IN THE MATTER OF ***the Resource Management Act 1991***

A N D

IN THE MATTER OF ***application by Kea X Limited for resource consent to establish a solar array at 150 Buckleys Road, 115 Buckleys Road and 821 Hanmer Road, Brookside, Selwyn***

(RC225180)

DECISION OF COMMISSIONER ANTHONY HUGHES-JOHNSON KC APPOINTED BY THE SELWYN DISTRICT COUNCIL TO HEAR AND DETERMINE APPLICATION FOR RESOURCE CONSENT

DATED 27 MARCH 2023

1. *INTRODUCTION*

THE APPLICATION

1.1 In March 2022, KeaX Limited ("KeaX" or "the applicant") applied to the Selwyn District Council ("the Council") for a land use consent [1]…

> *….to construct a new solar array (or solar farm) on a 258ha site in the Brookside area, approximately 10km north of Leeston in mid-Canterbury. It is proposed to construct the solar array in three stages over three years. The solar array will be comprised of a total of 5,844 frames of solar panels, with the solar panels situated between 700mm and 3.02m above ground level. Once operational the solar array will be capable of generating up to approximately 160 MW of renewable electricity, to be fed back into the electricity network via the Brookside Substation located in the north-western corner of the site.*
>
> *Resource consent is required under the operative Selwyn District Plan as a discretionary activity, as the solar array will generate electricity that will not be used on-site, seeks the retention of relocatable buildings on the site beyond the construction phase of the project (i.e. on a long-term basis to be used as a staff room and storage), and due to the scale of earthworks proposed.*

A number of amendments have been made to the application to reflect the need to deal with certain matters raised by submitters. I will term the application in its amended form "the Proposal".

1.2 Resource consents were also required from the Canterbury Regional Council under the Canterbury Land and Water Management Plan …

> *…. due to the earthworks proposed that will intersect the highest groundwater level ever recorded on the Site and the discharge of stormwater from a utility onto land less than 1m above the highest groundwater level ever recorded on the Site.*

Description of site and surrounding area

1.3 The solar farm is proposed to be constructed on approximately 258ha, which is comprised of several parcels of land as described below ("the site"):

- *115 and 150 Buckleys Road, Leeston Lot 1 DP 46472 Lot 1 DP 54392 Lot 2 DP 387576 RS 8955 Lot 1 DP 7545 (Just the southern section)*
- *187 Buckleys Road, Leeston Lot 2 DP 54392 BLK IX Leeston SD*
- *883 Hanmer Road, Leeston, Rural Sec 3658 BLK X Leeston SD*
- *821 Hanmer Road, Leeston RS 5565 & PT RS 9500 BLK X Leeston S.D.*

[1] At para 1.0 of the application

1.4 The street addresses for the site are 150 Buckleys Road and 821 Hanmer Road (on Canterbury Maps).

1.5 The landowners are the Ward family of Pitcairn Dairy Farm, and the Price family of Paisley Dairy Farm, who have agreed to lease the land to KeaX for 35-years.

1.6 Currently, the site is used for dairy farming, and is characterised by irrigation infrastructure, existing dwellings, farm buildings, shelter belts, as well as a group of trees adjacent to the southwestern boundary. The shelter belt plantings surrounding the site are well established mature plants in areas along the road boundaries. In some locations there are gaps in the extent of tree planting, either where there are smaller shelter belt planting, very young plantings, or no shelter belt plantings at all. In these areas partial and full views of the site are possible.

Key aspects of proposal

1.7 The key aspects of the Proposal the subject of the application are summarised in the extensive Council Officer's report dated 1 February 2022 prepared under s42A of the Resource Management Act 1991 ("the Act") ("the s42A report") by Mr Jesse Aimer, a senior planner with Harrison Grierson Consultants Limited, holding qualifications in both law and geography. The report states [2] …

> *18. The solar array will comprise of a total (on completion) of 5,844 tables of panels (referred to as 'frames') and 26 'inverters' (technology which converts the electrical current generated by the panels into a form that can be fed into the national grid). Each table comprises 26 pairs of modules (i.e. 52 panels per table – 26 on the top row and 26 on the bottom row of the table).(AEE at 4.0) The applicant proposes to feed the electricity into the network via Orion's Brookside Substation located in the north-western corner of the site. (AEE at 4.2).*
>
> *19. The property is owned by the Ward and Price families and are currently utilised for dairy farming. The owners of the site have entered into a lease agreement with KeaX to construct and operate the solar array for 35 years. However, no limit on the duration of consent has been sought as part of the application.*
>
> *20. Each table of panels will be set to a maximum height of 3.02m above ground level, with the lowest point of the table being 0.7m above ground level. The proposal is designed to allow sufficient space for*

[2] From para 18 onwards

vehicle access through the site. Sheep grazing will occur underneath the panels to manage grass growth. (AEE at 4.0)

21. *The solar array is proposed to be constructed in three stages over approximately 3 years. The staging is proposed as follows:*

    1. *Stage 1 (22 ha at the north-western corner of the site): starting September 2023;*
    2. *Stage 2 (89 ha in northern and central parts of the site): starting September 2024; and*
    3. *Stage 3 (128 ha in the eastern and southern parts of the site): starting September 2025*

    with the proposal taking approximately 12 months total (split over three four-month periods beginning in September) to complete.

22. *Other ancillary infrastructure and equipment includes (AEE section 4.5):*

    1. *A Single Skid Inverter – 10.2m long, 2.1m wide, and 2.25m high, covering an area of approximately 21.42m².*
    2. *13 Twin Skid Inverters (1 for Stage 1,5 for Stage 2 and 7 for Stage 3) 9.2m long, 5.4m wide, and 2.35m high, covering an area of approximately 25m².*
    3. *Site office as shown in the plans in Appendix 8. This will be a relocatable building 12m in length and 4.198m in width, covering an area of approximately 50.4m²*
    4. *Storage buildings for retaining equipment and materials on site. These will comprise two 40ft shipping containers approximately 29.7m² each (12.19m long, 2.44m wide, and 2.59m high)*
    5. *13 future battery sites (1 for Stage 1,5 for Stage 2 and 7 for Stage 3). The batteries are not within the scope of this application, but may be installed in the future to manage power fluctuations and store excess energy.*

23. *Landscaping is proposed around the perimeter of the application site with all existing shelterbelts and landscaping, for the most part being retained. The details of the proposed landscaping, along with a landscape plan, are provided within the Landscape and Visual Effects Assessment complete by Boffa Miskell submitted with the application. In summary:*

    1. *All existing site boundary shelterbelts will be retained, except for the boundary with 180 Grahams Road.*
    2. *Along the boundary with 180 Grahams Road, the existing exotic shelterbelt plantings will be removed and replaced with a 3m wide native buffer planting.*
    3. *Additional planting around the remainder of the site is proposed where there are gaps in the plantings around the permitter(sic) of the site or where planting is minimal. This will consist of either a 3m wide native landscape buffer or a double-staggered row of exotic shelterbelt species. Once mature, the existing proposed plantings will be maintained to a height of 4m. This is approximately 1m higher than the solar farm structures.*
    4. *The applicant proposes to source indigenous species in the corresponding order:*
        - *firstly, where practicably obtainable from within the Low Plains Ecological District; and*
        - *second, from the wider Canterbury Plains Ecological Region.*

    Following a recommendation from the landscape planner, the applicant proposes to use harakeke, lowland ribbonwood, mikimiki

(coprosma propinqua), kanuka, narrow-leaved houhere, kohuhu and tarata. (AEE at 4.1.1)

24. *A 2.1 metre-high 'deer type' security fence is proposed along the road boundaries and each side of the driveways for the dwellings located at 821 and 889 Hanmer Road. The fence will contain standard fencing wire on top, and be supported by fence posts up to 3m in height. The fencing will be located behind the existing and proposed planting. The entrances to the site will be secured by 2.1m high gates. (AEE at 4.0)*

25. *No external lighting is proposed for the site. (AEE at 4.0)*

26. *16,125m³ of earthworks will be required to: (AEE at 4.4)*
    1. *Drive piles up to 1.8m in depth to support the solar panel frames. The piling will be carried out using a pile-driving machine, meaning excavation is not required.*
    2. *Trench up to 1m in depth to lay cables.*
    3. *Disturb topsoil to prepare areas for the relocatable buildings, inverters and future battery sites.*
    4. *Spread gravel to form internal tracks.*

27. *Vehicle access to the Site both during construction and operation will be via existing vehicle access points on Buckleys Road and Hanmer Road. During construction of each stage, there will be approximately five staff vehicles entering and leaving the site each day, equating to 10 equivalent car movements (ecm). Delivery of materials (including aggregate for tracks, inverters and containers, and the construction materials for the solar arrays) will be made using heavy goods vehicles. Other equipment will be required at times, such as pile driving machinery. The numbers and scale of vehicles will range depending on the deliveries and will require up to 4 trucks to enter and exit the site per day during the construction period, equating to 24 ecm. Informal car parking will be provided within the site. (AEE at 4.6.2)*

28. *Up to twelve staff would be on site during the peak construction period. (AEE at 4.0) During the operational phase staff will not be required on a permanent basis, with staff occasionally visiting (approximately 1 to 2 per month) to check site operations and carry out maintenance as required. (AEE at 4.7) Construction at the site will be restricted to weekdays from 8am to 6pm. (AEE at 4.0)*

29. *The existing dairy farm operations at the site will be phased out as construction moves across the site. Small animals, such as sheep, will continue to graze on the site following construction of the panels. (AEE at 4.7)*

30 *The site contains a Wāhi Taonga Management Site – C59, understood to be a midden. (AEE at 4.7) Existing fencing around the Wāhi Taonga Management Site – C59 will remain in place, with a 50m buffer proposed between the site and any earthworks and solar panels.*

1.8 The application was amended after lodgement and prior to notification to address matters raised by the Council and its technical experts. [3]

[3] Statement of evidence of Claire Kelly / paragraph 3.2

1.9 There are other aspects of the Proposal which call for comment and which are referred to later in this decision.

2. *PROCEDURAL ASPECTS*

Notification decision

2.1 On 21 October 2022 Mr Aimer reported on the notification question and recommended that the application be processed on a limited notified basis. Those notified are recorded in the notification decision at paragraph 136. The recommendation was adopted under delegated authority by Emma Larsen, Planning Manager, on the same day ("the notification decision"). As will be noted later in this decision, the notification decision has drawn criticism. The submitters in opposition (referred to hereafter) maintain that consent to the application should be declined under the provisions of s104(3)(d) of the Act. This issue is the subject of extensive analysis later in this decision.

Written approvals

2.2 A number of written approvals were received from the following:-

Paul Ward, Jennifer Ward	105 Buckleys Road
Pricilla Ward, Matthew Ward	150 Buckleys Road
Pitcairn Farm Limited (written approval from all four directors)	115 and 150 Buckleys Road, 10 Stewarts Road
Angela Ward	187 Buckleys Road
Pitcairn Trustees Limited	187 Buckleys Road
Darren Osbourne, Danica Williams	115 Buckleys Road
Paisley Price Farms Ltd (written approval from all four directors	821 and 883 Hanmer Road
David Duncan, Raye Packer	883 Hanmer Road

Submissions

2.3 The notification decision ruled that the application did not need to be the subject of public notification and went on to identify affected persons who should be served with the application on a limited notified basis.

2.4 The application drew submissions from the following:-

SUBMITTER	***MATTERS RAISED***
Glenmore Farming Company Limited	Concerns regarding: notification of application; visual effects; health and safety and fire risk; weed control; requirement for fire emergencies Assessment Plan to accompany Vegetation and battery fire; noise levels.
Donna Jayne Kewish, David John Kewish and Ann Williams	Concerns regarding: diminution in value of home and selling home; proximity of solar panels; visibility issues and glint and glare issues; plantings to screen views.
Robyn Lynnett Anne Casey	Concerns regarding: visual; acoustic; noisy inverters; electromagnetic radiation from inverters; chemical leachates from solar panels; fire hazards; changed land use from rural to industrialisation; lack of consultation.
Clark James Casey	Concerns regarding: visual; acoustic; noisy inverters; electromagnetic radiation from inverters; chemical leachates from solar panels; fire hazards; changed land use from rural to industrialisation; lack of consultation.
Clark James Casey, Liz Casey, Robyn Casey, Donna Kewish, Dave Kewish, Ann Williams	Joint submission Concerns regarding: failure to carry out statutory obligations of local government including consultation; visual impacts; landscape and visual effects issues; glint and glare issues; acoustics electromagnetic radiation; chemical leachates a petition against a change in the use was attached to the submission.

all opposing the granting of consent.

My appointment

2.5 I was appointed by the Council to hear and determine this application on 16 February 2023. On the basis of this appointment, I have proceeded to hear and determine the application.

The hearing

2.6 On 23 February 2023 and 28 February 2023, I held a hearing of the application at or adjacent to the offices of the Council in Rolleston.

The issue of minutes

2.7 On 21 February 2023 I issued a minute regarding the duration of the hearing and the completion of the hearing. This was followed by a minute date 24 February 2023 in which, for the reasons set out in that minute, I extended the time for completion of the hearing until Monday 6 March 2023 pursuant to s37 and s37A of the Act. On 2 March 2023 I issued a further minute which made reference to a number of procedural matters, including the status of documents produced by a witness for the submitters in opposition, Mr Henderson. He was to produce a number of documents upon which he was relying and these documents were later made available and produced on 3 March 2023.

2.8 On 6 March 2023 I issued a further minute closing the hearing. This was followed by a minute on 21 March 2023 regarding my contact with Mr Edward Luisetti, the author of a letter produced in evidence.

Site visit

2.9 In my minute dated 2 March 2023 I recorded that I had conducted a site visit on 2 March 2023. I was accompanied by Mr Richard Bigsby, a planner employed by the Council, who is not involved in this matter.

2.10 My site visit involved visiting the property of Dave and Donna Kewish at 324 Branch Drain Road, the property of Robyn Casey at 265 Branch Drain Road and the property of Clark and Elizabeth Casey at 198 Branch Drain Road/180 Grahams Road. I record that I travelled around the perimeter of the subject site as well.

3. *THE PROPOSED ACTIVITY / STATUS AND TERMS OF THE OPERATIVE SELWYN DISTRICT PLAN AND PROPOSED SELWYN DISTRICT PLAN*

OPERATIVE SELWYN DISTRICT PLAN

Introduction

3.1 The Operative Selwyn District Plan ("the ODP") is a relevant planning document governing the determination of this application. The ODP was made operative on 3 May 2016. Under the ODP the application site is zoned Outer Plains.

Earthworks

3.2 The following discussion of compliance has been obtained from Council's s42A report [4]

3.3 Rule 1.7.1.2 limits the volume of earthworks to 5,000m³ per project. The applicant has estimated that the Proposal would involve earthworks of approximately 16,125 m³ and in accordance with Rule 1.7 the earthworks are required to be assessed as a discretionary activity.

Shelterbelts and amenity plantings

3.4 Rule 2.1 of the ODP does not permit shelterbelts and amenity plantings if they shade any part of the road carriageway between 1000 and 1400 hours (inclusive) on the shortest day of the calendar year or any property under different ownership between 1000 and 1400 hours (inclusive) on the shortest day of any calendar year. As a result of the provision of shading diagrams the Proposal does not comply with Rule 2.1.1.5(a) and Rule 2.1.1.5(b). In accordance with Rule 2.1.6 this aspect of the Proposal is required to be assessed as a restricted discretionary activity.

Vehicle crossings

3.5 Rule 4.5.1 of the ODP requires the formation of any vehicle crossing to comply with the requirements of Rule 4.5.1 Appendix 10. Because of the breaches of the rule specified in the report, the non-

[4] From para 41 to 51 inclusive

compliance with Rules 4.5.1.2 and 4.5.1.3 dictate that the Proposal is required to be assessed as a discretionary activity.

Solar array and inverters

3.6 The solar array and inverters are considered to fall within the definition of a "utility" under the ODP. The following applies to utilities taken from the introductory "notes" of Chapter 5 Rules-Utilities:

> *The undergrounding or ducting of any utility is permitted subject to compliance with Rule 1.6-Earthworks except where the provisions of Rule 1.6 (Earthworks and Protected Trees) apply.*
>
> *The Rules in the Rural Volume of this Plan are applicable to activities generally, including utilities. However, the rules under Rule 3 Buildings, Rule 4 Roading an Rule 9.4 Scale of Non-Residential and Non-Rural Activities do not apply to utilities, except the following:*
>
> *Rule 3 Buildings:*
> - *Rule 3.15.1 Relocated Buildings*
> - *Rule 3.9.1.1 Access and Parking*
> - *Rule 3.13.1.2 Line of sight – railway crossings*
>
> *Rule 4 Roading:*
> - *Rules 4.5.1.2 – 4.5.1.5 Roads, Accessways and Vehicular Crossings*
> - *Rule 4.6 Parking*
> - *Rule 4.1.1 Outstanding Landscapes*

3.7 In accordance with the above, the buildings and associated infrastructure on the site are required to be assessed under the utilities chapter (C5-Utilities). Rules 3,4 and 9.4 are not applicable to utilities, except for those rules listed above.

3.8 Rule 5.1 of the District Plan (Utilities and Activities) permits utilities if they meet the requirements of Rule 5.1.1 to 5.1.2. As the solar array would generate electricity that would not be used on the site, the Proposal does not comply with Rule 5.1.2.4. In accordance with Rule 5.1.3 this aspect of the Proposal is therefore required to be assessed as a discretionary activity.

Buildings

3.9 Buildings are proposed to be relocated onto and will remain permanently on this site. This requires assessment as a controlled activity under Rule 3.15.2.

3.10 Rule 3.13.1 permits buildings that meet specified boundary setbacks. Table C3.2 requires accessory buildings (which include fences greater than 2m in height) to be set back 5m from the property boundary and 10m from roads. The fences are to be set back 10m from the road boundaries, but will be within 5m of neighbouring properties. The ODP requires that a resource consent be obtained for this activity but does not classify the status of the activity. In accordance with s87(B)(1)(b) of the Act this requires assessment as a discretionary activity.

Noise limits

3.11 It is considered that the noise limits in the ODP do not apply to the application because Rule 9.16.6.3 provides that the noise limits contained in Rule 9.16.1 do not apply to any temporary activity and given the completion of the project across three four month periods, the rule does not apply.

Status in terms of ODP

3.12 Overall, the Proposal is a discretionary activity under the ODP. It was clear from the submissions of counsel for the parties, there is no dispute regarding this classification.

PROPOSED SELWYN DISTRICT PLAN

3.13 The Proposed Selwyn District Plan ("the Proposed Plan") was notified on 5 October 2020. No decision has yet been made on submissions on the Proposed Plan. The site is located within the General Rural Zone in the Proposed Plan and is located within the EIB Mudfish Habitat and EIB Management overlays. There are no rules with immediate legal effect that apply to this proposal.

4. *MATTERS REQUIRED TO BE CONSIDERED*

4.1 Section 104(1) of the Act sets out the matters which must be considered in considering an application for a resource consent. For convenience I set out what I apprehend are the relevant provisions of the statutory provision …

> *104.**Consideration of applications***
>
> *1. When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2 and section 77M, have regard to-*

(a) any actual and potential effects on the environment of allowing the activity; and

(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and

(b) any relevant provisions of-

(i) a national environmental standard:
(ii) other regulations:
(iii) a national policy statement:
(iv) a New Zealand coastal policy statement:
(i) a regional policy statement or proposed regional policy statement:
(ii) a plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

2. When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.

……

(3) A consent authority must not, -

(a) when considering an application, have regard to-

(i) trade competition or the effects of trade competition; or

(ii) any effect on a person who has given written approval to the application.

…….

(d) grant a resource consent if the application should have been notified and was not.

4.2 In addition, mention should be made to section 104B of the Act which provides that after consideration of an application for a discretionary activity, a consent authority may grant or refuse the application and if it grants the application, may impose conditions under section 108 of the Act.

5. ***EVIDENCE OF APPLICANTS***

Introductory comments

5.1 During the course of the hearing, it became apparent that a number of members of the public who were not formally notified of the application, wanted to be involved in the hearing. Shortly after the completion of the hearing on 28 February 2023, I was advised that the Council had received a document from a member of the public which that member of the public wanted to be submitted to me for my consideration. I directed that the relevant memorandum should not be made available to me. This was because, given the fact that the application was being dealt with on a limited notified basis by reason of the notification decision, it was not appropriate for me to receive evidence from other than the parties to the hearing. To do

otherwise would have been to act in a way which was inconsistent with the notification decision and would have been legally inappropriate.

5.2 In this context I note that the submitters in opposition have submitted that the application should have been publicly notified and as a result of this, I should exercise my discretion to refuse consent to the application under the provisions of s104(3)(d) of the Act. This is the subject of extensive consideration later in this my decision.

5.3 At this point of the decision, I summarise the evidence given on behalf of the applicants. I emphasise that what follows is only a summary and is not intended to capture every feature of the evidence led on behalf of the applicant. The summary is intended to record the main features of the evidence led on behalf of the applicants.

Campbell McMath

5.4 Mr McMath is the managing director of Kea X Limited, a company which undertakes consultancy work and contracting work and projects in the field of solar generation and self-consumption of power. He has had experience with the installation of solar farms for over 10 years in a number of locations [5].

5.5 Kea Group Venture started with mini hydro power stations but, relevantly, was responsible for the construction of New Zealand's largest solar farm in the Wairau Valley, Marlborough in January 2021 [6].

5.6 Mr McMath went on to refer to his support for the local community, noting that his staff included Selwyn residents. He said that the company was now in a situation where there were Selwyn businesses wanting to supply them with power because they wanted to be part of the Kea group [7].

5.7 Mr McMath then went on to refer to the commitment of the Government to transitioning to 100% renewable electricity generation by 2030 and noted the importance of implementing projects for renewable electricity

[5] See paras 1.1 and 1.2 of statement of evidence
[6] See para 1.3 of statement of evidence
[7] Paras 3.1 to 3.3 inclusive of statement of evidence

generation. [8] He noted the passing of the Climate Change Response (Zero Carbon) Amendment Act in 2019 and the associated aims of reducing omissions and the target of 60% renewable energy by 2035 released by the Climate Change Commission. He said that the Proposal the subject of the application could form part of the overall energy solution and may assist in reducing reliance on fossil fuels and associated omissions of greenhouse gases.

5.8 Of critical importance in this case is the evidence relating to site selection. He noted the difficulty in choosing an appropriate site and the number of factors which had to be considered in order that a site could be considered to satisfy the requirements in question. [9] He said that if generation was installed near a load it brought down the load price and said that the site was chosen due to its proximity to load, being near existing infrastructure including a substation (which I visited) and power lines. He said that the electrical system was perfect because it offered three directions for the electricity to flow from:-

(i) Brookside to Springston then Islington in one direction;
(ii) Killinchy then Dunsandel then Hororata in another direction and Norwood (new) in another direction.

5.9 I will return to the issue of the need to demonstrate an operational need for the Proposal to establish on this particular site but note that Mr McMath was of the view that the factors outlined above clearly demonstrated an operational need for the Proposal to establish on this particular site [10] .

5.10 Mr McMath went on to state that the highly productive land policy was not in play when he undertook the selection process. However, he did not believe that there were many opportunities available to proceed with a proposal of this scale and nature at a site with a low (or no) highly productive land classification. He went on to state that it was not the intention to take the land out of production altogether as sheep farming would continue on the site under and around the solar panels. [11]

[8] Para 4.3 of statement of evidence
[9] See paras 5.1 and 5.2 of statement of evidence
[10] See statement of evidence at para 5.4
[11] See statement of evidence at para 5.5

5.11 In answer to a question from submitters as to why the solar farm could not be located in a remote area and a new substation constructed, Mr McMath referred to the significant costs of the suggestion. It was not economically viable for a new substation to be built for the Proposal given the energy needs needed to be affordable to all persons. He said that on top of the economic cost it would be a gross under-utilisation of existing infrastructure [12].

5.12 Mr McMath went on to refer to growth in the Selwyn District, noting that his company was helping to supply renewable and affordable energy to this growth area. He went on to refer to the opportunity to utilising existing and upgraded assets to construct and operate the solar farm.[13]

5.13 Mr McMath then went on to refer to the results of his investigation of other substations in the Selwyn area, [14] noting the issues which prevented their adoption being:-

(i) lack of capacity;
(ii) too many limitations and/or restrictions on line;
(iii) weak part of the network;
(iv) not sufficient energy security;
(v) too close to urban areas;
(vi) land prices were too high;
(vii) other solar farms were committed to the substations.

5.14 Mr McMath noted that disasters such as earthquakes and storms would put stress on the existing grid and that the solar farm satisfied a need for "local" power generation and transmission. He went on to state that being close to the load reduced network losses. [15]

5.15 Mr McMath then dealt with the important issue of the ability for pasture to survive under the panels through the life of a solar farm. He said that pasture grew very well under the panels as he has seen on the company's sites and overseas sites. He said that the panels were sitting high which allowed for sun and water to get under the panels. He said that the gaps between the panels allowed for water to reach the ground under them and that there were other benefits such as the ability of a sheep to rest

[12] See statement of evidence at para 5.6
[13] See statement of evidence at paras 5.6 and 5.7
[14] See statement of evidence at para 5.9
[15] See statement of evidence at paras 5.10 and 5.11

under the panels on hot days. He said that the sheep would be less stressed and expected higher wool quality.[16]

5.16 Mr McMath then went on to deal with the issue of economic viability. He said that the Proposal had been the subject of a stringent business case and that he would not be proceeding if it was not economically viable. He noted that early the property owners were diversified when solar was installed on their land and this allowed for more innovation to take place and two-tier farming also known as Agri-Voltaic. This type of farming was increasing around the world. In addition, he noted the need to reduce fertiliser use, discharge of nitrates around the surface water and the need to move to overseas sustainability requirements and said that solar farms were consistent with these aims. [17] He said that diversification was important and that there was a need for the project to proceed as soon as possible because of the effects of delay. [18]

5.17 As to the duration of the term, being a matter of significant importance as appears hereafter, Mr McMath noted that his company was asking for a term without limitation on the duration because of reasons of economics, commercial, ethical and operational reasons. He said that to remove the solar farm after 35 years would be a backward step on helping New Zealand being self-sufficient. That over the 35 years Selwyn customers would want reasonable certainty that there was the ability to supply power beyond that time. [19]

5.18 On the topic of consultation with the community, Mr McMath noted the consultations which had taken place and his attempts to explain the project and answer questions which were put to him. [20]

5.19 Mr McMath then went on to refer to the employment opportunities which would be created by the project. I will not repeat the nature of the positions created but it is apparent that the project would give rise to significant employment opportunities. [21]

5.20 In the hearing on 28 February 2022, Mr McMath summarised a number of topics and made available to me a paper headed "key points". This paper

---

[16] See statement of evidence at para 5.12
[17] See statement of evidence at paras 6.1 to 6.5 inclusive
[18] See statement of evidence at paras 6.6 and 6.7
[19] See statement of evidence at para 6.8
[20] See statement of evidence at para 6.9 to 6.12 inclusive
[21] See statement of evidence at paras 6.13 to 6.16 inclusive

introduced a significant amount of further technical information which supported the view that there was a need for the project and that it would serve the community. I will not repeat all of the technical information which was made available to me and in view of the importance of Mr Mc Math's evidence in relation to my consideration of The New Zealand Policy Statement on Highly Productive Spoils (referred to hereafter). I deal with this evidence in some detail.

5.21 Mr McMath said that the project would generate sufficient power for approximately 22,000 houses per annum. He noted that the total houses in Selwyn in the 2018 census was 23,244 houses. He went on to note the offsetting of CO2 per year and said that the total area of land used by solar on the site was approximately 2,022m² (0.078%) still leaving about 99.92% of the land available to be farmed. In answer to a question from me, he said that using a birds-eye view, 40% of the land would be covered by panels and 60% not covered. He went on to state that a likely scenario was that when the Brookside project was generating 100 MW, it would be supplying 25% of Orion's power from the solar farm. He then emphasised the desirability of having generation next to load, thus reducing transmission losses. He went on to note that Orion was expecting a winter peak demand on its network to increase by approximately 140 MW (18%) over the next 10 years.

5.22 Mr McMath went on to refer to operational need matters, emphasising the importance of resilience which was the ability for a network to get through a fault, disaster, accident and maintenance to be flexible. In short Mr McMath emphasised that the project would result in resilience particularly because the Brookside project was part of the local generation and the closer generation was to load centres the better. Mr McMath emphasised the reality of disasters or unexpected weather events occurring in the future.

5.23 Mr McMath then dealt with the important matter of site selection. He emphasised yet again the importance of being at a substation. He said that the project required a large flat land area with good ground conditions and that the landowner wanted to lease or sell at an agreed rate. As to the reasons for a large scale, Mr McMath referred to economics of scale, the large purchasing power of equipment, the fact that equipment could be economically maximised, existing cable and transformer efficiency and investment certainty.

5.24 As to matters raised by submitters, Mr McMath stated:-

(i) that Dunsandel had no capacity as there was a solar farm assigned already;

(ii) that Te Pirita was at the end of a 66kV line and that had had limited capacity and only one line.

5.25 As to Brookside, Mr McMath stated:-

(i) that land which was not highly productive was 3.1km to the edge of the site. The distance was getting too far for the HV(33kV) cables needed;

(ii) there were other costs such as easements, consents and multiple road crossings;

(iii) there would be additional capital expenditure on HV(33kV) cables;

(iv) there would be wasted Cu/Al which was not environmentally friendly;

(v) the amount of road which would need to be dug up was significant as several circuits would be required and spaced accordingly;

(vi) would increase losses/wasted energy by travelling longer distances;

(vii) there would still be a need to secure land and the supply of land was not guaranteed.

5.26 As to establishing the project, Mr McMath referred to the method of installing piling which involved a minimisation of the footprint, that once the site was complete gravel access roads could become overgrown allowing for more grass and that the land available for available farming was minimally affected which Mr McMath repeated was approximately 99% available.

5.27 Mr McMath then referred to the continuation of the farming operation which is discussed in greater detail later in this decision. He noted the dual use of land in association with an Agri-voltaic use. He said that a white paper on sheep trials was showing improved fleece on sheep farms farmed in conjunction with solar farms and said that Kea was expecting a higher quality product from the land. As to the issue of irrigation, Mr McMath said that irrigation would still continue on the land and that Kea was expected to increase flock sizes as irrigation took hold. He said that Kea was happy with the amount of dry matter being farmed from under and around the panels and that the ground received enough sun or water for what Kea needed. As for water quality, Mr McMath said that the

Brookside property does not have a need for nitrogen and that if less nitrogen was put on the land there would be less nitrogen in the groundwater thus helping clean streams and lakes.

Aaron Williams (glint and glare)

5.28 Mr Williams is employed as a technical analyst with Pager Power. He is qualified in and has carried out a number of glint and glare assessments in New Zealand and elsewhere. [22] The methodology used by Mr Williams is as follows:- [23]

(i) identify receptors in the area surrounding the solar development;

(ii) consider direct solar reflections from a proposed development towards the identified receptors by undertaking geometric calculations;

(iii) consider the visibility of the panels from the receptor's location;

(iv) determine whether reflection can occur and if so what time it will occur;

(v) consider both the solar reflection from the proposed development and the location of the direct sunlight with respect to the receptors position;

(vi) consider the solar reflection with respect to the published studies and guidance;

(vii) determine whether a significant detrimental effect is expected in line with the presented in a report being the Glint and Glare Report (Appendix D).

5.29 Following an initial review, it was determined that the assessment needed to consider the potential for glint glare and effects on road users and dwellings within the assessment area and a high-level aviation assessment for Christchurch Airport. [24]

---

[22] See statement of evidence at paras 1.1 to 1.8 inclusive
[23] See statement evidence at paras 2.6 and 2.7
[24] See statement evidence at para 2.10

5.30 After recording the receiving environment, and a review of the most recent landscape plans, which proposed 2m plantings (to meet the terms of a proposed condition), Mr Williams was of the view that no significant effects upon residential amenity, road safety, or aviation activity associated with the Christchurch Airport were predicted.

5.31 Mr Williams reviewed the submissions which opposed the application and in particular a joint submission by Casey, Casey Kewish and Williams which raised glint and glare queries.

5.32 The submissions led Mr Williams to consider the effect on roads, given the expressed concern that the glint and glare report categorised the surrounding roads as local roads and the effect upon road users might be significant. Mr Williams described the stages of the glint and glare assessment, noting that the roads within the 1km assessment area of the Proposal were local roads and that local roads had low traffic densities and were not taken forward for technical modelling because the risk to road safety was considered to be low in the worst case. Mr Wiliams said that the determination by Pager Power was that any solar reflections from the proposed development experienced by a road user would be considered low impact in the worst case due to the lower traffic densities. He said the determination was based on past project experience and concluded that no significant impacts were predicted upon road safety. [25]

5.33 Mr Williams then went on to consider the effect on dwellings noting that the landscape strategy sufficiently mitigated the potential effects of the glint and glare from the proposed development. [26] Given that the applicant had agreed that all planting along Buckleys Road and in proximity to Branch Drain Road would be 2m in height at the time the solar panels are installed, Mr Williams said that there would minimal, if any, temporary effects resulting from glint and glare upon dwellings.[27]

5.34 Mr Williams went on to state that for dwelling receptors the key considerations were:-

(i) whether a reflection was predicted to be experienced in practice;

---

[25] See statement of evidence at paras 7.3 to 7.12 inclusive
[26] See statement of evidence at para 7.14
[27] See statement of evidence at paras 7.13 to 7.17 inclusive

(ii) the duration of the predicted effects relative to the thresholds of:

- three months per year
- 60 minutes per day

5.35 Mr Williams said that the reason why the duration of effects was a key determination was because effects upon amenity were most significantly determined by how long the effects occurred throughout a year. He said that overall, the determinations made for the development were in line with the associated guidance and that effects would not occur for longer than the period set out above. [28]

5.36 Mr Williams then went on to deal with concerns expressed by Mr Aimer in the officer's report. Mr Aimer had raised concerns in his report that there was a risk that the health and safety of road users on Dunsandel and Brookside Roads and Buckleys Road would be adversely affected by the establishment of Stages 1 and 2 of the solar panels prior to the vegetation reaching 2m in height. Given that the applicant is proposing to ensure that all planting along Buckleys Road and Branch Drain Road would be 2m in height at the time that the solar panels are established, Mr Williams said that this further reduced the risk to road safety and that no significant impacts were predicted. He said that with respect to effects upon residential amenity no further mitigation was required. [29]

5.37 Finally, Mr Williams said that he had reviewed the draft proposed consent conditions and that they exceeded his recommendations.

Amanda Lee Anthony (landscape planning)

5.38 Ms Anthony is employed as a Senior Landscape Architect with Boffa Miskell Limited, holding landscape qualifications and being a registered member of the New Zealand Institute of Landscape Architects. She has practiced in landscape architecture for a number of years and set out her experience at the commencement of the statement of evidence. [30]

[28] See statement of evidence at paras 7.18 to 7.20 inclusive
[29] See statement of evidence at paras 8.1 to 8.6 inclusive
[30] See statement of evidence paragraphs 1.1 to 1.3 inclusive

5.39 Ms Anthony said that following the review of submissions and the s42A report, a revised landscape mitigation strategy was proposed.[31] This revised mitigation planting strategy was not illustrated within the visual simulations prepared in September 2022 but were prepared as a guide for the Council and Mr Densem, the Council's peer reviewer. The revised landscape mitigation strategy was as outlined as follows:-

(i) an addition row of evergreen, exotic plants species will be planted along the shared southern site boundary with 324 Branch Drain Road;

(ii) due to the Council requiring an existing planting along Branch Drain Road (western site boundary) to be removed, the proposed mitigation planting will be set back 10m from the road reserve but in the short term the existing planting will be retained to provide screening of Stage 1 until such time as the proposed mitigation planting reaches 2m in height (expected to be between 2 to 4 years depending on the plant species). Where there are gaps in the existing planting, larger grade 2m tall native plants, spaced closely, will be planted to ensure filtered views and visual softening prior to the construction of Stage 1. The same approach will be applied to gaps along Buckleys Road;

5.40 Ms Anthony said that based on the revised mitigation strategy the adverse visual effects from Branch Drain Road and Buckleys Road would be in the low to moderate range initially but that the length of time for the level of effects to reduce to very low would be shortened (by potentially one year) due to the implementation of more mature plant species in the gaps that would reduce the visual impact from the beginning and soften/filter the view of the solar arrays. [32]

5.41 Ms Anthony described the proposed activity and the site and the existing environment. [33] There is no need for me to repeat what she said about these matters.

---

[31] See statement of evidence paragraph 3.3.
[32] Statement of evidence / paragraph 3.3
[33] Statement of evidence / paragraph 6

5.42 I note that Ms Anthony commented upon the rural amenity vales which are said to relate to the site being:-[34]

(i) expansive areas of open pasture which creates a sense of spaciousness and openness;
(ii) a general lack of structures and buildings, aside from the pivot irrigators and two dwellings; and
(iii) a distinct linearity provided by established shelterbelts and fenced paddocks.

5.43 Ms Anthony said that in her opinion these matters related to a "perception of naturalness" rather than representing actual natural character values and that the term "natural character" should be reserved to its application under the Act.

5.44 Ms Anthony turned to refer to an assessment of landscape effects noting that a full assessment could be found in section 6.0 of her LVA. [35] This had been independently peer reviewed by Mr Densem who was in general agreement with it. Ms Anthony went on to address matters raised by submitters and addressed in Mr Aimer's report.

5.45 Ms Anthony referred to Mr Aimer's report [36] which had concluded that the Proposal would result in adverse landscape and rural character effects, and that these effects will be mitigated over time through the establishment of the boundary vegetation. He considered that the adverse effects were mitigated by:-

(i) the use of sheep to graze the site retaining the rural productive use of the site and groundcover which characterises the Rural Outer Plains Zone; and

(ii) a requirement that the solar array be returned to pastoral use at the end of the solar array's operational life.

5.46 Ms Anthony was in agreement with the nature and extent of adverse effects and that these would reduce over time particularly given the 18m setback of the solar arrays from the road reserves. [37]

---

[34] Statement of evidence / paragraphs 6.2 to 6.4 inclusive
[35] Statement of evidence / paragraph 8.1
[36] Statement of evidence / paragraph 8.4
[37] Statement of evidence / paragraph 8.5

5.47 Ms Anthony went on to consider matters raised by submitters and in particular their contention that construction of the solar farm should not commence until all landscaping reached 2m in height, an approach supported by Mr Aimer. [38] It was noted that the applicant has agreed to this.

5.48 Ms Anthony went on to summarise her conclusion on temporary visual effects for each of the three stages of development. She noted as follows:-

(i) *Stage 1*

That partial glimpsed views could be experienced in the 840m length of Branch Drain Road that bordered the western side boundary but said that the majority of the boundary was lined in established native planting that was nearly 2m in height. She went on to state that she understood that existing vegetation which was almost 2m in height along the boundary in question was to be removed due to concerns regarding shading and as a result the proposed mitigation planting would be set back 10m within the site. Ms Anthony said that the setback provided for the solar rays to be set back approximately 18m from Branch Drain Road allowing some open space consisting of pastoral grasses backed by proposed native plantings. She said that in the interim existing planting along Branch Drain Road would be retained until the proposed planting had reached 2m in height. As to the existing gaps in the vegetation it was proposed to plant 2m tall native plants in the proposed mitigation area to reduce the visual impact. The larger bag sizes of plants would be planted in staggered rows and closely spaced to soften and filter views of Stage 1. She said that the alternative would be to implement an exotic shelter belt around the boundary which would provide a quicker growing stream. She noted that irrigation would be implemented as part of a landscape management plan. She said that the remainder of the existing planting within the site and on the eastern edges of Stage 1 would provide screening from northern and eastern views prior to Stage 2 being built. On the basis of the above Ms Anthony's

[38] Statement of evidence / paragraphs 9.1 et seq

view was that the temporary adverse visual effects were expected to be low-moderate following the construction of Stage 1 then reducing to low-very low (adverse) over time as the planting established to a height of 3-4m.

(ii) *Stage 2*

Existing shelter-belts between Stages 1 and 2 are to be removed although shelter-belts between Stages 2 and 3 would be retained in the short-term to provide an additional layer of screening for Stage 2 while the proposed mitigation planting along Hamner/Caldwells Road established. An 18m set-back would apply to Stage 2 along Buckleys Road. Gaps in the vegetation equating to approximately 100m in length along the 615m length of shared boundary would enable views of the site until infill planting became established. However where there were gaps in existing vegetation 2m tall and closely spaced native plantings were proposed to be established. It was noted the remaining portion of Buckleys Road was predominantly lined in established native vegetation that was in excess of 2m in height and that was to be retained based on the above temporary very localised low to moderate adverse visual effect which was anticipated which would reduce to very low over time.

(iii) *Stage 3*

Ms Anthony said that Mr Aimer was less concerned about Stage 3 given that the proposed planting would have two years to grow between establishment and construction activities. She agreed with this.

5.49 Ms Anthony went on to consider the position of the Kewish family at 324 Branch Drain Road. She said that she considered it unlikely that the panels would be visible through the existing shelterbelt located north of their boundary although she had not viewed the site herself. She acknowledged that should there be gaps in the shelterbelt glimpses of the Proposal to the north would be apparent. Ms Anthony went on to state that as a good neighbour the applicant had agreed to establish an additional row of exotic plants adjacent to the southern boundary of the

site which would be included in the proposed landscape management plan. As to views along the eastern boundary of the property of Stage 2 of the solar farm, Ms Anthony noted that the eastern boundary is approximately 600m from this stage and whilst there were a few gaps in the existing shelterbelt the majority had existing vegetation. Based on the distances involved the visual effects were considered to be low or less than minor. She noted that the proposed mitigation planting would have at least one year of growth prior to the construction of Stage 2 and that the existing shelterbelt would be retained until the proposed native planting was established to a height of at least 2m.

5.50 Ms Anthony then went on to consider a number of aspects of submissions received in relation to landscape and visual effects. [39] There were the following matters:-

(i) *Plant growth rates etc*

Ms Anthony noted that the highest level of effects would be in the first four to five years following construction of the Proposal but that views of the Proposal would be softened and screened in less time given that infill gap planting was to be approximately 2m in height at the time of construction. She discussed the larger bag size species proposed in the mitigation planting area and said that would be coupled with irrigation and ground preparation. There that planting would be given a good head start and maintained to ensure that survival rates were high. She noted the alternative to implementing native plant species was to introduce exotic shelter belt species but noted that consultation had indicated that native planting was preferred.

(ii) *Plant replacement and maintenance*

Ms Anthony noted the Proposal in the landscape management plan for the maintenance of the existing and proposed planting.

[39] Statement of evidence / paragraph 10.1 et seq

(iii) *Proposed landscape character change*

Ms Anthony said that the site would transform from an open rural landscape to a landscape of energy infrastructure but that in her opinion the proposed mitigation planting would visually contain the Proposal within the confines of the site and screen it from neighbours over time. Ms Anthony said that she had been informed by Ms Kelly that as of right the site could be converted into a forestry block or be covered with tunnel houses without consent. She said that she thought that both of those options would be visually prominent in contrast to the local landscape but would not require mitigation planting or screening. She concluded by stating that the Proposal would not be visually prominent in the long term and would in time enhance the rural character and amenity of the area by way of proposed native planting along the road corridors.

5.51 At the hearing, Ms Anthony presented a summary of her evidence which dealt with the revised landscape mitigation strategy. She considered that the visual simulations were out of date because they had been prepared prior to the revised mitigation planting strategy which had been formulated to address the concern of the submitters. [40]

5.52 Ms Anthony then commented upon Mr Smith's evidence. [41] She queried Mr Smith's concerns about whether the mitigation planting would grow in the first instance and said that the site was capable of growing vegetation. She referred to aspects of the proposed mitigation planting and said that maintenance details would be the subject of a proposed condition of consent and would be maintained for the life of the solar farm. She said that she agreed that the expected growth rates sourced from the Southern Woods website at five years but said that because of the planting of larger grade species the proposed mitigation planting should achieve if not exceed the expected growth rates after five years. She acknowledged that by implementing larger growing plants growth within the first year might be slower but the plants should make good progress with appropriate preparation, fertiliser and irrigation. She

[40] Summary of evidence / paragraph 1.1
[41] Summary of evidence / paragraph 1.2 to 1.3

noted that the varying growth rates of the plant species. She said that the solar arrays would be at a maximum height of 3.02m above ground level so that while the LVA relied on a 4m plant height, the majority of the Proposal would be screened once the proposed plants reached a height of just over 3m.

William Peter Reeve (acoustics)

5.53 Mr Reeve is employed as a Senior Acoustic Engineer with Acoustic Engineering Services. He has an engineering qualification and over 11 years' experience in the field of acoustic engineering consultancy. [42]

5.54 Mr Reeve noted the nature of the Proposal being the establishment of solar panel arrays which would be connected to the inverter/transformer skids distributed across the subject site, with future battery sites alongside. At each skid location the air-cooling systems on the inverter and battery were expected to be the dominant sole source of noise. [43]

5.55 The noise emitting items would not operate outside the hours of 7.30am to 8pm seven days a week. Mr Reeve dealt with construction noise and said that he had assessed noise from piling, civil works, panel construction and tree clearing which were expected to be the key stages. He noted that he had undertaken ambient noise monitoring at the site, had considered what noise levels may be appropriate to the environment and reviewed other guidance from appropriate standards. [44]

5.56 Mr Reeve considered that a 50dB LAeq daytime limit for operational noise could be implemented which was more restrictive than the ODP and PDP limits. He agreed that it was reasonable that a lower night time noise limit of 40dB LAeq be in place for completeness. As far as construction noise was concerned, he thought it best practice to rely on the guidance in the relevant New Zealand Standard 6803:1999 *Acoustics-Construction noise* (NZS 6803) used to control the effects of construction activities. [45]

5.57 Mr Reeve went on to note that he had predicted operational noise levels from the equipment associated with all three stages of the development.

---

[42]Statement of evidence / paragraphs 1.1 to 1.3 inclusive
[43] Statement of evidence / paragraph 2.1
[44] Statement of evidence / paragraphs 2.2 to 2.6 inclusive
[45] Statement of evidence / paragraphs 2.7 and 2.8

He said that 324 Branch Drain Road and 870 Hanmer Road were predicted to receive the highest operational noise levels at 48 and 47 dB LAeq respectively. All other dwellings would receive noise levels of 46 dB LAeq or lower. Mr Reeve said that there may be times during the day when the noise from the solar farm was clearly audible in the areas outside the dwellings but said that the noise would not interfere with typical domestic activities and the noise effects would be minimal. [46] He said that construction noise levels were expected to comply with the relevant standard except that 324 Branch Drain Road during the piling activity where it was expected there could be an exceedance of up to 4 dB during that activity for a period of a few days. [47] Mr Reeve recommended the implementing of an construction noise and vibration management plan for use during the construction phase which should be prepared with consideration of the relevant standard and specifically include an element of community relations management and controls for 324 Branch Drain Road. [48] Mr Reeve agreed with the acoustic pier review and s42A report generally recording agreement with the methodology and findings and agreed with the conditions of consent proposed by the Council acoustic reviewer where appropriate with only minor wording clarifications required. [49]

5.58 Mr Reeve went on to deal with predicted operational noise levels in some detail. He noted that he had calculated noise levels using a computational noise modelling software SoundPLAN. He said he had used noise emission data for the equipment provided by the manufacturers for the inverter and that the transformer noise levels had been predicted using guidance from the appropriate New Zealand Standard. He said that a plus 5dB penalty to the transformer noise level had been applied to address the potential for special audible characteristics which was common from the source but that no such penalty had been applied to the inverter or battery sources. He said that he did not consider likely that the operation of the plant items would result in special audible characteristics and that this was consistent with a site visit to a similar KeaX installation in the Wairau Valley. [50]

---

[46] Statement of evidence / paragraphs 2.9 and 2.10
[47] Statement of evidence / paragraph 2.11
[48] Statement of evidence / paragraph 2.12
[49] Statement of evidence / paragraph 2.13
[50] Statement of evidence / paragraphs 7.2 to 7.6 inclusive

5.59 He went on to note that he considered the predicted levels were likely to be conservative noting [51]:-

(i) Both his measurements of the second-generation inverter at Wairau and the manufacturers data for the third generation inverter showed that the source had some directionality and that it was likely that the battery would exhibit similar characteristics. However, he said that all sources had been modelled as dispersing sound uniformly in all directions;

(ii) the third-generation inverter has a variable speed fan and noise levels reduce in the order of 10 to 12 dB depending on orientation;

(iii) the modelling does not account for any local screening provided by the inverters and from the panel array itself.

5.60 As to predicted construction noise levels, already the subject of comment, Mr Reeve said that temporary noise barriers around construction plant could provide a noticeable reduction in noise levels if they could be arranged correctly. However he said that given the height of the piling head a typical 2m high temporary noise barrier may not provide compliance in this case. [52]

5.61 Given the piling works were likely to be within 50m of the dwelling for a few days there was a need for communication with residents. Mr Reeve went on to note that the applicant was investigating options for a custom temporary noise barrier using the likes of a Hushtec Acoustic Curtain or rig attachment. [53]

5.62 Mr Reeve went on to consider the matters raised by submitters. In answer to the concern that the standards relied upon were more appropriate for an urban environment than a rural one, he said that the ODP limits were specific to the rural zone and that the relevant standard was also used widely in both urban and rural setting. [54] As to the concern that noise levels would be higher under certain weather conditions, Mr

[51] Statement of evidence / paragraph 7.9
[52] Statement of evidence / paragraph 8.7
[53] Statement of evidence / paragraphs 8.8 and 8.9
[54] Statement of evidence / paragraph 9.3

Reeve said that in weather conditions which were not as favourable to sound propagation noise levels would actually lower than he had predicted and that his predictions have been undertaken on a worst case basis allowing for favourable conditions (in all directions at the same time). [55]

5.63 Mr Reeve said that the modelling had included cumulative noise emissions from all the solar array fixed plant items (in all three stages) operating concurrently. [56] As to the suggestion that noise from the Proposal would act cumulatively with other sounds in the environment, Mr Reeve said there were already periods when the noise levels were higher than the ODP limits and he expected that when background noise levels were near a dwelling were high or of a similar order to the predicted noise levels, they would often provide some level of masking. [57]

5.64 Mr Reeve said that the underlying district plan limits did not provide any particular protection for sleep during the daytime and that daytime noise levels in the area were often higher than the 45 dB LAeq threshold set out in the WHO Guidelines for Community Noise to allow residents to sleep with windows open during the daytime. [58]

5.65 As to the suggestion that there would be different individual responses to the same noise as a result of many factors including age etc, Mr Reeve agreed but said that this was already taken into account in the noise levels and limits set out above. [59]

5.66 Mr Reeve submitted addendum evidence at the hearing which summarised certain aspects of his evidence and also commented upon the evidence prepared by Mr Mark Lewthwaite on behalf of the joint submitters. Mr Reeve noted that there had been general agreement with Mr Lewthwaite as to the standards and guidance in Mr Reeve's report and also in the recommendation for a Construction Noise and Vibration Management Plan. Importantly, Mr Reeve commented upon the difference in how Mr Lewthwaite had described the likely changes resulting from the Proposal. Mr Lewthwaite had considered that there were likely to be

[55] Statement of evidence / paragraphs 9.7 and 9.8
[56] Statement of evidence / paragraph 9.9
[57] Statement of evidence / paragraphs 9.11 and 9.12
[58] Statement of evidence / paragraph 9.13
[59] Statement of evidence / paragraph 9.14

"prolonged periods of days when the solar equipment is the most noticeable component for the sound environment". [60]

5.67 Mr Reeve then went on to comment on his own ambient noise study in preparation for the hearing quoting the provisions of the relevant district plan. He said that taking his ambient noise measurements, the relatively steady nature of the source and peer review comments into account, he had agreed that the lower daytime limit of 50dB LAeq would be appropriate in this context and that the highest predicted noise levels would be 2dB below this threshold. [61]

5.68 As to the composition of the sound environment and noting that Mr Lewthwaite had assessed the sound composition of the environment taking a comparison with the current contribution of anthropogenic noise which could be expected following the installation of the solar farm. He referred to the "background plus" approach developed in the UK but said that this approach was not currently applied in New Zealand on a regular basis. As to the suggestion by Mr Lewthwaite that when noise levels from the solar farm exceed the level of other noise level in the area, it will become the most noticeable component, Mr Reeve said that this was not necessarily the case particularly as the source was broadband in nature and not as variable as other sources, for example traffic or bird noise. [62]

5.69 Mr Reeve went on to note that noise levels would vary due to weather and often be 5dB or more below the predicted level and said that there were further conservatisms inherent in his modelling a feature being that he had made no allowance for directionality of sources screening from a panel array or variable inverter fan speeds. [63]

5.70 Mr Reeve went on to note that Mr Lewthwaite's analysis had been completed based on the quietest measured 15 minute period of four samples and was of the view that the reported sample size was relatively small. [64] In summary Mr Reeve was of the view that the proposed controls were sufficiently conservative that noise effects would remain minimal for residents near the solar farm. [65]

---

[60] Addendum evidence / paragraph 1.9
[61] Addendum evidence / paragraph 2.12
[62] Addendum evidence / paragraph 3.4
[63] Addendum evidence / paragraphs 3.6 and 3.7
[64] Addendum evidence / paragraphs 3.9 and 3.11
[65] Addendum evidence / paragraph 3.15

5.71 Lastly Mr Reeve dealt with wind noise noting that Mr Lewthwaite had been critical of the lack of assessment of noise generated from wind blowing across the solar panels. Mr Reeve said he was not aware of any research which suggested that this noise was a noteworthy issue if panels were installed correctly, that in most cases it was not possible to accurately predict wind induced noise and that whilst small gaps between panels meant that there may be potential for some noise to be generated under certain wind conditions, this was not a detail that was unique to this installation and he thought this was a relatively low risk and unlikely to result in substantial noise levels offsite. [66]

Martin Gledhill (electromagnetic fields)

5.72 Mr Gledhill is director of Monitoring and Advisory Services NZ Limited which provides professional measurement and advisory services in relation to possible health effects of electromagnetic fields. Mr Gledhill noted that details of the Proposal, and described the receiving environment before commenting upon the background EMF monitoring undertaken. He said that whilst the total size of the Buckleys Road site was much greater than the KeaX Wairau Valley site, the module was similar to the KeaX installation at Wairau Valley and that for that reason measurements of EMF's at the Wairau Valley could be used to estimate EMFs that could be expected from the Proposal. [67]

5.73 As to the Wairau Valley site and the report which followed his investigations there, he said that the key conclusions as to measurements were [68]:-

(i) the highest fields were found close to the inverter skid;

(ii) electric and magnetic fields with distances greater than 1m from the inverter skip were very low in comparison to limits recommended by the International Commission on Non-Ionising Radiation Protection in 1998 and 2010;

(iii) the solar panels and the combiner boxes mounted beneath each string of panels only produced very weak fields;

---

[66] Addendum evidence / paragraphs 4.1 to 4.4 inclusive
[67] Statement of evidence / paragraph 6.1
[68] Statement of evidence / paragraph 6.2

(iv) all field levels decreased rapidly with increasing distance from their source.

5.74 Mr Gledhill went on to note the EMF limits in rural zones set in the ODP which were essentially adopting the standard referred to above. He said that EMF's from the KeaX installation would comply with the rules in both the ODP and the PDP and on this basis EMFs would not adversely affect the health of nearby residents. [69]

5.75 Mr Gledhill then went on to refer to the submissions in opposition dealing with three matters in particular [70]:-

(i) the absence of long-term studies on human health;
(ii) the possible effect on bees which might affect ability to pollinate;
(iii) the possible (but unspecified) effect on bird life.

5.76 Mr Gledhill said that EMFs were not electromagnetic radiation which generally referred to the propagation of energy away from some source such as light from a light bulb and said that the solar farm would not transport energy away from itself. [71] He went on to refer to the fact that there had been a number of epidemiological studies investigating the long-term health of persons exposed to EMF and that the World Health Organisation had concluded that the evidence was too weak to suggest a cause-and-effect relationship between high magnetic fields and increases in leukaemia in children. [72] Mr Gledhill said concluded that the solar farm would make an indiscernible difference to EMFs outside the site so the question of potential chronic effects did not arise. [73] Mr Gledhill referred to literature in relation to the effects of EMFs and said that the measurement at the Wairau Valley solar farm showed that electric fields were everywhere thousands of times below the levels experienced close to high voltage transmission lines. He concluded that it was highly unlikely that EMFs from a solar farm would have any effect on bees and their ability to pollinate in the neighbourhood and there would be no effect outside the solar farm boundary. [74] As to the possible effect on birds, Mr

[69] Statement of evidence / paragraph 6.4 and 6.5
[70] Statement of evidence / paragraph 8.2
[71] Statement of evidence / paragraph 8.3
[72] Statement of evidence / paragraph 8.5
[73] Statement of evidence / paragraph 8.6
[74] Statement of evidence / paragraph 8.9

Gledhill said that research on birds had looked at the possible effects of electromagnetic fields on bird navigation and said that because the region within which elevated magnetic fields existed was largely restricted to a small volume around the inverter skid and that this was unlikely to have any significant effect. [75]

5.77 Finally, Mr Gledhill said that he had reviewed the proposed consent conditions and agreed that an EMF condition was not necessary. [76]

Evidence of Claire Kelly (Planning)

5.78 The final witness called on behalf of the applicant was Claire Kelly. She is Senior Principal and Planner at Boffa Miskell Limited and holds a qualification in environmental management and has had significant experience in planning matters around New Zealand.

5.79 Having summarised the Proposal and noted that batteries were within the scope of the application [77] Ms Kelly noted a minor amendment to the Proposal referable to the description of the fencing at paragraph 24 of the S42A report in that it was not proposed to be a chain link fence with barbed wire instead of deer fencing with three strands of wire on top. This was not regarded as being material.

5.80 Ms Kelly then went on to refer to the resource consents which were required for the Proposal noting the grant of consent by Canterbury Regional Council for a discretionary activity to undertake earthworks and discharge operational phase stormwater to ground. She noted that Environment Canterbury had provided a copy of the application to Mahaanui Kurataio Limited and that there had been a response with the following recommendations: - [78]

(i) with regard to the wāhi taonga site, this was understood to be a midden. The existing fencing and the proposed 50m setback from earthworks was deemed to be sufficient to protect this site;

---

[75] Statement of evidence / paragraph 8.10
[76] Statement of evidence / paragraph 10.1
[77] Statement of evidence / paragraph 3.7
[78] Statement of evidence / paragraphs 4.1 to 4.3 inclusive

(ii) it was not recommended that indigenous planting was undertaken on the wāhi taonga site but the rūnanga support enhancing biodiversity elsewhere on site through planting indigenous species of local whakapapa.

5.81 Ms Kelly then went on to deal with the application to the Council. She noted certain non-compliances with rules in the ODP (notified version of the application). Because of the breach of the shading rule the activity was identified as a restricted discretionary activity. [79] On balance, and in the absence of shading diagrams, Ms Kelly accepted the position regarding this shading non-compliance.

5.82 Ms Kelly went on to note Mr Aimer's view that Rule 3.13 would not be met as proposed fences (buildings) greater than 2m in height would be located within 5m of the property boundary and Mr Aimer was of the view that this required assessment as a discretionary activity. Ms Kelly disagreed because it was her view that the fence by dint of the definition of "building" the fence fell to be considered as a utility building and accordingly Rule 3.13 did not apply. She said that by reference to the relevant rule and the fact that the fences would be setback at least 3m from the property/internal boundaries fences were permitted under Rule 5.2.1.2. [80]

5.83 Ms Kelly agreed with Mr Aimer's assessment of noise limits not applying to the Proposal as the construction activity was deemed to be a temporary activity. [81] Ms Kelly went on to state that the Council had provided a copy of the application to Mahaanui Kurataio Limited and the response had been that the Proposal had been considered holistically and that there were no outstanding concerns regarding further engagement with mana whenua. Accordingly, Ms Kelly did not discuss potential adverse effects on cultural values in her evidence. [82] Ms Kelly went on to note the receipt of submissions and made particular reference to the National Policy Statement for Highly Productive Land ("NPS-HPL"). Ms Kelly noted that further amendments were proposed to address matters raised by submitters which are referred to hereafter.

---

[79] Statement of evidence / paragraphs 4.6 to 4.8 inclusive
[80] Statement of evidence / paragraphs 4.11 to 4.13 inclusive
[81] Statement of evidence / paragraphs 4.14 and 4.15
[82] Statement of evidence / paragraph 4.17

5.84 Ms Kelly went on to refer to the possible relevance of the limited baseline being a discretionary matter in terms of s104(2) of the Act [83]. Ms Kelly noted that Mr Aimer had considered that the following activities were relevant to the permitted baseline:-

> *any buildings could be constructed to a height of 8m;*
>
> *any utility building 12m;*
>
> *any fence over 2m high bordering a road was permitted provided there was a 10m setback to the road boundary;*
>
> *any construction noise for up to the lesser of 12 months or the completion of the project was permitted;*
>
> *the removal of shelterbelt vegetation to the site.*

5.85 Ms Kelly said that there were additional activities which were also relevant being:-

> *digging postholes;*
>
> *earthworks which were setback and limited in volume;*
>
> *the planting of trees for shelterbelts provided they did not shade part of the carriageway, did not encroach within the line of site of any railway crossing or road intersection that did not disturb soil previously disturbed by tree plantings;*
>
> *the generation of energy for use on the same site;*
>
> *utility buildings with certain restrictions as to site and setback and recession planes;*
>
> *buildings associated with rural activities that met the 5% site coverage standard;*
>
> *noise limits assessed at the notional boundary of any building except where located in a Living zone.*

5.86 Ms Kelly went on to note that under the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017, afforestation was a permitted activity in a rural zone provided wilding tree risk is managed in setbacks from adjoining property, dwellings and waterways were adhered to.[84]

5.87 Ms Kelly went on to refer to effects on the environment, focusing on areas where there was disagreement between experts and/or Mr Aimer or a change of approach was proposed. She noted where there was general agreement between herself and Mr Aimer [85]:

---

[83] Statement of evidence / paragraph 4.21 et seq
[84] Statement of evidence / paragraphs 4.21 to 4.24 inclusive
[85] Statement of evidence / paragraphs 5.1 to 5.3 inclusive

(i) *Noise*

Ms Kelly referred to the evidence of Mr Reeve and expressed the view that both construction and operational noise would be appropriately managed to minimise adverse effects on the environment including surrounding residential dwellings; [86]

(ii) *Landscape and visual*

Ms Kelly noted the general agreement between herself and Mr Aimer on the nature and extent of adverse effects on the physical environment. She noted that by reason of the agreement that all landscape planting adjacent to Buckleys Road and Branch Drain Road be 2m in height at the commencement of construction of each stage of the solar farm and the planting of an exotic shelterbelt adjacent to the southern boundary of the site with 324 Branch Drain Road, a number of changes were required to the draft conditions of consent. Overall, she considered that adverse visual effects on all surrounding properties would be less than minor. [87]

(iii) *Glint and glare effects*

Ms Kelly considered that the adverse glint and glare effects on all surrounding properties and roads would be less than minor having regard to the evidence of Mr Williams. [88]

(iv) *Effects conclusion*

Overall Ms Kelly was of the opinion that the adverse effects of the Proposal were acceptable based on amendments to the Proposal. [89]

5.88 Ms Kelly then went on to deal with the statutory and planning assessment noting where there was agreement with the views of Mr Aimer, she noted the areas of agreement being:-

---

[86] Statement of evidence / paragraphs 5.4-5.8 inclusive
[87] Statement of evidence / paragraphs 5.9 to 5.13 inclusive
[88] Statement of evidence / paragraphs 5.14 to 5.16 inclusive
[89] Statement of evidence / paragraph 5.17

(i) the Proposal was consistent with the NPS-REG;

(ii) the Proposal was consistent with the CRPS objectives and policies which she listed;

(iii) there was nothing in the MIMP that would prevent the application from being granted;

(iv) subject to the NPS-HPL matters which she had set out in her evidence being addressed. The Proposal was in accordance with the purpose and principles of the Act;

(v) she expressed the view that the Proposal was not contrary to a number of objectives and policies in the ODP which she specified and went on to refer to the Proposal not being contrary to other objectives and policies in the proposed SDP. This led to a detailed discussion of the NPS-HPL.

5.89 After canvassing the background to the NPS-HPL, and referring to relevant provisions, Ms Kelly agreed that the provisions applied to the Proposal. [90]

5.90 Ms Kelly then went on to deal with the NPS-HPL in some detail. She referred to the relevant objectives and policies of the NPS-HPL and noted that the existing dairy farm operation to the site would be phased out but that grazing of small animals under and around the solar panels would continue. Ms Kelly was of the view that the combination of the new solar farm and the continuation of grazing activity meant that the Proposal was not "caught" by clause 3.9(1) of the NPS-HPL because it was not seeking to solely enable a use or development of HPL that was not land based primary production. Land based primary production would continue on the site. [91]

5.91 Ms Kelly went on to consider the term "inappropriate" in clause 3.9(1) and said that the document was intended to ensure the availability of New Zealand's most favourable soils. She noted that the Proposal may improve the site from a water quality/nutrient management perspective, would require minimum earthworks and not disturb a large area of soil

[90] Statement of evidence / paragraphs 6.4 to 6.6 inclusive
[91] Statement of evidence / paragraphs 6.12 to 6.14 inclusive

which would affect its structure and quality vis a vis its productivity. As such Ms Kelly said the Proposal was not an "inappropriate" use or development of HPL. [92]

5.92 Ms Kelly went on to consider the list of "exemptions" should I consider that clause 3.9(1) did apply to the Proposal, referring to the matters raised in that clause and clause 3.9(3). Ms Kelly agreed with Mr Aimer that the exemption in clause 3.9(2)(j)(i) applied to the Proposal and she considered that the measures in clause 3.9(3) were achieved. [93]

5.93 Ms Kelly then went on to consider the important issue of operational need. She emphasised that the relevant clause referred to "functional *or* operational need". She agreed with the emphasis on operational need. After referring to the definition of "operational need" Ms Kelly noted that the sub-clause only referred to the "maintenance, operation, upgrade, or expansion of the specified infrastructure" and did not refer to "new" or the "establishment of" infrastructure. However she noted that the NPS-HPL:Guide to Implementation (Part 1) dated December 2022 ("the Guidelines") stated that the "intention of this clause was to recognise a situation with the use or *development* of specified infrastructure, may occur on HPL". Ms Kelly referred to the full extract from the Guidelines, which I comment upon later in this decision. Ms Kelly went on to state that the Proposal could be defined as "specified infrastructure" in terms of the NPS-HPL having regard to the fact that specified infrastructure is defined in the instrument as including infrastructure that is recognised as reasonably significant in a regional policy statement as is the case with the Canterbury Regional Policy Statement. [94]

5.94 Ms Kelly noted that solar farms required large generally open sites with little internal vegetation or large-scale buildings or structures on adjoining sites that cause shading and that such sites were generally found in rural areas. She acknowledged that there may be some sites available in industrial areas but these would be few in number and unlikely to be of sufficient size. Ms Kelly went on to note other limitations such as the availability of land for sale and land topography and other features. [95]

---

[92] Statement of evidence / paragraph 6.15
[93] Statement of evidence / paragraphs 6.16 to 6.18 inclusive
[94] Statement of evidence / paragraphs 6.19 to 6.21 inclusive
[95] Statement of evidence / paragraph 6,23

5.95 Ms Kelly then went on to discuss the important element of proximity to a substation saying that this was a key. She said that the cost of constructing a new substation was prohibitive as addressed in Mr McMath's evidence. She went on to refer to the evidence of Mr McMath, repeated the matters which Mr McMath had relied upon in support of the choice of site for the Proposal and expressed the opinion that there was a clear operational need for the solar panel to locate in proximity to the Brookside substation. [96]

5.96 Ms Kelly then dealt with the issue of the ability of the pasture to survive under panels throughout the life of the solar farm, noting the evidence which had been given by Mr McMath in relation to this matter. She noted that the photographs which had been submitted showed how well the grass grew beneath, between and around the panels. [97]

5.97 Ms Kelly went on to address clause 3.9(f) of the NPS-HPL and stated that a use or development of highly productive land was appropriate if it provided for the retirement of land from land based primary production for the purpose of improving water quality. She referred to the Guidance document and the fact that the site lay within the area managed under Section 11 : Selwyn-Te Waihora of the Canterbury Land and Water Plan and the fact that nitrate-nitrogen concentration in groundwater was quite high as is shown in Mr McMath's evidence. Her conclusion was that the solar farm may well assist in improving water quality by replacing dairy farming with sheep farming. [98] Ms Kelly went on to examine the issue of whether the land would be used for sheep grazing or sheep farming and whether sheep farming grazing represented primary production in terms of the NPS-HPL. She referred to Mr McMath's evidence in this regard and concluded that the project would represent sheep farming and not a hobby/lifestyle block activity. [99]

5.98 Ms Kelly then discussed the concept of agri-voltaics. Ms Kelly referred to Mr McMath's evidence and expressed the view that farming in and around solar farms whilst also generating renewable energy represented a highly productive and efficient and sustainable use of land and accordingly Ms Kelly did not consider that the Proposal was contrary to

---

[96] Statement of evidence / paragraphs 6.23 to 6.26 inclusive
[97] Statement of evidence / paragraphs 6.27 to 6.29 inclusive
[98] Statement of evidence / paragraphs 6.32 to 6.35 inclusive
[99] Statement of evidence / paragraphs 6.36 and 6.37

the key outcomes sought by the NPS-HPL to predict highly productive land. [100]

5.99 Ms Kelly then went on to refer to clause (3)(a) of the NPS-HPL requiring the Council to take measures to ensure that any use or development on highly productive land minimised or mitigated any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in the district. Her view was that the HPL would not be lost as the Proposal would not disturb the structure of the soil or remove it from being able to be used for primary production. [101]

5.100 Ms Kelly then referred to the mitigation provisions in clause (3)(b) of the NPS-HPL. Her view was that the Proposal would not result in reverse sensitivity effects as they would not curtail primary production on adjoining sites. As to concerns expressed about dust from ploughing etc Ms Kelly noted that the applicant had confirmed that this would not be an issue given the planting proposed around the site and the cleaning of panels. [102]

5.101 Ms Kelly did not consider that there was any conflict between the NPS-HPL and NPS-REG and concluded that because the use and development of HPL was not inappropriate in the case in question, at a high level there did not appear to be a conflict between the two NPS. She noted that there was no requirement under the Act for any particular NPS to take precedence over the other. [103]

5.102 Ms Kelly went on to discuss the provisions of the ODP. She agreed that the view of Mr Aimer that the Proposal was not inconsistent with Policy B2.2.6 which required utility structures to be made of low reflective materials given mitigation landscaping and the fact that any adverse effects associated with reflectivity (glint and glare) would be less than minor. Ms Kelly was of the view that the Proposal generally accords with the utility objectives and policies. [104]

5.103 As to the quality of the environment, Ms Kelly was of the view that the Proposal was consistent with Policy B3.4.18 but questioned the relevance of this policy and expressed the view that because the

---

[100] Statement of evidence / paragraph 6.38
[101] Statement of evidence / paragraphs 6.39 and 6.40
[102] Statement of evidence / paragraph 6.42
[103] Statement of evidence / paragraph 6.43
[104] Statement of evidence / paragraphs 6.46 and 6.47

"buildings" associated with the Proposal were defined as "utility buildings" they were not generally subject to the Rural Building rules and that it was inappropriate to apply the Rural zone policy on buildings to the Proposal. [105]

5.104 Ms Kelly went on to discuss the effect of the proposed SDP noting the provisions in the general Rural zone which had application. She noted that Mr Aimer had concluded that reverse sensitivity effects of the Proposal on neighbouring primary production would be largely avoided and went on to discuss shading of the adjoining land to the south, expressing the view that this was not a reverse sensitivity issue but an effect of the Proposal. She went on to refer to dust effects on the solar farm, agreeing with Mr Aimer's conclusions and considering that there were no ongoing dust effects or reverse sensitivity matters that needed to be addressed. Overall Ms Kelly considered that the Proposal accorded with the General Rural Zone objectives and policies. [106]

5.105 Ms Kelly then examined Part 2 of the Act and summarised key matters which stood out to her, expressing the view that the Proposal represented sustainable management of resources and was consistent with the purpose of the Act. [107]

5.106 Ms Kelly then went on to refer to certain matters raised in the s42A report. As to shading of neighbouring properties she traversed Mr Aimer's report which had noted that a relatively small area of adjoining properties to the south would be shaded, noting that Mr Aimer had suggested that the proposed shelterbelt should be setback 10m into the site to reduce shading effects. She went on to refer to the fact that the area to be planted with indigenous plants was replacing an existing shelterbelt which must already shade the adjoining land. In summary Ms Kelly considered that any shading effects would be less than minor. [108]

5.107 Ms Kelly then referred to key issues raised by submitters, commencing with the issue of the scope of submissions. She expressed the view that economic viability, the business case, and the need for the Proposal were not matters that were relevant to the assessment of the Proposal. As to community opposition to the Proposal, Ms Kelly agreed that my role was

[105] Statement of evidence / paragraphs 6.48 and 6.49
[106] Statement of evidence / paragraphs 6.50 to 6.55 inclusive
[107] Statement of evidence / paragraphs 7.1 and 7.3 inclusive
[108] Statement of evidence / paragraphs 8.2 to 8.5 inclusive

to evaluate the submissions and evidence before me against the relevant provisions of the Act. She accepted that the petition may represent concerns about the solar farm but noted that the ODP provided for solar farms as a discretionary activity. She said that put simply this equated to an activity that was appropriate in the rural zone but not on every site. She expressed the view that given that the application was the subject of limited notification, the petition was not a matter that could be considered when determining the Proposal. [109] Ms Kelly then went on to refer to the notification decision expressing the view that the notification decision had to be formally challenged and the case heard in the High Court and that it was not for me to revisit that decision. [110] As to the effect on property values, Ms Kelly considered it was appropriate only to consider amenity effects and that adverse effects on property values was simply a measure of adverse effects on amenity values and that it would be very difficult to assess whether or not a proposed activity was likely to result in reduction in property values. [111]

5.108 Ms Kelly then went on to examine Section 5.3.12 of a policy in Chapter 5 (Land Use and Infrastructure) in the Canterbury Regional Policy Statement. Her view was that the policy did not seek to avoid all development, only that which prevented the land being used for primary production and/or results in reverse sensitivity effects that limited or precluded primary production. [112]

5.109 Ms Kelly then commented upon the submissions in relation to criticism of the proposed landscaping. She referred to concerns of submitters regarding increase in bird numbers associated with the established number of trees associated with the Proposal and possible damage to crops. Ms Kelly noted that the submitters were also concerned that the Proposal would adversely affect fauna (including birds) and expressed the view that the planting of indigenous vegetation associated with the Proposal directly supported work to create a corridor for wildlife from the Alps to Banks Peninsula. As to the concern of Mr Casey that the existing shelterbelt on the southern boundary of the subject site, in proximity to his dwelling, be removed and replaced with indigenous planting, Ms Kelly

[109] Statement of evidence / paragraphs 9.6 and 9,7
[110] Statement of evidence / paragraph 9.8
[111] Statement of evidence / paragraphs 9.9 to 9.11 inclusive
[112] Statement of evidence / paragraphs 9.12 to 9.14 inclusive

said that she would like to offer Mr Casey an opportunity to retain the exotic pine shelterbelt which may attract less birds. [113]

5.110 Ms Kelly went on to refer to the issue of electromagnetic radiation expressing the view that the Proposal would not result in adverse effects on the health of surrounding residents or fauna such as bees. [114]

5.111 Ms Kelly then commented upon the issue of chemical leachates. She referred to the grant of consent to discharge operational stormwater to land by the Canterbury Regional Council and considered that any matters regarding potential contamination of soil and water had already been appropriately considered and that the conditions of consent would ensure that potential effects were actively managed. Lastly, she referred to the storage of hazardous substances on the site being managed under other legislative regimes. [115]

5.112 As to fire risks, Ms Kelly noted that such risks associated with the Proposal would be managed under the Fire and Emergency New Zealand Regulations 2018 which required the applicant to prepare a fire and emergency assessment plan and provide it. Further, she provided evidence confirming that the inverters and transformers could contain an internal fire and confirmed that there was installation guidance to minimise fire risk related to the transformers. She said that the batteries would have an integrated fire suppression system. She noted that the grass underneath and around the panels would be grazed and considered that this risk could be appropriately managed to minimise any danger to surrounding properties. [116]

5.113 Ms Kelly then went on to briefly touch on legal precedents. She did not agree with the suggestion that the Proposal did not comply with the general principles set out under s5 of the Act for reasons which she expressed and expressed the view that the Proposal represented a sustainable development. [117] As to reverse sensitivity, Ms Kelly agreed that the Proposal would not result in reverse sensitivity issues. [118] As to servicing of on-site facilities, Ms Kelly noted the facilities which would be provided on-site noting that there was no requirement for consent from

[113] Statement of evidence / paragraphs 9.15 to 9.17 inclusive
[114] Statement of evidence / paragraph 9.18
[115] Statement of evidence / paragraphs 9.19 to 9.20
[116] Statement of evidence / paragraphs 9.21 and 9.22
[117] Statement of evidence / paragraphs 9.23 to 9,25 inclusive
[118] Statement of evidence / paragraph 9.26

the Canterbury Regional Council for discharge to land associated with toilets and washing facilities. [119]

5.114 Ms Kelly then went on to comment upon the expressed concern of submitters that future expansion areas had not been identified as part of the Proposal. Ms Kelly said that she understood that there were no plans to extend the farm and that furthermore any upgrading of the transmission infrastructure including the substation were outside the scope of the application and could not be considered by me. As to concerns about the future of the solar farm should it stop operating, Ms Kelly was of the view that this will be addressed by a condition of consent enforceable by the Council which had appropriately managed the risk of panels rusting on the site and noting the responsibility of the applicant for removal and disposal/recycling of panels. [120]

5.115 Ms Kelly then went on to comment upon the proposed conditions of consent, noting that these would further evolve through expert conferencing prior to the hearing. [121]

6. *EVIDENCE OF SUBMITTERS*

Introductory comments

6.1 My account of the evidence given on behalf of submitters follows. I have not attempted to record every aspect of the evidence given by the submitters in question. Rather I have attempted to provide a summary of what I perceive as the essential elements of that evidence.

6.2 The application was the subject of limited notification. A number of the submitters have criticised the limited notification decision and suggested that had the matter been the subject of public notification, other interested parties would have been involved. I discuss the issue of notification later in this my decision in greater detail. At this stage I wish to make it clear that the decision which follows is based upon my assessment of the submissions and evidence presented to me at the hearing. It has not been appropriate for me to receive any submissions or evidence from persons who did not become parties after the

[119] Statement of evidence / paragraph 9.27
[120] Statement of evidence / paragraph 9.29 to 9.31 inclusive
[121] Statement of evidence / paragraph 10.1 and 102

application was the subject of limited notification. I interpolate that it would be inappropriate for me to consider the petition. To consider a wider body of evidence would have been contrary to the notification decision. Whilst I am obliged by s104(3)(d) of the Act to consider the question of whether the application should have been the subject of wider notification, this does not mean that I have jurisdiction or any role in considering other than the evidence which was presented to me at the hearing.

Donald Green

6.3 Mr Green spoke on behalf of the Glenmore Farming Company Limited. He is a director of that company along with his wife, Ann and two sons. Mr Green said that his background and that of his family in the Brookside District could be traced back six generations and that for the past 61 years his family had been successfully dairy farming on the land along Branch Drain Road across from the proposed site.

6.4 Mr Green said that he was disappointed in how the application had been handled by both the Council and Environment Canterbury given what he said was the major change in what was a highly productive land use and the visual effects and said that he would have thought that at the very least public notification of the project should have been a priority. He said that something of this scope and scale would have attracted an enormous amount of interest.

6.5 Mr Green went on to record his concern regarding the loss of returns from what he said was high productive dairy land, this being lost to the New Zealand economy.

6.6 He went on to state that one of his major concerns was the risk of fire beneath the solar panels and the resulting pollution of the land and environment should such an occurrence happen. He said that to satisfy his concerns of a possible fire outbreak he would be interested in viewing a fire and emergency plan to cover vegetation, solar panels and battery fires.

6.7 Mr Green said he was concerned about the prospect of sheep farming, stating that the soil was wet in the winter. He said that there needed to be fulltime attention if there were to be sheep farming and he wondered

if sufficient facilities such as yards etc would be available. He also expressed concern about thistles being under control.

6.8 Mr Green then went on to mention the Brookside substation. He noted the advantages of the situation of the substation as far as the handling of huge amounts of energy that would be generated from the proposed solar panels. However, he went on to note that the adjacent intersection had a history of many motor accidents and expressed concern about the lack of action to improve traffic safety at the intersection.

6.9 Mr Green went on to state that he and his family shared the objections of other joint objectors to the Proposal especially the Kewish family who were more directly affected. He noted the fact that he had lived and farmed in the area all his life, had experienced a number of weather and earthquake events, and had seen major changes to land use in recent years. He said that dairying had proved most profitable.

6.10 Mr Green said that he understood the need to generate sustainable energy to meet future demands but said that if solar farms were to be part of the community and environment in the future that it was important that certain safety and operational standards were met and reports ordered on a regular basis. He said that at the end of the day a decision would have to be made on the application and it would be a pleasing outcome if the parties could reach some agreement.

6.11 In answer to a question from me as to whether his main concern was fire, Mr Green said that what I understood to be the preservation of the Brookside greenbelt was also a concern to him.

Clark James Casey

6.12 Mr Casey is the owner and managing director of Clearmont Farm, trading as Casey and Sons and is the third generation of his family to farm at Brookside adjacent to the subject site. Mr Casey gave an account of his farming enterprise background including his acquisition of farming land over a number of years. He noted that his work involved growing very top-end crops in a lamb fattening operation all this involving an intensive farming scheme. Mr Casey said that he did not provide Mr McMath with a written approval because he and his wife felt it was unfair to make this decision solely on behalf of a community that had had "no idea what was going on in their own backyard". The other reason was the perceived impact on the farming business. Mr Casey

gave an account of his dealings with Mr McMath including discussion of the status of existing trees on the boundary and what was to happen to the solar panels at the end of the 35 year lease. [122]

6.13 Mr Casey then went on to discuss his perception of the impacts of the Proposal which are summarised as follows:-

(i) he said there was only he, with his experience of running the farming business, who could provide a true picture of the perceived effects on business, family and wellbeing;

(ii) Mr Casey then dealt with visual effects. [123] He said he was concerned about how long trees take to grown in this area of Selwyn due to the unforgiving structure of the Watertown soils. He noted that trees he planted five years ago, which along with fertiliser, irrigation and maintenance of replacing dead trees and spraying gorse and weed, had only managed to grow up to 2m and many were smaller. Mr Casey said that the trees along the south/southwest border of Price and partly Wards which were there at the present time were inadequate to screen any solar panel. He said that he had 1.5km of boundary fence along the farm with no plantings at all. Importantly he said that the height of panels was 3.02m above ground level so that from many vantage points, a 2m high hedge was not going to screen off solar panels or the glint and glare. He said that ideally hedges and amenity planting should be given five plus years to establish as a visual barrier. [124]

(iii) Mr Casey then dealt with the issue of glint and glare. He said that inadequate screening posed real hazard due to glint and glare, noting that he had some big machinery which he used to operate his business up to 4m to 4.5m in height and that this was a real concern for workplace health and safety. He noted that many contractors came to his workplace and was concerned about the effect of glint and glare. He said that his dwelling was affected because it was

[122] Statement of evidence / paragraphs 8 to 15 inclusive
[123] Statement of evidence / paragraphs 18 and 23
[124] Statement of evidence / paragraphs 21 to 23 inclusive

only 300m away from the southwest corner of the solar farm. [125]

(iv) Mr Casey then expressed concern about sound effects. He said that the measurements from the experts that had been taken had been based on where his home was and had not considered the fact that he was working all over the farm and close to boundary fences where the impact of sound would be higher. He expressed concern that "we will hear a hum, a noise that is not good for our mental health". He said that he lived in the country which was quiet at night, loved the peacefulness of the area and did not know how he could cope with the noise which he said would be generated by the Proposal. He said that most noises in the country were normal and expected but the solar operation was a different sound abnormal from country life and that this would be constant and not good for cognitive health. [126]

(v) Mr Casey then went on to refer to his concern about possible adverse effects associated with electromagnetic radiation on bees who were sensitive to magnetic fields. He felt that this element would cause adverse effects on his farming operation and profitability.

(vi) Mr Casey went on to discuss bird damage/weed and seed contamination stating that this was a major concern. He said that with the solar farm being established next door to him the added tree screening of the solar farm was likely to cause a bird problem and that he would "undoubtedly 100% suffer further bird damage". He wanted this element to be carefully investigated. [127]

6.14 Mr Casey then discussed the issue of the solar infrastructure sitting on highly productive land. He referred to comments made by Mr McMath to the effect that it was unlikely that irrigation would be used on the site because the pivots were not suited to the solar farm setup and irrigation would cause an issue of water droplets on the panels.

---

[125] Statement of evidence / paragraphs 24 to 26 inclusive
[126] Statement of evidence / paragraphs 27 to 29 inclusive
[127] Statement of evidence / paragraphs 31 to 35 inclusive

6.15 Mr Casey disagreed with the statement of Mr McMath that 99.92% of the land was still available to be farmed. He referred to the answer of Mr McMath to a question which I put to him as to the area covered by the solar panels, taking a birds-eye view, being 40%. He said that this left the available area at 60%. He said that later he would use 99.92% of land for sheep grazing as they could graze under panels and 60% in a crop situation dryland and irrigated. [128]

6.16 Mr Casey went on to discuss the likely productivity of the subject site given the intention for sheep to graze under the panels. Mr Casey was critical of the suggestion that this element of the Proposal could be satisfactorily carried out expressing the view that the pasture would run out in a few years leaving only wild grasses and weeds to try and grow. He said that the green growth under the panels could not be classed as pasture and that all that would be left would be unpalatable for sheep to eat and went on to refer to the problems which that would cause. He said that the operation would not be able to finish (fatten) lambs. [129] Mr Casey then went on to describe what he said was "a huge fire risk". He went on to criticise Mr McMath's statement that the Brookside project did not have a need for nitrogen and said that it was a mistake to not look after the soil with fertilisers because it would leave soils to become nutrient deficient and useless and would lead to the Brookside solar project not maintaining primary production. Mr Casey said that he had planted a pine tree plantation which was finely logged and "made a pittance". He said his point was that the land that he planted with soil had not been utilised or worked for the past 28 years. He showed a photograph of what the land looked like and said that the planting that he was involved in was a mistake. [130]

6.17 Mr Casey was critical of the likely wool quality, stating that sheep would rub on the steel structures causing discolouration and that wool would be more likely to have more seed discolouration and cotty wool from sitting in longer grass. [131]

6.18 Mr Casey then went on to speak of the economics of farming. He discussed Mr McMath's farming venture on the basis of the information which had been given. I will not list the evidence in relation to the

[128] Statement of evidence / paragraphs 36 to 38 inclusive
[129] Statement of evidence / paragraphs 39 to 43 inclusive
[130] Statement of evidence / paragraphs 44 to 47 inclusive
[131] Statement of evidence / paragraph 48

financial analysis but note that Mr Casey said that even with irrigation, Mr McMath "would be no better off". He cast the project as a failure in the use of highly productive land. He then referred to cropping saying that no crops could be grown under the steel structures or in the laneways because of the need for ploughing and working in the soil bed. Mr Casey concluded by stating that the claims of being able to farm on the land "is just a front to say he is producing good production on good land". He did not believe that the economics of the matter supported the views expressed by Mr McMath. [132]

6.19 Mr Casey then concluded by criticising the decision to proceed with the Proposal, stressed that the subject land was prime rural land for agricultural purposes, referred to the opposition to the Proposal, expressed the view that the wrong site had been chosen and said that there were more suitable sites that would have very few neighbouring properties in a more extensive farming area. [133]

Donna Jayne Kewish

6.20 Ms Kewish, together with her husband David and two daughters live at 324 Branch Drain Road and have lived there since March 2000. It is a small land area at 5060m² and is situated immediately adjacent to the subject site. Ms Kewish expressed concern about the closeness of the Kewish property to the subject site and said that with a solar farm in the pipeline at Te Aroha, hear Hamilton, the panels and equipment were to be set back from public roads by at least 120m and 150m from neighbouring houses. [134]

6.21 Ms Kewish noted that the Kewish property had been identified as the worst for noise during construction operation. She expressed her appreciation of the peace and quietness of the area and was concerned about this being replaced by a constant hum of inverters and cooling systems. She played a tape-recording noise from an operational solar farm at the hearing (the solar farm being situated in the United Kingdom). [135]

---

[132] Statement of evidence / paragraphs 49 to 54 inclusive
[133] Statement of evidence / paragraphs 55 to 63 inclusive
[134] Statement of evidence / paragraphs 1 to 5 inclusive
[135] Statement of evidence / paragraph 6

6.22 Ms Kewish said that the family were keen gardeners and noted the challenges in getting plants to grow in the area. She noted the exotic pine hedge running along the northern boundary and said that there were always gaps and these had become larger and more apparent after a trim. While she said the Kewish family appreciated the second row of plantings now going on beyond the hedge to help with this issue she was of the view that she would be able to see into the subject site. She said that the Kewish family valued the wide-open uninterrupted views along Branch Drain Road and said that the family would see views of panels from a living room every day when the curtains were open with the rural amenity value being lost. She said the view would be greater in autumn and winter when the deciduous trees and shrubs would lose their leaves and that the family would then have a 27m wide view towards the site. In addition, she said that until the proposed boundary plantings had grown sufficiently there would be problems with glare. [136]

6.23 Ms Kewish was critical of community engagement in saying that the whole community should have been consulted. She said that at no stage had written approval been sought from her. [137]

6.24 Ms Kewish expressed concern about the potential risk of fire breaking out on the site which may lead to a need to evacuate immediately due to the toxic chemicals that would be released into the air and associated health risks. [138] Ms Kewish expressed concerns about the impact which a solar farm was likely to have on the prospects of selling the Kewish property which was intended in the future. She felt that potential buyers would be limited. She said that buyers would be wanting a quiet rural amenity "not an industrial powerplant in their backyard". She went on to stress the profound effect that the Proposal has had on her mental health which had involved the need to attend a therapist. She said that she had lost weight and had experienced trouble sleeping. [139]

Robyn Lynnette Anne Casey

6.25 Ms Casey is the sister of Mr Clark Casey and lives at 265 Branch Drain Road having resided there since December 2002. Ms Casey owns 8.9030 hectares at her home residence but also other land which is farmed by her

[136] Statement of evidence / paragraphs 7 to 10 inclusive
[137] Statement of evidence / paragraphs 11 and 12
[138] Statement of evidence / paragraph 13
[139] Statement of evidence / paragraphs 14 and 15

brother Clark Casey. She works as a general manager for a national non-profit organisation in Christchurch and commutes to Christchurch. [140] Ms Casey stressed that her choice to live where she did was based upon lifestyle issues including peace and quiet and rural views. She expressed concern at losing or having her lifestyle damaged by a development that "shouldn't be going where it is – in terms of loss of views, glint and glare, acoustics, type of soils and flooding".[141]

6.26 Ms Casey described the view that she enjoyed and, stressed that she wanted peace and quiet and said that glints and glare would be a concern from her drive. [142]

6.27 Ms Casey went on to express concern about the lack of consultation and said that Mr McMath had never met her to discuss anything. She noted her communications with Mr Clark Casey, her brother and in relation to the requests to keep matters quiet and the request that Clark signoff on behalf of all persons. [143]

6.28 Ms Casey referred to the steps she had taken to contact the Council in relation to her concerns and went on to express concern about what she said were the inconsistency of information provided. She said that the project was bigger than the size of Leeston, the nearest town, and that when she spoke to people they had no idea of the size of this or the potential risks associated with the conduct of the project. She said that she was not anti-solar but did not want the solar farm to be located where it was proposed. She made reference to a contact with a landowner from the Lauriston solar farm, noting that this was established in a rural environment where there were only a limited number of neighbours and that there had been full consultation and plantings were consistent. [144]

6.29 Lastly Ms Casey referred to concerns about the effect of weather events. She said that she was situated in a flood zone. She referred to the Environment Canterbury discharge operational stormwater to land consent requiring stormwater to be discharged onto and into land within the boundary of this site. She said it was important to note that runoff and any contaminants would run into outside the boundaries and into

[140] Statement of evidence / paragraph 1 to 5 inclusive
[141] Statement of evidence / paragraphs 6 to 8 inclusive
[142] Statement of evidence / paragraph 9 to 11 inclusive
[143] Statement of evidence / paragraphs 12 to 15 inclusive
[144] Statement of evidence / paragraphs 18 to 20 inclusive

creeks that flow into Lake Ellesmere. She said that she was concerned about the interaction of water with electricity saying that electricity and water do not mix. [145]

Paul Andrew Smith (Landscape)

6.30 Mr Smith is Senior Landscape Architect employed by Rough Milne Mitchell Landscape Architects. He holds architecture qualifications and has been practicing as a landscape architect since 2012. He has worked on a number of solar farm projects which he identified in his evidence. [146]

6.31 After Mr Smith described the information which he had read prior to giving his evidence, he said that he agreed that the methodology followed by Ms Anthony in her landscape assessment in her statement of evidence was appropriate. [147]

6.32 Ms Smith went on to describe the Proposal noting the proposal to use native plant species along the boundaries. He said that he had come to learn through individual conversations with submitters that the growth rates of vegetation which are not maintained in Brookside was surprisingly slow and gave examples of this. He said that different native species which were to be planted at 2m tall were relatively spindly and transparent in juvenile years including at 2m tall. He said that he had found that vegetation planted at a taller height may struggle to establish and that in the first few years of growth can be slower than smaller grades of plants. [148]

6.33 Mr Smith went on to refer to the irrigation proposals. He said that there was no certainty that plants would be irrigated following the first two to three years which was likely to stunt the mitigation vegetation growth rates and lengthening the timeframes for screening. He went on to refer to the preparation of a landscape management plan and noted proposed conditions. Based on those conditions he considered that the detail relating to the proposed mitigation vegetation remained relatively unresolved and he considered that a level of detail should be provided to provide certainty that future vegetation would establish and mature so

[145] Statement of evidence / paragraphs 21 to 28 inclusive
[146] Statement of evidence / paragraphs 1 to 5.4 inclusive
[147] Statement of evidence / paragraphs 8 to 14 inclusive
[148] Statement of evidence / paragraphs 15 to 22 inclusive

that it visually screened the Proposal for the surrounding public and private places. [149]

6.34 Mr Smith agreed with the description of the existing environment but noted that there was confusion regarding the description of the site's southern boundary along Hanmer/Caldwells Road. He showed a photograph illustrating the site boundary to be situated alongside a mature row of Macrocarpa trees. These trees are to be removed as the site's boundary is highlighted by a low gorse hedge. He said that there was no exotic shelterbelt along the section of the southern boundary that ran northeast to southwest. [150]

6.35 Mr Smith went on to refer to his agreement with the statutory provisions that had been taken into account including the National Environmental Standard for Renewable Energy Generation 2011 which he said was relevant. [151]

6.36 Mr Smith went on to view the assessment of effects. He said that the Proposal made a track from the open space and rural landscape values in the amenity afforded by this rural outlook and considered that the landscape assessment downplayed these issues by using terms like "multiple structures" when describing the amount of built form that would be located within the site. [152]

6.37 Mr Smith went on to describe the visibility and visual effects. He said that that mitigation vegetation may not be able to be relied upon and that adverse visual effects from other neighbours may be greater than had been previously assessed. [153]

6.38 As to the property of Clark and Elizabeth Casey at 180 and 198 Branch Drain Road, Mr Smith noted that a shelterbelt adjacent to the dwelling had been topped so that the view gained from upstairs bedrooms was maintained. He referred to the fact that Mr Casey spent much of his time working his land on the tractor where the eye height varied between 1.2m to 4.5m above ground level and the fact that the rural outlook and

[149] Statement of evidence / paragraphs 23 to 25 inclusive
[150] Statement of evidence / paragraphs 26 and 27
[151] Statement of evidence / paragraphs 28 and 29
[152] Statement of evidence / paragraph 30
[153] Statement of evidence / paragraphs 32 to 33

amenity that the Casey's experienced on a day-to-day basis was greatly valued. [154]

6.39 Mr Smith said that, contrary to a statement by Ms Anthony, Mr Casey did not express a preference for native vegetation along the boundary. Rather he had requested that boundary planting screen the solar farm. Mr Smith noted the existing shelterbelt provided visual mitigation of the Proposal from upstairs views was proposed to be removed and replaced with native vegetation that would be maintained in the long term at approximately 4m tall. This boundary treatment would occur along approximately 2.4km of the shared boundary. As to the views from the upstairs bedrooms, the proposed vegetation would allow open views over the site in which a large portion of the solar farm would be clearly seen. From the Casey's paddocks Stages 2 and 3 would be clearly seen until such time as the native vegetation reached 4m tall. Mr Smith agreed that when standing or in a regular vehicle the solar farm would be screened when the proposed vegetation was 2m tall but from the taller farm machinery this was not the case. [155]

6.40 Mr Smith took issue with Ms Anthony's Visual Simulation 2 – figures 4 and 5 from Branch Drain Road, near the Casey dwelling. He found them to be inaccurate because the simulations illustrated the proposed native vegetation as approximately 3m tall and 8m tall respectively; a height that these plants would not grow to in the timeframes in question. He did not place any weight on the two visual simulations. [156]

6.41 Mr Smith went on to note the potential for glint and glare to acerbate visibility and visual impacts of the solar farm. He said these effects would occur particularly in the morning when travelling north to south through the paddocks along Branch Drain Road and in the evening when travelling east to west through the paddocks alongside the subject site's southern boundary. He said that this was because the glare has a "skimming stone" effect from solar panels fixed in place. Mr Smith emphasised that he was not an expert in the glint and glare field and that it was necessary to rely on experts to provide details. [157]

---

[154] Statement of evidence / paragraphs 34 to 37 inclusive
[155] Statement of evidence / paragraphs 38 to 41 inclusive
[156] Statement of evidence / paragraph 42
[157] Statement of evidence / paragraph 43

6.42 In summary Mr Smith was of the view that the proposed solar farm would have a high degree of adverse visual effects when viewed from the three upstairs bedrooms which were in the Casey dwelling which would not be mitigated. When seen from the paddocks the adverse visual effects would be of a moderate to high degree and potentially a higher degree during those times when the glare would result. Those visual effects may reduce if the proposed vegetation achieves its desired outcome but Mr Smith expressed concern about this. [158]

6.43 Mr Smith went on to discuss the concerns of Ms Robyn Casey at 265 Branch Drain Road. He noted the physical characteristics of Ms Casey's property and the rural outlook and amenity that was enjoyed by her. [159]

6.44 Mr Smith noted that the site was currently visible through the 280m gap in the shelterbelt along the site's western boundary and noted that the southern half of the solar farm would be seen prior to the proposed vegetation reaching 3m to 3.5m in height and formed a thick hedge. He noted that the proposed vegetation may need to be 3.5m tall because Ms Casey's dwelling is approximately 0.5m above ground level. He said that during this time the large extent of built form in its rural utility/industrial character would degrade the outlook and rural amenity that is experienced. In addition, he said that there was a proposal for glare to acerbate the visual effects of the solar farm, in particular in the morning. [160]

6.45 Overall, he considered that prior to the proposed vegetation maturing the proposed solar farm would have a moderate degree of adverse visual effects when experienced from the master bedroom, veranda, garden and when exiting the driveway. Adverse visual effects from the remainder of the dwelling and property would be a low or very low degree or no effect at all. Mr Smith said that the adverse visual effects may be potentially higher should glare become a factor. [161]

6.46 Mr Smith then went on to refer to the Kewish property at 324 Branch Drain Road. After describing the physical characteristics of the property and producing photographs showing the views from the Kewish property, Mr Smith said that he had reviewed Ms Anthony's visual effects

---

[158] Statement of evidence / paragraph 45
[159] Statement of evidence / paragraphs 46 to 48 inclusive
[160] Statement of evidence / paragraphs 49 and 50
[161] Statement of evidence / paragraphs 51 and 52

assessment and disagreed with it in part. He did not agree that what he termed a more distant location in Ms Anthony's Image 3 was appropriate. He said that the photograph did not show the gaps that existed in the mature shelterbelt which are not easily seen or illustrated in the photograph. Mr Smith noted that the shelterbelt was situated in a box drain and discussed what would happen if the shelterbelt was required to be removed the views to the north would be entirely opened up and the solar farm within Stage 1 would be clearly seen. Mr Smith noted the recommendation that an additional shelterbelt two rows deep be implemented on the site. Mr Smith recommended that the shelterbelt proposed by Ms Anthony be extended along the entire length of the boundary to provide desired screening, noting that the shelterbelt may need to be located 10m from the drain being 12m from the boundary line so that the drain can be regularly maintained. [162]

6.47 Mr Smith then referred to views to the solar farm within Stage 2 in which native vegetation was proposed to screen it from view. Mr Smith said that the solar farm within Stage 2 would be seen for up to two years following the planting of vegetation and on the western side of Stage 3 for up to three years following planting. Overall Mr Smith concurred with Ms Anthony's recommendation regarding the use of an additional shelterbelt to visually screen the Proposal to negate any adverse effects. He recommended that shelterbelts should extend along the entire southern boundary *and* be offset from the waterway. [163]

6.48 Mr Smith then dealt with the solar farm to the east. He considered that prior to the proposed vegetation maturing it would have a low to moderate degree of adverse visual effect when experienced from the lounge, main outdoor living and garden areas. Adverse visual effects from the remainder of the dwelling and property would be of a very low degree, or no effect at all. Mr Smith said that these visual effects may be higher if there are resulting glare effects. [164]

6.49 Mr Smith then discussed the position regarding surrounding public roads. Having commented upon the lack of certainty regarding the proposed vegetation's ability to establish to a mature height and width that would visually screen the proposed solar farm, Mr Smith was critical

[162] Statement of evidence / paragraphs 55 to 60 inclusive
[163] Statement of evidence / paragraphs 61 to 63 inclusive
[164] Statement of evidence / paragraphs 64 and 65

of Ms Anthony's visual simulations finding that they inaccurately illustrated the plant's growth rates which were faster than they were. Further he said that there were instances where Ms Anthony relied on single rows of mature trees to provide continuous long-term screening and said that Ms Anthony did not appropriately consider the lifespan of the vegetation. He agreed that a person travelling along a road would obtain a more fleeting view when compared with a stationary view but noted that there were a lot of people who reside in the area who would regularly travel along the roads and also notice people riding around the roads. He said that the viewing audience travelling along these roads would notice small nuanced changes to the landscape and have their amenity more affected when compared with a person travelling through this area on a one-off occasion.

6.50 Overall, he considered that prior to the proposed vegetation maturing, the proposed solar farm would have a moderate degree of adverse visual effects when seen from Buckleys Road, Branch Drain Road, and Hanmer/Caldwells Roads. He said that the adverse visual effects described could be potentially higher should deer become a factor. When seen from Grahams Road, the adverse visual effects would be of a low to moderate degree and glare would not be an issue. He said that if the vegetation established and matured the adverse visual effects would reduce to a very low degree. [165]

6.51 When examining landscape effects Mr Smith said that he generally agreed with Mr Densem's peer review that the character of the site would change from rural open pastural character to a predominantly rural utility/industrial character. He went on to refer to how much of the site would have solar panels standing above pasture grass and said that from his experience the solar farms he had accessed covered approximately 30% of their prospective sites with 70% of the site mostly remaining as pasture. He also agreed with Mr Densem that the proposed vegetation was not in keeping with the rural character of the area which was mostly comprised of shelterbelts and hedgerows delineating boundaries between paddock/property. He said that whilst an exotic shelterbelt would be the most visually prominent aspect of the Proposal it would be in keeping with the vegetation patterns in the area. Overall, due to the uncertainty regarding proposed vegetation's ability to visually screen the

[165] Statement of evidence / paragraphs 66 to 74 inclusive

Proposal, he considered that the Proposal would have a moderate degree of adverse effects on the landscape character of the site it surrounds. [166]

Rebuttal evidence

6.52 Mr Smith noted that since preparing his statement of evidence, there had been changes to the Proposal and in particular the construction of a solar farm would not occur prior to all proposed plant species reaching 2m tall. Based on this he considered that most built-form below 2m tall would be screened by people on foot in cars and SUVs. He said that views between more spindly vegetation may be still be gained. He then referred to the visual simulations. He raised concern regarding the use of the term "visual simulation" and considered that the term was misleading. [167]

6.53 Mr Smith then discussed the property of Clark and Elizabeth Casey at 180 and 198 Branch Drain Road. He noted that there was no certainty regarding the irrigation of the native plants once they reached 2m tall and repeated concerns about the screening of the solar farm from the upstairs bedrooms or tall farm machinery. Mr Smith referred to the transparent nature of the existing shelterbelt with views of the site being readily available through the gaps and considered that if the proposed landscape treatment was further changed a double row of conifer shelterbelt would be required. He noted that he had not stated that glare would be experienced from the upstairs bedrooms within the Casey dwelling but said that glare may be experienced when sitting on a tractor. [168]

6.54 As to the property of Robyn Casey at 265 Branch Drain Road, Mr Smith said that the changes to the Proposal meant that the lower half to two-thirds of the panel would be screened which would reduce the potential adverse effects from low to low-moderate. The higher degree effect was from the master bedroom and veranda but these effects may reduce if the vegetation provided further screening. [169]

6.55 Lastly, Mr Smith referred to the Kewish property at 324 Branch Drain Road. He referred again to the possibility that the shelterbelt located

[166] Statement of evidence / paragraphs 75 to 81 inclusive
[167] Statement of evidence / paragraphs 5 to 7 inclusive
[168] Statement of evidence / paragraph 10 to 14 inclusive
[169] Statement of evidence / paragraph 15

within the box drain which caused flooding issues may need to be removed over the 35 year or more lifetime of the solar farm and in which case it would open up views to it. He said that this was a likely scenario and while removed the Proposal would have a low moderate to moderate degree of adverse effects. [170]

Mark Douglas Lewthwaite (acoustics)

6.56 Mr Lewthwaite is an acoustic consultant with 17 years of acoustic and mechanical engineering consultancy experience. Prior to giving evidence in this case he noted the material which he had reviewed and noted that he had been requested to provide an acoustic peer review of the application. [171]

6.57 Mr Lewthwaite broadly agreed with the references to various standards and guidance within the application acoustic report and the MDA report. Having commented upon Mr Reeve's evidence, Mr Lewthwaite noted that there had been no assessment of noise generated (if any) from wind blowing across a solar panel's structure. He agreed that the relevant standard should be referred to for construction noise management. [172]

6.58 Mr Lewthwaite went on to discuss the sound environment composition assessment. He said that he did not have appropriate expertise to comment broadly on changes in amenity much of which was unrelated to sound but that the term "pleasant" was a term that would include the properties of the sound environment. He referred to his noise logging and observations undertaken and considered how the proportions logged might change with the introduction of solar or equipment noise at the levels predicted by Mr Reeve. [173]

6.59 Mr Lewthwaite said that in the case of 324 Branch Drain Road the change was reviewed at 48dBA being the model noise levels from the evidence of Mr Reeve and also at 42dBA, 6dB less. Mr Lewthwaite went on to explain why 42dBA was included. Mr Lewthwaite said that the process for determining the balance of noise sources from solar equipment was to assume that all noise louder than the respective solar equipment levels would remain the most noticeable sound source and where the

[170] Statement of evidence / paragraph 16 to 19 inclusive
[171] Statement of evidence / paragraphs 1 to 11 inclusive
[172] Statement of evidence / paragraphs 12 to 17 inclusive
[173] Statement of evidence / paragraphs 19 to 27 inclusive

solar equipment was louder than the recorded ambient level the solar equipment noise would be the most noticeable. Mr Lewthwaite said he considered an analysis that also factored in relative distinctiveness of character. However, given that solar equipment noise may have aspects that are tonal, of distinct character and more broadband in nature, any two factor analysis considering both level and distinctness of character would be complicated, speculative and subjective. [174]

6.60 Mr Lewthwaite said that the results of the overall analysis at 324 Branch Drain Road showed 86% desirable sound and 14% noise without the solar equipment changing 0% desirable sound and 100% noise when the solar equipment noise was at 48dBA. In the lower solar equipment noise scenario, the outcomes were 4% desirable sound and 96% noise. Mr Lewthwaite said that the average outcome across all four samples were 69% desirable sound and 31% noise without the solar equipment, changing to 6% desirable sound and 94% noise when the solar equipment was at the upper noise level. In the lower solar equipment noise scenario, the outcomes were 18% desirable sound and 82% noise. Mr Lewthwaite said that both change in composition and noise levels would be readily apparent in the conditions observed and the noise environment less pleasant. [175]

6.61 Mr Lewthwaite went on to refer to the fact that the measured periods did not include louder continuous anthropogenic noise sources involved in the rural activities and noted that natural sound would also vary offering the balance of desirable sound and noise. He then referred to wind levels and said that further analysis would need to be undertaken to determine the relevant wind data. [176]

6.62 Mr Lewthwaite went on to refer to the evidence of Mr Reeve and said that based on the sample analysis conditions undertaken by Mr Lewthwaite, which were within Mr Reeve's anticipated existing ambient noise level range, there were likely to be prolonged periods of days when the solar equipment was the most noticeable component of the sound equipment. Hed went on to state that acoustic screening of solar equipment could be investigated to reduce noise emissions. [177]

---

[174] Statement of evidence / paragraph 27 to 30 inclusive
[175] Statement of evidence / paragraphs 32 to 34 inclusive
[176] Statement of evidence / paragraphs 35 and 36
[177] Statement of evidence / paragraphs 38 and 39

6.63 In conclusion, Mr Lewthwaite said that properties such as 324 Branch Drain Road would experience a change in the sound environment composition and level which would be readily apparent in conditions similar to those observed. The change would be a shift from one of more commonly natural sound to operational sound from the batteries (assumed to be ventilation noise) and the inverter electronics. This would make the sound environment less pleasant, and should be considered as part of assessing the change in amenity. [178]

Raymond John Henderson (contaminants and ecology)

6.64 Mr Henderson gave an account of his experience and qualifications which consisted of involvement in a number of projects in which he had worked as an ecologist and ecotoxicologist over a number of years. Mr Henderson did not give an account of academic qualifications but it is clear from his evidence that he has significant expertise and experience in the field of contamination which he addressed in his evidence. [179]

6.65 Mr Henderson said that contamination effects that would not be appropriately avoided, remedied or mitigated by the consent conditions imposed by the Canterbury Regional Council remained relevant. He addressed those effects. Mr Henderson provided a helpful series of diagrams and photographs illustrating certain matters in his evidence. Then, at the conclusion of the hearing, and at my invitation, he submitted the literature upon which he sought to rely, this having been uncertain at the hearing when Mr Henderson pointed to a box full of documents.

6.66 Mr Henderson addressed the issue of the nature of contaminants and the risk of escape of those contaminants. He noted that solar panels typically included a number of contaminants including metal halides, silica and PFAS. He presented a table showing the half-lives, health and environmental risks of materials used in solar technologies stating that solar technologies were comprised almost entirely of heavy metals, glass that was mainly silica circuit boards and wire installation that were mainly per and poly-fluoroalkyl substances and films for encapsulating the mix of ethylene vinyl acetate polymer layers and edge sealants. He

[178] Statement of evidence / paragraph 40

said that these materials had a very long half-life in the environment and were colloquially referred to as "forever chemicals". [180]

6.67 He said that because the materials in solar technologies have high hazards, then the exposure of soil, air water and eco-systems must be low for risks to be low. He said that in spite of intensive research and especially ongoing research over the last two years there was no effective way to prevent leaching of the substances into soils and waters. He said there had been numerous papers printed on leaching of materials from solar technologies. He went onto state that in the event of a fire a multitude of additional toxic substances would be produced by combustion that were hazardous in soils and waters and if inhaled in air were very hazardous noting the nature of these substances. [181]

6.68 Mr Henderson noted that the Canterbury Regional Council had granted two resource consents but he said that they had not assessed and provided mitigation measures in the conditions imposed for a number of additional sources of contamination. He also noted that the applicant had not sought consent to discharge such additional contaminants. [182]

6.69 Mr Henderson went on to state that most of the metal halides and solar technologies were highly toxic to aquatic organisms and gave an account of the elements in question which I will not repeat in this decision. Mr Henderson said that the consents from Environment Canterbury could neither control nor prevent PFAS being washed into Te Waihora where Māori harvest wild foods. He added that silica from the glass and solar panels leached into water has a significant toxicity to the gills of fish and that metal halides not only severely impact the welfare of waterfowl but these compounds bio-cumulate in tissues so fish and water fowl act as a medium for the transfer of PFAS and heavy metals back to humans. [183]

6.70 Mr Henderson referred to the leachates from solar panels on soils bio-accumulating and said that after 30 years at Brookside under solar arrays, the soils will be severely impacted in the area under solar panels and will be listed as a "contaminated site" in the event of a fire. Mr Henderson went on to state that metal halides and PFAS in animals bio-

---

[180] Statement of evidence / paragraphs 7 to 10 inclusive
[181] Statement of evidence / paragraphs 11 to 13 inclusive
[182] Statement of evidence / paragraph 14
[183] Statement of evidence / paragraph 21

cumulate in livers and kidneys where they affect a multitude of enzymes and electro transactions which cause significant health issues. [184]

6.71 Mr Henderson went on to refer to brodifacoum being a significant health hazard and that metal halides in PFAS compounds behaved in the same way being termed "forever chemicals". After discussing this further including the research in relation to these matters, Mr Henderson said that he had not formed fixed opinions on the risks associated with solar technologies but kept an open mind as to the long-term implications at Brookside for ecosystems and human health. However he said that there were substantive linkages within the literature for future risk to both ecosystem health and human health. Mr Henderson said that residues of heavy metals in sheep, cattle, goats and other livestock grazing under solar panels needed evaluation. [185]

6.72 Mr Henderson then dealt with the issue of aquatic toxicity stating that what he termed the "forever chemicals" be washed into creeks and eventually down to Te Waihora. He said that all metal halides were highly toxic to aquatic organisms. Having discussed the technical aspects of this matter further, Mr Henderson said that the applicant could not discharge stormwater into drains and creeks and that Environment Canterbury must revoke the consents. [186]

6.73 Mr Henderson then went on to discuss the issue of soil toxicity. He said that leachates would be integrated into soil concentrations that were toxic to soil microorganisms. He added that they reduce total organic carbon and nitrogen, change pH, and alter water dispersion. Mr Henderson went on to note that total organic carbon and nitrogen soils under solar panels were reduced by 61% and 50% respectively after 7 years during a study in Italy and went on to discuss the effect of land use change which he said induced significant changes in the physical, chemical, and biochemical properties of soils. Mr Henderson said that the effects he noted created serious concerns for the long-term viability of fertile soils in New Zealand and noted the uncertainty regarding the question of whether the sites used for solar facilities would finish as "contaminated sites" and whether after decommission the soils would be able to be restored to their previous state. Mr Henderson went on to refer to leaching saying when it was low earthworms may mitigate some

[184] Statement of evidence / paragraphs 22 and 23
[185] Statement of evidence / paragraphs 24 to 31 inclusive
[186] Statement of evidence / paragraphs 33 to 36 inclusive

effects on micro-organisms but with constant leaching and/or pulses of heavy metals then macro-organisms are overwhelmed. He expressed concern for the survival of earthworms. [187]

6.74 Mr Henderson then went on to express the view that the assessment of environmental effects published by the applicant lacked detail. He went on to note the composition of solar technologies and stated that leaching of substances from solar technologies would increase through time as panel delaminated in UV light with the advent of weather events and with fire. He said that leaching would in the main be "pulsed" with high leaching when panels were damaged by hail, light, lightning, wind, torrential rain, acid rains, the freeze thaw after snow, and he said that leachates would be extremely high after fire. [188]

6.75 Mr Henderson went on to discuss the risk of fire stating the possibility of a fire at Brookside was not insignificant and that the consequences where a massive release of toxic materials were released into the air. He noted the conversion of materials which would be released during a fire and said that they would present a very significant risk to human health and the health of aquatic systems around the site. He said that fire damaged panels would leach vastly increased amounts of metal halides and other elements of the panels and leachates would flow into surface waters that surround the proposed development in the first rains. [189]

6.76 Mr Henderson then went on to discuss surface water, stating that in the event of rain and floods stormwater discharge with leachates was moderate to high. He referred to the model in his evidence and stated that the risk to surface water was moderately high. In the event of a fire he said that leachate hazard was very high and discharge from stormwater was high so risk to surface water was very high. He said that the "forever chemicals" that accumulate in stream water in Lake Ellesmere could only be removed if they were ingested by birds. [190]

6.77 Mr Henderson then discussed aquatic systems expressing concern for endangered mudfish in the creeks around the site and also for trout, eels, ducks, pukeko, herons and bitterns that occasionally frequented

---

[187] Statement of evidence / paragraphs 37 to 42 inclusive
[188] Statement of evidence / paragraphs 43 to 46 inclusive
[189] Statement of evidence / paragraphs 47 and 48
[190] Statement of evidence / paragraphs 49 and 50

the waterways. He said the ramifications for those Māori that still harvested eels and flounder from Lake Ellesmere was serious. [191]

6.78 Mr Henderson noted that the leachates were constantly added to soils and then dramatically increased in "pulses". He said that leachates from panels would grow at an increased rate over time but losses from the site were mainly attributed to stormwater and materials going offsite in livestock. He questioned whether this reached an equilibrium. He said the answer was probably not. He expressed the view that plant growth with losses of soil nitrogen and loss of organic carbon and soils would slow because of growth factors. He said that in the second half of the project there would inevitably arise in heavy metals and PFAS in soils. Overall, he suggested a high long-term hazard rating for soils. [192]

6.79 Mr Henderson then dealt with groundwater stating that the leachates would leach through damp soils over winter and enter shallow groundwaters but because of the nature of soils the process would take time. He said in the first half of the project PFAS and metal halides in groundwater would be negligible to low. In the second half of the project, he said that the position may be quite different. He expressed concern about the future position and said that long-term risks were unknown. [193]

6.80 Mr Henderson then went on to discuss what he termed "forever chemicals" in the food web. He commenced by citing the example of brodifacoum use in North Island poto cut forests, noting that this form of control was killing other non-target species. He then went on to consider PFAS and metal halides as they enter the food web. He noted the effects of PFAS and metal halides as they entered the food web stating that compounds in metal halides caused long-term health problems and disrupted normal physiology. He said that at the site of the solar farm the amount of "forever chemicals" leached into the environment would be 3-orders of magnitude higher than the amount of brodifacoum that went into the environment in North Island protocol forests and expressed concern at the effects of this. He said that for birds and other vertebrate species the exposure to heavy metals and PFAS was high. He said that the hazard was high and accordingly the

[191] Statement of evidence / paragraph 51
[192] Statement of evidence / paragraphs 52 to 54 inclusive
[193] Statement of evidence / paragraphs 55 and 56

risk was X high. He concluded by stating that the impacts of a solar farm on ecosystems was serious. [194]

6.81 Mr Henderson concluded by stating that the long-term impacts of solar technologies on ecosystems were potentially very dire. He referred to the example of brodifacoum (referred to above) and said that unlike brodifacoum that was applied to the environment at very small rates the active compounds from solar technologies would be broadcast at much higher rates. He made an assessment of the extent of heavy metals and solar panels and said that if just 0.01% (which he said was a very conservative figure) of the heavy metals and PFAS on site were lost as leachates in good weather, then that would be putting 300 kilograms per annum into the environment or 10,500 kilograms of PFAS and heavy metals onto soils over the 35 year course of the project. [195]

6.82 Mr Henderson went on to note the figures in literature citing up to 100% of dangerous metal halides each out of broken panels with acid rains and typically around 20% from broken panels or panels with weak spots in pH-neutral rain in a year. He said these figures did not include leach silica which is just as toxic to fish as leached heavy metals. He went on to reiterate his concerns regarding the effect on health of heavy metals an PFAS, with particular reference to mothers and unborn babies. [196]

6.83 At this point I note that Mr Henderson submitted a number of scientific papers in support of his evidence. These were:-

(i) comparative toxicity of potential leachates from perovskite and silicon solar cells in aquatic ecosystems;

(ii) release of metal pollutants from corroded and degraded thin-film solar panels extracted by acids and buried in soils;

(iii) eco-toxicity and sustainability of emerging Pb-based photovoltaics;

---

[194] Statement of evidence / paragraphs 57 to 62 inclusive
[195] Statement of evidence / paragraphs 65 and 66
[196] Statement of evidence / paragraphs 67 to 69 inclusive

(iv) green or not? Environmental changes from photovoltaic technology;

(v) soil properties changes after seven years of ground mounted photovoltaic panels in central Italy coastal area;

(vi) leaching via weak spots in photovoltaic modules;

(vii) leaching potential of chemical species from real perovskite and silicon soil cells;

(viii) ten best practice guidelines for solar development.

Stuart William Fletcher (planning)

6.84 Mr Fletcher manages his own planning consultancy, has qualifications as a consultant planner and has been practicing as a planner for approximately 25 years. Mr Fletcher commented upon certain key issues associated with the application.

6.85 The first issue which Mr Fletcher considered was that of public notification. [197] Mr Fletcher referred to the statutory background to notification and expressed the view that there had been errors made in the conclusions reached to notification in the notification assessment and S42A report and on the basis of s104(3)(d), which he noted was pertinent to the consideration of the application, suggested that the first step for me to take was to determine whether a procedural issue had arisen that mandated that resource consent must not be granted. He then went on to give his reasons for his determination that there were procedural complications.

6.86 In the first instance Mr Fletcher dealt with the issue of highly productive land, noting the objectives and policies in the NPS-HPL which were relevant. Mr Fletcher referred to the assessment of effects within the notification determination which considered the potential effects from the loss of productive soils and highlighted two passages (contained at paragraphs 99 and 100) in which the view was expressed that the grazing of sheep would still be supporting primary production but that the productive potential of the land would be significantly reduced and

[197] Statement of evidence / paragraphs 4.1 to 4.6 inclusive

secondly that although the area of the site was significant, it was considered that the reduction in productive potential of the land constituted a more than minor adverse effect. [198]

6.87 Mr Fletcher went on to compare the above statements to the assessment provided in the S42A report and the issue of loss of productive soils was addressed (at paragraphs 132 to 136 inclusive). He then noted that a paragraph 277 the report noted that the extent of mitigation associated with sheep grazing was relatively minor given that:-

(i) it was not clear whether the use of sheep for grazing purposes at the site would fall within the definition of "land-based primary production";

(ii) the solar panels were also likely to significantly reduce the productive capacity of the land while the solar farm was in operation;

(iii) there was no certainty as to when the solar farm would reach its end of life, given the applicant had sought no limit on the duration of any consent granted.

6.88 Mr Fletcher said that it would appear that the processing planner considered that the potential effects of the proposed activity would include a significant effect on the productive capacity of the application of the site. Mr Fletcher considered that a proposal which would significantly reduce the productive capacity of the site must be considered to have more than a minor effect on the environment. [199]

6.89 Mr Fletcher then went on to consider the issue of character and amenity. He said that the change in use of the site represented a significant change in the amenity and character of the site and surrounding area and that the site would most likely become known in the community as a solar farm which was less consistent with the current amenity and character of the area. Mr Fletcher went on to note objectives and policies in the ODP and proposed SDP and said that these provisions create an expectation or context for the appearance, nature and character of rural areas and reinforced the fact that the

[198] Statement of evidence / paragraphs 4.7 to 4.8
[199] Statement of evidence / paragraphs 4.9 to 4.11 inclusive

proposed activity would have significant effect on the rural amenity and character of the area and that such an impact should be given significant consideration. He went on to state that he considered that the amenity effects of glare and particularly noise needed to be given significant consideration. [200]

6.90 Mr Fletcher then went on to note an element of confusion as to the duration for which resource consent was sought. He said that the lease period was irrelevant as an unlimited duration had been sought by the applicant and that the application must be assessed on the basis of an unlimited duration. He referred to paragraph 100 of the notification assessment where it was stated that any productive loss would be temporary and reversable following the expiry of the 35 year term, stating that he had a different view as the notification issue had to be assessed by reference to the duration actually sought, suggesting that a different conclusion might have been reached if that had been the case. [201]

6.91 Mr Fletcher then went on to discuss the identification of potentially affected parties. Mr Fletcher said that the semi-open character of the site would be lost and for some neighbours the landscape they currently enjoyed would be lost. He said that this had not been considered as part of the notification assessment. [202] Mr Fletcher was critical of the identification of the property owners who had provided written approval and suggested that a significantly clear understanding of this issue was appropriate. He went on to state that there were some properties that would experience high level of noise and the visual amenity and character of the area would also change. He said that the notification assessment did not consider the amenity related effects from noise but beyond this he worried that the assessment might have also determined that some properties were not affected without knowledge of the landowners' intentions for the property.

6.92 Mr Fletcher stated that it was necessary for me to assess whether all potentially affected persons who had been identified and notified as part of the resource consent process. He said that the properly he had an interest in was the Brookside substation site at 414 Branch Drain Road and whether any consideration had been given to the site as part of the

---

[200] Statement of evidence / paragraphs 4.12 to 4.18 inclusive
[201] Statement of evidence / paragraphs 4.19 to 4.21 inclusive
[202] Statement of evidence / paragraph 4.22

notification assessment such as electricity related effects. He went on to refer to what he termed a "loose assessment of potentially affected parties" combined with the petition containing a number of names. He suggested that questions arise as to whether the application should have been processed under a public notified basis. Further, he went on to state that it was unusual not to address the issue of notification with me at this stage given the option available in the Act and the fact that the High Court, upon judicial review, may question why the matter was not addressed at this time when the issue became apparent. In summary Mr Fletcher was of the view that the consent authority should not grant a resource consent in accordance with s104(3)(d) of the Act. [203]

6.93 Mr Fletcher then went on to discuss the NPS-HPL. He discussed the introduction of the policy statement and said that it would be fair to suggest that the policy statement has introduced a high bar which now has to be met in assessing proposals for highly productive land. [204]

6.94 Mr Fletcher went on to state that in assessing the Proposal against the policy statement the Proposal fell within the definition of a lifeline utility and also fell within the definition of specified infrastructure. He went on then to refer to clause 3.9 of the NPS-HPL and discussed the question of whether the applicant had established that there were operational needs to establish on the site. He said that there needed to be more than an operational advantage, rather than need or requirement to establish within an area classified as highly productive land. [205]

6.95 Mr Fletcher identified the key point which made the application preferable for this activity being the location of the local substation at the corner of the site. He said that the applicant had not provided any parameters as to whether the establishment of a transmission line between the site and substation would impact on the viability of the Proposal. He then went on to examine the question of whether the characteristics of the site were unique and said that he had undertaken a high-level analysis to determine whether there were other sites in the

[203] Statement of evidence / paragraphs 4.26 to 4.29 inclusive
[204] Statement of evidence / paragraphs 5.1 and 5.2
[205] Statement of evidence / paragraphs 5.1 to 5.6 inclusive

Selwyn District where it could be possible to establish an activity like the one proposed without establishing on highly productive land. [206]

6.96 Mr Fletcher produced a number of figures identifying substations in the Selwyn District. He referred to the Dunsandel substation, the Te Pirita substation and a substation at Hights Corner. He respectfully suggested that there were other sites and locations which would fulfil the operational needs of the activity without having to establish on highly productive land. [207]

6.97 Mr Fletcher went on to refer to the question of whether the Proposal would result in potentially improved water quality, relevant in clause 3.9(2)(f) which he set out. He said that while the intention was commendable and there may be potential water quality improvements, the purpose of the Proposal was not to improve water quality nor is the land being retired. He said that instead the primary production of the land was being significantly reduced. Overall, he said that there were other areas where the activity could be established without need to be on highly productive land, referring to clause 3.9(2)(f) of the policy statement. [208]

6.98 Mr Fletcher then went on to examine the potential effects of the proposed activity. Firstly, he dealt with the issue of amenity. Mr Fletcher stated that in his opinion a simplistic view of the activity had been taken with regard to the mitigation effects on the amenity and character from the proposed activity which he said was represented by hiding it behind some trees. He said that he did not consider the effects of the activity could be reduced so as to minor or less and that this was a reflection on the fact it was proposed to establish a large-scale activity which was not rural in nature. [209]

6.99 Mr Fletcher then went on to consider the important element of the productivity of the land. He said that in his opinion that the rural productive potential of the site was significantly reduced and he said that it was fair to consider this effect to be more than minor but that this was really only relevant to the question of notification. He said that it was recognised that something else would be produced on the

---

[206] Statement of evidence / paragraphs 5.7 to 5.11 inclusive
[207] Statement of evidence / paragraphs 5.12 to 5.17 inclusive
[208] Statement of evidence / paragraphs 5.18 to 5.20 inclusive
[209] Statement of evidence / paragraphs 6.2 to 6.6 inclusive

site being electricity so that the site was not sitting dormant or being underutilised. [210]

6.100 Mr Fletcher then went on to discuss the issue of noise, noting his understanding that the sounds from the proposed activity would be audible for most surrounding properties some of the time and for some properties most of the time. He referred to his conference with Mr Lewthwaite who had suggested that the emitted noise from the activity would in effect replace the existing rural sounds of the area. He thought that this would impact upon local residents and questioned whether the processing planner had suitably considered the noise effects of the activity and on the basis that the noise generated, given adequate consideration to what parties would be affected by the Proposal and the scale and effect on them. Finally he noted the incorporation of batteries as part of the proposed activity would lead to noise from the associated cooling fans. [211]

6.101 Mr Fletcher then went on to discuss the issue of contamination referring to the evidence of Mr Henderson which I have already recorded and stating that the implications needed to be considered in detail and concluding whether any management procedures were available to adequately address potential adverse effects. [212]

6.102 Mr Fletcher then considered alternative locations and methods. He repeated his view that he considered that the introduction of the proposal would have a significant adverse effect on the environment and that on that basis, further consideration of alternatives was required. [213]

6.103 Mr Fletcher then discussed the objectives and policies of the ODP and proposed SDP. He noted the objectives and policies which were relevant acknowledging that there were other objectives and policies that I should consider such as those regarding infrastructure. He made the simple point that the objectives and policies of the district plan included provisions seeking to avoid remedy or to mitigate significant environmental effects and on the basis of his earlier comments considered that the applicant could develop a more comprehensive

[210] Statement of evidence / paragraphs 6.7 and 6.8
[211] Statement of evidence / paragraphs 6.9 to 6.12 inclusive
[212] Statement of evidence / paragraphs 6.13 and 6.14
[213] Statement of evidence / paragraphs 7.1 and 7.2

proposal which better addressed the impacts of the Proposal on the character and amenity of the area. [214]

6.104 Mr Fletcher then produced a summary statement, reflecting his comments on the evidence which had been led at the hearing. He noted that the amendments to the Proposal being stronger landscape controls had been made to better address potential effects. He said he remained unclear as to the question of irrigation which he said was important as to the productive use of the property. Mr Fletcher said that there was a demand for accessibility to link electricity substations to solar farms and commented that care needed to be taken in allocating space because by establishing a solar farm on highly productive land this took away the opportunity to establish a solar farm on land which was not highly productive.

6.105 Mr Fletcher questioned the operation of batteries and whether they would operate at night. He referred to his opinion that the Proposal would introduce non-rural sounds in the environment being noise from the solar farm which would be clearly audible at times during the day. In relation to Ms Anthony's specification that the site would transform from an open rural landscape to a landscape of energy infrastructure, Mr Fletcher queried the measures that were proposed to reduce the effect considering that the local community would be aware that the site would consist of energy infrastructure including due to the impacts of noise. He went on to state that his opinion persons who inhabit the local area and enjoy the rural amenity would be adversely affected was reinforced. He went on to question whether all potentially affected parties were notified. He noted that the majority of notifications appeared to have occurred on the western side of the site but in his opinion those properties on the eastern side including 870 and 932 Hanmer Road and 365, 375 and 381 Brookside and Irwell Road should have also been notified. [215]

6.106 Mr Fletcher went on to consider potential conditions and said that because of what he saw as procedural flaws in the resource consent process he was hesitant to imply the conditions would address concerns but recorded the suggested condition points which had been raised by

[214] Statement of evidence / paragraphs 8.1 to 8.5 inclusive
[215] Statement of evidence / paragraphs 3.1 to 3.9 inclusive

submitters. I will not record the suggestions at this point but will do so later in this decision.

7. *CONSIDERATION OF ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT / BASELINE ISSUE*

Introduction

7.1 It follows from the fact that the activity the subject of the Proposal is a discretionary activity that all actual and potential effects must be considered, both positive and negative, and the assessment of the Proposal is not confined by reference to any particular considerations but is unrestricted. The objectives and policies of relevant plans provide guidance as to the effects which will require consideration. These are discussed hereafter.

7.2 At this point I discuss the issue of whether I should apply what is known as the permitted baseline in making my assessment of effects. My discussion of this matter follows.

Evidence/submissions on behalf of the parties

7.3 Section 104(2) of the Act provides …

> *When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.*

7.4 At this point it is appropriate to identify activities which would be permitted on the site by a rule or rules in the relevant plans, because the Act provides that I have a discretion to disregard an adverse effect of the Proposal on the environment if a provision of a plan permits an activity with that effect, representing what is known as the application of a permitted baseline.

7.5 In the evidence on behalf of KeaX in an earlier part of this decision, I have referred to the evidence of Ms Kelly in relation to the issue of the permitted baseline. I will not repeat that evidence. She noted that in addition to a number of activities that Mr Aimer had considered constituted a permitted baseline, there were other activities which also needed to be taken into account. [216]

---

[216] See paragraph 4.23`

7.6 Mr van der Wal dealt with the permitted baseline issue in his legal submissions. [217] He said that whilst it was not disputed that activities identified by Ms Kelly in the s42A report and by Ms Kelly could occur as of right, he said both the officer and Ms Kelly had failed to address adequately the following issues:-

(i) the fact that the application of the permitted baseline was discretionary, relying upon *Protect Aotea v Auckland Council*; [218]

(ii) it should only include a non-fanciful permitted baseline, relying on *Rodney District Council v Ayres Eco-Park Limited.* [219]

7.7 Mr van der Wal went on to submit that no evidence had been provided as to whether the activities were or were not fanciful and whether it would be appropriate to apply the permitted baseline. He went on to state that there was no indication that it was reasonably feasible that someone would wish to establish 250ha of tunnel houses in the location. In the event he said that the fact that tunnel houses were not reliant on highly productive soils would suggest to the contrary and that even if this was not an issue, the nature and appearance of the structures was not comparable or similar to the solar panels. He went on to characterise the solar panel structures as industrial or trade structures with significant glare issues. He went on to refer to a further example being plantation forest. He said that there was no evidence that it was feasible that this productive land would be used for forestry and then went on to submit that there could be no comparison between trees which had a natural character aspect to them and industrial solar panels. He referred to the trees being harvested when they grew and contrasted that with the panels which would appear at their full height for an indefinite duration. On this basis he submitted that it would be inappropriate to apply the permitted baseline to disregard any part of the visual, glare or noise effects of the Proposal.

7.8 In the summary statement of Mr Aimer, he said that he largely agreed with Ms Kelly's description of the permitted baseline at paragraphs

---

[217] At paragraphs 18 to 23 inclusive
[218] *Protect Aotea v Auckland Council* [2022] NZHC 1428
[219] *Rodney District Council v Ayres Eco-Park Limited* [2007] NZRMA 1

[4.23] to [4.24] of her evidence statement, with the following exceptions:-

(i) sub-paragraph (d) ***:*** Given the amount of electricity proposed to be generated, and the scale of infrastructure required to generate the electricity, he did not consider that generation of electricity for use on the same site to be a relevant baseline;

(ii) paragraph [4.24]: he did not consider that the permitted afforestation of the site functioned as a useful baseline.

Permitted baseline / my findings

7.9 It is undoubtedly the case that the activities which have been identified by Mr Aimer and Ms Kelly are permitted activities which could establish on the site as of right. The submission by Mr van der Wal that two of the activities mentioned, namely tunnel houses and plantation forest should be disregarded has some force. It seems unlikely that land of the highly productive potential of the subject site would be used to establish 250ha of tunnel houses or that the land would be use for a plantation forest. Further, I agree with Mr Aimer that given the amount of electricity proposed to be generated and the scale of infrastructure, the generation of electricity for use in the same site is not a relevant baseline.

7.10 I do not apprehend there to be any difference between the parties as to the applicable legal principles which govern the application of the permitted baseline. Whilst the matter of the application of the permitted baseline is discretionary, that discretion must be exercised on a principled basis. Further, the permitted baseline should only include a non-fanciful permitted baseline.

7.11 I record that I will comment upon the permitted baseline where appropriate in the passages in this decision which follow. Given the scale of infrastructure which is proposed and the nature of it, I have found a comparison with the activities which are permitted to be of limited assistance.

8. *ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT / MY ANALYSIS*

INTRODUCTION

8.1 I have already made reference to the relevant provisions of s104(1) of the Act. Linked to the various matters which are referred in that sub-section, I am required to assess any actual and potential effects on the environment of allowing the activity including positive effects. Accordingly, I proceed to examine the effects in accordance with the statutory provisions.

POSITIVE EFFECTS

8.2 Undoubtedly the Proposal has associated with it a number of positive effects. They have been helpfully summarised in the legal submissions on behalf of KeaX [220]. Because of the importance of recognition of these positive effects, I summarise the positive effects:-

(i) enable renewable electricity generation which is anticipated to be sufficient to supply, on average, 22,000 homes in Canterbury annually;

(ii) assist in meeting national targets to increase electricity generation, renewable resources and reduce New Zealand's reliance on fossil fuels; and

(iii) build resilience into the electricity generation network, with other electricity sources (for example, hydro-electricity) which is said to be under increasing pressure due to changes in weather patterns.

8.3 Ms Hawkins went on to make further specific submissions in relation to the Proposal which she said would:-

(i) provide a locally generated electricity supply, reducing the need for long transmission distances and the associated inefficiencies in cost;

[220] At paragraphs 25 and 26

(ii) being able to feed into existing network infrastructure resulting in more cost-effective electricity production for end users;

(iii) enable diversification of the agricultural use of the site;

(iv) have lower environmental impacts then the existing dairy farm operations;

(v) result in economic and social benefits.

8.4 Later in this decision, I refer to the fact that the proposal is consistent with the objectives and policies in the National Policy Statement for Renewable Electricity Generation 2011 ("NPS-REG"). As will be noted, this instrument recognises the national significance of renewable energy generation, recognises the benefits of renewable electricity generation activities and acknowledges the practicable implications of achieving New Zealand's target for electricity generation from renewable sources.

8.5 In summary, I am of the clear view that the Proposal brings with it significant positive effects which must be balanced when assessing the application.

ANALYSIS OF EFFECTS

RURAL CHARACTER AND VISUAL AMENITY

Introduction

8.6 The prospect of change in rural character and visual amenity assumed considerable importance at the hearing. The submitters in opposition maintained that the rural character would change irrevocably in a manner which was unacceptable and detracted from the amenities enjoyed in the existing environment. In this context I note that expert evidence was led on behalf of the submitters but as well they expressed their concerns and fears of the likely effect of the changes in rural character and visual amenity.

8.7 I note that in *Harewood Gravels Company Limited v Christchurch City Council* [221] Davidson J stated …

> *[226] The criticism of the Court's approach to the evidence of the landscape expert is in my view entirely misplaced. The Court said that the experts did not (so far as it knew) engage with the residents' views that their amenity is adversely impacted by quarrying activity taking place in the locality. That is simply to point to the need for an understanding of the experience and concerns about amenity including rural character of those affected, and for those elements to be objectively brought into account, recognising their inherent subjectivity. What better evidence in the first place is there than that of those who experience and live with the effects, provided their evidence is objectively assessed against the provisions of the District Plan and other expert evidence? The Court was not in error in observing the need for this fundamental step. A querulous and unreasonable stance taken by a resident will never prevail, but their living experience, not overstated, must be prime evidence. It is easy to dismiss or minimise the views of affected persons as subjective, yet theirs are the experiences of the very effects and amenity with which the Court is concerned.*

This case serves as a reminder of the need to give proper consideration to the expressed views of residents in relation to my assessment on environmental effects in order to arrive at a just decision in this case.

The evidence and submissions

8.8 As already noted, Ms Anthony gave evidence on behalf of the applicant in relation to landscape planning. She concluded, following a review of submissions in the S42A report and the revised landscape mitigation strategy, that the adverse visual effects from Branch Drain Road and Buckleys Road would be in the low-moderate range initially. However, the length of time for the level of effects to reduce to very low would be shortened due to the implementation of more mature plant species in the gaps.

8.9 As already noted, Ms Anthony discussed the establishment of planting associated with the Proposal, and dealt with a number of matters raised by submitters in opposition. A matter of pivotal importance was to address the issue of proposed landscape character change. Ms Anthony was of the view that whilst the site would transform from an open rural landscape to a landscape of energy infrastructure, the proposed mitigation planting along the site boundaries would contain the Proposal within the confines of the site and screen it from neighbouring views

---

[221] *Harewood Gravels Company Limited v Christchurch City Council* CIV-2017-409-891; [2018] NZHC 3118

over time, therefore limiting the character change over the site area. Ms Anthony expressed the view that albeit there would be a change in the character of the landscape, it would not be visually prominent in the long term, and would in time enhance the rural character and amenity of the area by the way of proposed native planting along road corridors.

8.10 As already noted, Mr Smith gave landscape evidence on behalf of the submitters. In the light of the evidence given at the hearing, Mr Smith updated his assessment of visual effects from the properties of Clark and Elizabeth Casey, Robyn Casey and Dave and Donna Kewish.

8.11 Mr Smith stated that the updated proposal did not alter his assessment from the property of Mr and Mrs Casey at 180 and 198 Branch Drain Road, for three reasons. Firstly, he said that there was no certainty regarding the irrigation of native plants once they reached 2m tall. He had concerns about the growth of vegetation. He was concerned about the solar farm would not be screened from the upstairs bedrooms nor from other tall machinery that Mr Casey uses on a day-to-day basis. Secondly, Mr Smith reiterated his view that irrigation was critical to the growth of vegetation. Thirdly, Mr Smith said that Ms Anthony has used exotic shelterbelts not native vegetation as her example of well-established plants in the area. He went on to question the view of Ms Anthony that the existing shelterbelts would provide some visual screening of the solar farm. He said that the existing shelterbelt was transparent with views of the site being readily available through the gaps and considered that a double row of conifer shelterbelt would be required to provide appropriate screening.

8.12 Mr Smith said that based on the change to the proposal glare would not be experienced below 2m in height but would be experienced when sitting on a tractor.

8.13 Mr Smith went on to refer to the property of Robyn Casey at 265 Branch Drain Road. He said that the changes to the proposal would mean that the lower half to two thirds of the panel would be screened from view and that this would reduce the potential adverse effects when viewed from her master bedroom, veranda, garden, and driveway to a low to low-moderate degree.

8.14 Lastly Mr Smith commented on the property of Dave and Donald Kewish at 324 Branch Drain Road. He said that the updated proposal and Ms Anthony's summary of evidence did not capture the

recommendations made in his statement of evidence nor did she comment on the existing shelterbelt being located within the box drain, the flooding issues this causes and the potential ramifications if the shelterbelt needs to be removed. Mr Smith was of the view that if the shelterbelt and the box drain needed to be removed over the 35 year or more lifespan of the solar farm that would open up views to it. He thinks that tis was a likely scenario and while removed the Proposal would have a low-moderate to moderate degree of adverse effects on the visual amenity that the Kewish's currently experience from their main outdoor area.

8.15 Ms Hawkins provided extensive submissions in relation to visual and landscape effects in her reply legal submissions [222]. She noted the proposals for a comprehensive landscape mitigation strategy to screen the Proposal from views from adjacent and nearby public roads and neighbouring and nearby properties. This included a combination of reliance on existing, full-height and dense shelterbelts, filling in gaps with exotic planting, planting new 3m wide exotic shelterbelts in some locations, and in some locations willing the gaps of existing native plantings and in some locations planting new 3m wide native buffer planting. Ms Hawkins noted that there is no reliance on off-site vegetation to provide screening of the Proposal and all vegetation (existing and proposed) is on-site.

8.16 Ms Hawkins referred to proposed Condition 21 providing for planting to be required to reach 2m in height and 3m in width along the relevant public road and private property boundaries prior to the commencement of each relevant stage of construction. She said that this would ensure that appropriate screening was achieved prior to construction of the solar infrastructure commencing.

8.17 Ms Hawkins went on to state that from the 2m starting point the planting would then be required to reach 4m in height to provide full screening of the Proposal.

8.18 Ms Hawkins then dealt with the important issue of irrigation of the landscape mitigation. Prior to the hearing there had been a proposal to irrigate the landscape mitigation planting for two to three years to enable it to establish. However, in response to Mr Smith's evidence,

[222] At paragraphs 11 to 25 inclusive

the applicant now proposes that the planting will be irrigated as required during the operational life of the solar farm being proposed condition 17.

8.19 Ms Hawkins referred to the assessment of Ms Anthony on effects on views from public roads to be in a low-moderate to moderate (i.e. minor) range initially reducing to very low. Ms Anthony assessed the effects on landscape character to be low to moderate (i.e. minor) initially reducing to very low. Ms Hawkins noted that Mr Densem's peer review agreed with this assessment.

8.20 Ms Hawkins went on to refer to *Trilane Industries Limited v Queenstown Lakes District Council* [223] where the landscape expert for the Queenstown Lakes District Council had assessed visual effects of a new dwelling as moderate. The planner relied on that assessment by concluding that the visual effects would be no more than minor on the basis that they were temporary. The High Court had held that for the purposes of notification tests under the Act it was wrong to characterise effects as minor because they were temporary. Ms Hawkins said that nowhere in the applicants or Council assessment had effects been considered "minor" because they were temporary.

8.21 Ms Hawkins went on to state that Mr Smith's pre-filed evidence suggested that the Proposal would have moderate adverse visual effects from three public roads and moderate adverse landscape effects. Ms Hawkins noted that Mr Smith did not address these "public" effects at the hearing and appeared to indicate that, aside from the matters he raised at the hearing, he was generally comfortable.

8.22 Ms Hawkins noted that uncertainty around irrigation was now addressed, reliance on proposed vegetation maturing was now addressed with the 2m starting point requirement, and native vegetation not being in keeping with the rural character of the area as now addressed with most native planting replaced with exotic planting especially along the Casey property boundary. On this basis she submitted that for the purpose of public notification determination the adverse visual and landscape effects of the Proposal on the environment would be no more than minor.

---

[223] *Trilane Industries Limited v Queenstown Lakes District Council* [2020] NZHC 1647

Rural character and visual amenity / my findings

General

8.23 I respect and understand the views of submitters as to the value of the rural amenities which they presently enjoy. Pleasant views of rural character are experienced adjacent to and across the subject site. The Proposal means that the environment will inevitably change and that there will be an impact upon the rural amenities (character and visual) which are valued by the residents. However, the resource management system enshrined in the Act anticipates change in land use activities. Change is always in prospect and the question of whether changes are permissible depends upon an assessment of the provisions of relevant planning instruments, the provisions of the Act, the consideration of environmental effects and the exercise of a balanced judgment as to whether the changes meet the legislative and other requirements which are referred to in this decision.

8.24 In this case a matter of significance has been the concern that the site would be readily visible during the time that it took for the proposed screening planting to establish. That concern has been met by the acceptance by the applicant that all planting around the perimeter of the site will be undertaken *prior* to commencement of construction of Stage 1. The planting will be required to reach 2m in height and 3m in width along the relevant public road and private property boundaries prior to the commencement of each relevant stage of construction. The second critical matter which was of concern to the submitters was the absence of any proposal for irrigation to continue during the life of the project. As noted above, concerns were expressed that the growth and maintenance of the necessary plantings would be adversely affected by a cessation of irrigation. This was a matter of concern to me. In the event proposed Condition 17 provides that all planting shall be irrigated (as required) for the entire time the solar farm is operating. In my view this meets one of the principal concerns which was raised by the submitters in opposition and this, coupled with the obligation to replant any plants that become diseased or die (proposed Condition 28) will ensure that the plantings will be adequately maintained and will continue to provide appropriate cover.

8.25 I turn to examine the visibility and visual effects on each of the submitters who gave evidence in relation to these matters. Before

discussing each of the properties in question, I observe that the concerns expressed by each of the submitters were entirely understandable. They are faced with the prospect of the establishment of a solar farm which they regard as foreign in their environment and their natural response has been to express concern about the visibility and visual effects which would follow the establishment of the solar farm. I have already noted the fact of my site inspection of the properties in question. This site inspection was invaluable because it enabled me to obtain a first-hand understanding of the likely visibility and visual effects of the establishment of the solar farm and to consider the concerns expressed by the submitters in relation to the suitability and visual effects against this background.

Mr and Mrs Casey

8.26 A principal concern of Mr and Mrs Casey (180 Grahams Road / 198 Branch Drain Road) revolved around the visibility of the proposal and views from their dwelling to the north, including from their upper-storey bedrooms. The dwelling of Mr and Mrs Casey is not on the boundary of the Proposal site. It is approximately 150m to the south and views from the upstairs bedroom look across the Casey's paddock. I agree with Ms Hawkins when she submitted that it is difficult to understand how views of the Proposal would result in a high degree of adverse effects as suggested by Mr Smith, given the distance between the Casey dwelling and the site. My own inspection indicated that the predominant view from the upstairs bedrooms of Mr and Mrs Casey would remain of their own paddocks and that whilst they would be likely to see some solar panels in the distance over the planting proposed to screen the Proposal, given the distance to the site, I am of the view that the adverse effects of this aspect of visual effects must be characterised as no more than minor. I certainly understand and take into account that there is likely to be a particular sensitivity about the sight of such solar panels as are visible. I have considered this likelihood of particular sensitivity and confirm the view which I have expressed above.

8.27 I deal with the issue of glint and glare, later below. As to the balance of the Casey property, given the proposals to screen the site, I anticipate that the solar panels will not be visible to Mr Casey or others working on the farm unless they are using machinery which elevates the sight line for viewing the solar panels. I can understand the

concerns of Mr Casey as to the sighting of the solar panels from time to time when operating machinery which will elevate the sight line for viewing the solar panels. I suspect that the real matter of concern is the issue of glint and glare which I deal with later in this decision. Looking at the matter from the point of view of the rural character and visual amenity, I am of the view that whilst there will be an effect on amenities and that the amenities will suffer a detraction, the visual and landscape effects from the balance of the Casey property on the Casey family will be minor.

Ms Robyn Casey

8.28 I go on to consider the position of Ms Robyn Casey at 265 Branch Drain Road. Again, I have had the advantage of a site visit. I have noted Ms Casey's understandable concerns about the visibility of the solar farm when viewed from her dwelling. I note that Ms Casey's dwelling is 395m away from the nearest site boundary. I note further that concerns about gaps in the existing shelterbelts on the site boundary were raised by Mr Smith who accepted that once the landscape mitigation reached 3m to 3.5m and formed a thick hedge, the effects would be addressed. I consider that the views of the site will be in the far distance from Ms Casey's dwelling and that the proposed screening to which the applicant has committed itself, namely 2m high 3m wide screening before each relevant construction stage commences, will deal with the concerns of Ms Casey. I observe that the planting along the boundary of the site with this landholding will not be native planting but will be exotic planting to be in keeping with the rural character of the area. On the above basis I am of the view that the landscape and visual effects in relation to the property of Robyn Casey are acceptable and the adverse effects will be minor or less than minor.

Kewish family

8.29 The Kewish family raised a number of concerns about the establishment of the solar farm immediately adjacent to their property at 324 Branch Drain Road. I harbour a particular co concern about the matters raised by the family. They raised understandable concerns about the visibility of the site and views from their property to the north and north-east and their driveway. As is noted in the reply legal

submissions of Ms Hawkins [224] , the applicant has proposed a number of changes to accommodate the concerns of the Kewish family. Firstly there is a proposal to plant two rows of evergreen, exotic species 150m in length setback 10m from the existing shelterbelt on the site along the northern Kewish boundary starting at Branch Drain Road and extending eastwards. This will strengthen the existing screening and address and gaps in the existing shelterbelt. Secondly as far as the views looking east, across the Kewish landholding, with the site behind the shelterbelts to the left and in the far distance some 500m away, it was noted that the shelterbelt to the left will be retained and will screen the Proposal immediately. The shelterbelt is in the distance (more than 500m away) has gaps but additional exotic planting is proposed to achieve full screening. Lastly, to the east of the Kewish property it is proposed to replace the proposed native planting with exotic shelterbelts to address concerns about the effectiveness of screening of the native planting, growth rates, and long-term plant viability with the intention of being in keeping with the rural character of the area.

8.30 Having visited the Kewish property (as noted earlier in this decision) I noted the gaps in the existing vegetation when looking north. It was understandable that the Kewish family were concerned about this. In my view the additional planting now proposed by the applicant should address these concerns. As to noise effects, I deal with these later in this decision. As far as the views to the east are concerned, I am of the view that with the mitigation proposed, the visual and landscape effects on the Kewish property looking east will be minimal and less than minor. Overall, I am satisfied that the proposals now made by the applicant will address the concerns of the Kewish family to an extent which is reasonable and as such express the view that the overall effects on the Kewish family under this visual head will be no more than minor.

Road network

8.31 As to views from the surrounding road network, I am of the view that whilst there may be glimpses of the solar panels by persons using the roading network either in motorised vehicles or on foot or on bicycles, these views , whilst altered, will not be unacceptable. I am of the view

[224] At paragraphs 57 to 60 inclusive

that the effects on those using the roading network will be minor or less than minor.

GLARE AND REFLECTIVITY

The evidence / submissions

8.32 Mr Aaron Williams gave evidence on behalf of the applicant in relation to the issues of glint and glare. I have already summarised the principal aspects of the evidence of Mr Williams earlier in this my decision. Mr Williams concluded that following a review of the most recent landscape plans which included some areas of 2m planting before panels were installed on the site, no significance effects of glint and glare upon residential amenity, road safety or aviation activity associated with Christchurch Airport were predicted. [225]

8.33 Mr Casey gave evidence on behalf of the submitters in relation to the issues of glint and glare. He said that the solar panels posed a real hazard due to glint and glare, noted the fact that he operated big machinery and that there were concerns about workplace health and safety. He noted that his dwelling was only 300m away from the southwest corner of the solar farm. [226]

8.34 The issue of glint and glare was addressed in the s 42A report by Mr Aimer. [227] He noted that the applicant had provided a solar photovoltaic glint and glare report prepared by Pager Power to assess potential glint and glare effects and that this had been reviewed by Mr Van der Velden. He noted that the Pager Power assessment had concluded that the proposed solar array activity would have no significant impact on aviation activity, that there would be no significant impacts upon road users due to the low movement on the local roads in the vicinity of the site and that there would be no adverse effects on nearby dwellings in practice due to existing and proposed planting.

8.35 Mr Aimer went on to refer to the possible effects on the operation of Christchurch Airport and noted that in the expert conclusion that any impact was considered to be small such that mitigation was not required, that is to say intervening screening would limit the view of the reflecting

[225] Statement of evidence / paragraph 2.12
[226] Statement of evidence / paragraphs 24 to 26 inclusive
[227] At paragraphs 90 to 98 inclusive

solar panels. He accepted that glare resulting from the Proposal would not have adverse effects on Christchurch Airport and its operation. He accepted that glare resulting from the Proposal would not have adverse effects on Christchurch Airport and its operation.

8.36 As to the surrounding road network, Mr Van der Velden found that glare conditions on Dunsandel and Brookside Roads (in the morning) and Buckleys Road (significant glare conditions during the day) could be considered where there were insufficient obstruction such as vegetation to shield glare effects and this could pose a health and safety risk notably at the intersection of these two roads. However, Mr Van der Velden noted that most of any potential glare was expected to be obstructed by the existing shelterbelts and vegetation and that the glare would be fully mitigated once the landscaping had matured to a height of at least 2m. Mr Aimer considered that given the extent of existing planting and the timing of stages in the proposed planting, the health and safety of road users on Dunsandel and Brookside Road and Buckleys Road would be adversely affected by the establishment of Stages 1 and 2 of the solar farm prior to the proposed vegetation reaching 2m in height. However, matters had been overtaken by the agreement of the applicant to a condition that no construction of the solar panels would begin until the planting on the northern boundary reached 2m in height.

8.37 Mr Aimer noted the potential glare effects on neighbouring properties had been comprehensively assessed in the Pager Power report and Mr Van de Velden's review. He noted that the dwellings that would be the most affected by glare were the properties located to the north of the Proposal. He did not consider that any further mitigation was required, given the existing planting, but noted that any residual glare effects would be addressed in any event through the imposition of conditions regarding planting along Buckleys Road. He concluded that based on the glare assessments, the dwellings in the vicinity of Branch Drain Road would be primarily affected by glare from Stage 3 of the development. He considered that the combination of existing vegetation, the proposed landscaping and duration of the glare meant that the effects of the glare would be satisfactorily addressed on those properties through the staging and planting proposed.

8.38 Mr Aimer revisited the issue of glare effects in his summary statement presented at the hearing. [228] He said that there was a large degree of agreement between Mr Williams and Mr Van der Velden as to the extent of glare from the proposed solar arrays. He said that it was expected that glare would not be experienced by any person (other than those in trucks and tractors) once the landscaping reached a height of 2m (assuming the landscaping was sufficiently dense). For those persons above the height of the proposed planting, Mr Van der Velden considered that the strength of the glare, length of time, and existing vegetation above 2m was such that any temporary effects could be managed so as not to present an adverse health or safety effect. He noted that no glare would be experienced on neighbouring properties on roads once the height of the planting was 4m (assuming the landscaping was sufficiently dense).

Glint and glare / my findings

8.39 I appreciate the concerns of Mr Casey in relation to the possible effects of glint and glare when there is an elevated viewing platform when driving heavy vehicles. It is understandable that he has raised these concerns. However I accept the view of Mr Van der Velden that the strength of the glare, given the length of time of exposure, and the existence of vegetation above 2m will be such that any temporary effects will be managed so as to not to present an adverse health or safety effect. That is not to say that the glare effect will not be experienced by Mr Casey and others when driving heavy machinery. But on balance, having regard to the evidence presented to me, I have concluded that the effects in this context, and also on residential amenity, road safety or aviation activity associated with the Christchurch Airport, will be no more than minor.

TRAFFIC

The reports / evidence

8.40 The issue of traffic safety and vehicle movements in the S42A report by Mr Aimer [229]. In that report he notes the position regarding vehicle access to the site during both construction and operation, the provisions

[228] At paragraphs 5.1 and 5.2
[229] At paragraphs 142 to 149 inclusive

in the ODP which relate to permitted car movements, the expected car movements and the fact that car parking and manoeuvring for all light and heavy vehicles will be provided within the site away form site boundaries. He went on to deal with vehicle crossings speaking of the applicant's agreement to upgrade the Buckleys Road crossing. He noted that the crossing was located only 53m from the nearest intersection which was less than the 60m distance required by the ODP, He went onto state that the Hanmer Road vehicle crossing was also less than the required 60m distance from the intersection of Hanmer and Caldwells Roads. He said that in spite of this the Council's Transportation Department had reviewed the application and the only upgrade considered necessary was for the vehicle crossing to be sealed at least to the property boundary or a distance of 10m whichever is the lesser of the two. Mr Aimer was of the view that the standard to which the vehicle crossing would be formed would be sufficient to cater for the volume of traffic generated and that overall, he considered the Proposal would satisfactorily manage adverse traffic safety effects.

8.41 As to traffic amenity, Mr Aimer said that he considered noise and vibration associated with trucks slowing down and speeding during construction would have the greatest impact but that traffic amenity effects could be appropriately managed as part of a construction noise management plan. Overall, he considered any effects relating to traffic safety could be mitigated through consent conditions to the extent that they will have a less than minor effect on the environment.

8.42 I note that Mr Green raised concerns about the fact that there had been a number of motor accidents at the intersection adjacent to the Brookside Sub Station. He said that numerous approaches had been made to the Council roading engineers to improve traffic safety at the intersection. In the absence of any detailed evidence about the extent of the danger, I am unable to make any findings which would link the establishment of the Proposal with an increased risk of motor vehicle accidents at the relevant intersection.

Traffic / my findings

8.43 I am in agreement with the comments of Mr Aimer to the effect that the proposal will satisfactorily manage adverse traffic safety effects and that any effects relating to traffic safety can be mitigated through consent

conditions to the extent they will have a less than minor effects on the environment.

NOISE

Evidence and submissions

8.44 Evidence of acoustic matters was given by Mr Reeve on behalf of the applicant. I have already made reference to the evidence of Mr Reeve. Mr Lewthwaite gave evidence on behalf of the joint submitters. Whilst they agreed on methodology, there were significant differences in their approach to the evaluation of noise which I now address.

8.45 The principal difference between the evidence of Mr Reeve and that of Mr Lewthwaite relates to Mr Lewthwaite's contention that there would be a shift in the balance of sound composition to one with less natural sound. Mr Reeve put it that he had described noise from the solar farm as clearly audible at times during the day whereas Mr Lewthwaite considered that there were likely to be "prolonged periods of days when the solar equipment is the most noticeable component of the sound environment". Mr Lewthwaite concluded that there would be a shift in the balance of sound composition, to one with less natural sound. In addition, as already noted, Mr Lewthwaite noted that there had been no assessment of noise generated (if any) from wind blowing across the solar panels and structure.

8.46 I refer to the evidence of Mr Lewthwaite as to how the proportions of desirable sound and noise change when the solar equipment is operating. As noted in my record of the evidence of Mr Lewthwaite, he referred to a marked change between the level of desirable sound and noise without the solar equipment and with the solar equipment. He said that both change in composition and noise level would be readily apparent in the conditions observed and the noise environment less pleasant. I have already referred to the conclusion of Mr Lewthwaite which was that there would be a change from one of more commonly natural sound to an operational sound from the batteries (assumed to be ventilation noise) and the inverter electronics. He said this would make the sound environment less

pleasant and should be considered as part of the assessment of the amenities.

8.47 Mr Reeve did not disagree with the statement by Mr Lewthwaite that there would be a change in the noise environment or that there would be sustained periods of days when solar equipment would be noticeable in the environment. But he remained of the view that the proposed controls were sufficiently conservative that the noise effects would remain minimal for residents near the solar farm. When turning to examine wind noise, he noted that there was the potential for some noise to be generated under certain wind conditions but considered that this was a relatively low risk and not likely to result in substantial noise levels off-site.

8.48 Mr Aimer dealt with the issue of noise and vibration in his S42A report [230]. As to construction noise, Mr Aimer noted that construction noise effects were likely to be able to be managed in accordance with a noise management plan and that in any event the proposed construction noise was a permitted activity under the ODP and was accordingly part of the permitted baseline. However, he noted that noise limits were likely to be exceeded when piling took place within 50m of the dwelling at 324 Branch Drain Road. The assessment had recommended a package of special measures to be developed to reduce the effects of piling on this property including the erection of temporary noise barriers. As to vibration effects, Marshall Day had concluded that any construction vibration effects could be effectively managed through an appropriate noise management plan.

8.49 Mr Aimer then went on to assess operational noise. He noted the report by Acoustic Engineering Services and the fact that it had undertaken modelling to assess the expected noise emission from the solar farm in operation. A peer review by Marshall Day noted that it could not be concluded how audible the activity would be when considered cumulatively with ambient noise in the surrounding environment without ambient noise monitoring information which it was said had not been completed by the applicant.

8.50 Mr Aimer went on to note that several submitters had raised concerns regarding the effects of noise at their property and

[230] At paragraphs 99 to 122 inclusive

particular concerns had been raised regarding the cumulative effect of all batteries and inverters operating in unison, potential variations and environmental factors resulting in noise figures that contrast from those contained within the acoustic assessments, concerns regarding residents who wished to sleep with their windows open and the "human factor" in the experience of adverse noise effects. Mr Aimer said that in essence the submitters raised two issues with the noise effects of the proposal being concerned as to the accuracy of the predictions of what noise will be and whether estimated noise emissions are reasonable taking into account in the context of the surrounding environment.

8.51 Mr Aimer went on to discuss concerns regarding the accuracy of the noise assessments. He referred to the Acoustic Assessment and noted that Marshall Day had concluded that the predicted noise levels were plausible. He went on to note that the Acoustic Assessment noted that the noise received at neighbouring locations may vary due to environmental factors and that it was not clear whether the noise limits contained in the Acoustic Assessment allow for environmental factors. However he noted the reference in the Acoustic Assessment that even for 324 Branch Drain Road and 870 Hanmer Road (the properties most affected), the noise would not interfere with typical domestic activities and the noise affects would be minimal. While noting that there were uncertainties in relation to acoustic effects, Marshall Day had noted that the predicted noise levels were plausible. In relation to concerns regarding sleep, the Acoustic Assessment estimated that the noise levels inside dwellings would be approximately 10 to 17dB lower (with windows open) then the external levels, depending on the aspect of the internal spaces.

8.52 Mr Aimer went on to refer to the provisions of the ODP as to noise levels. He went on to state that both AES and Marshall Day had acknowledged the reasonableness of noise was not solely a function of the noise limit in the district plan and had provided expert opinion on appropriate level on noise received in this particular environment. Both reports were in agreement that with the provision of appropriate conditions of consent the noise and vibration effects during the operational phase would be able to meet the appropriate limit recommended by Marshall Day. He said that

assuming compliance with the limits proposed by Marshall Day, there was nothing to indicate that stricter limits were required.

8.53 Mr Aimer went on to note that the Act acknowledged people as part of the environment and that the psychological effects or emotional responses of people to developments would constitute a valid resource management concern. However he said that it was his understanding that fears for health concerns should only be given weight if they were reasonably based on real risk. He noted that no expert evidence had been provided as to the indirect health effects that may arise from the solar farm, such as sleep disturbance and annoyance by the noise and presence of the solar farm. In summary Mr Aimer said that he did not consider that the operational issues of the solar array would have a material adverse effect on the mental health of neighbouring residents provided that the noise limits stated in the Marshall Day peer review could be adhered to.

8.54 In his summary statement produced at the hearing, Mr Aimer commented again on noise effects. [231] He noted that following the S42A report Mr Reeve had undertaken ambient monitoring of the site which had addressed his concern regarding a lack of ambient noise monitoring. He noted that the applicant had provided an amended set of conditions to manage construction and operation effects on the activity and that Mr Farren had reviewed these conditions and was satisfied that they would appropriately manage the acoustic effects of the Proposed activity. Based on the opinion of Mr Farren, Mr Aimer was satisfied that the conditions would appropriately manage adverse noise effects.

Noise effects / my findings

8.55 As already noted, I have been troubled by the question of whether, notwithstanding that the noise limits in the relevant district plan are complied with, I should give weight to the suggestion that the noise generated by the solar farm is likely to have a significantly different character from the existing ambient noise. It is understandable that certain of the adjoining neighbours have raised concerns about noise, given what has been perceived as a lack of similarity of the

[231] At paragraph 6.1 to 6.5 inclusive

noise expected to be generated when compared with the existing ambient noise characteristics.

8.56 The particular matter which has troubled me in relation to the issue of noise effects is the consideration of the evidence of Mr Lewthwaite that the noise which can be expected to emanate from the operation of the solar farm has a significantly different character from the existing ambient noise. In his submissions, Mr van der Wal submitted that there was no evidence provided by the applicant of a comparable activity that would be permitted by the district plan that would emit a similarly characteristic constant hum and accordingly he said that it was inappropriate to apply the permitted baseline to disregard the unique and characteristic noise effects of this proposal. He said that the noise effects were a very real and significant component of the adverse effects of the receiving environment and they are something which I must take into account and give significant weight. He said that despite mitigation measures in compliance with district plan noise standards, the noise effects played an important role in contributing to the significant adverse effects of the proposal on rural amenity. [232]

8.57 In her submissions in reply, Ms Hawkins noted that the character of the noise was a focus at the hearing. She submitted that the level of operational noise would be very quiet and appropriate in a rural area, based upon the applicant's assessment, and, importantly, there would be no noise at night because the Proposal would not be able to operate in darkness. [233]. After referring to the fact that the Proposal achieved noise limits applying to the relevant zone and that there would be no noise at night, she acknowledged that the character of the noise was a focus at the hearing. She went on to state that Mr Reeve, Mr Farren and Mr Lewthwaite had each addressed this matter at the hearing. Mr Reeve and Mr Farren had confirmed that the noise would not have special audible characteristics and Mr Reeve added that it would *not* be in the nature of a mechanical hum which appeared to be of concern to the submitters. Mr Farren considered that the noise would be acceptable.

---

[232] Legal submissions for joint submitters / paragraphs 37 to 42 inclusive

[233] At paragraphs 45 to 54 inclusive

8.58 Ms Hawkins submitted that whilst I was not limited to considering compliance with the district plan noise limits, they were a useful and objective measure of baseline appropriate noise. She said that the planning instruments provided a yardstick against which the subjective views of submitters can be measured and went on to refer to provisions of the ODP and the Proposed SDP relating to noise. Ms Hawkins went on to refer to the decision of the High Court in *Gabler and Others v Queenstown Lakes District Council* [234] stating that it may provide some assistance. That case involved judicial review and the argument focussed on the adequacy of information as to compliance with noise limits in the relevant district plan. However, there was some discussion about the "quality of the noise". As Ms Hawkins has noted, the end result appeared to be that a quantitative approach was appropriate and that if in the implementation of consent there was any failure to comply with noise limits the Council could intervene, review or if necessary, cancel the consent. I agree with Ms Hawkins that this case provides useful guidance.

8.59 Ms Hawkins went on to state that the applicant had considered additional noise mitigation to address concerns. She said that the fans used for the inverters were already variable speed and that changing speed would mean the noise levels could be even lower than predicted, especially during long sunny days. She said that mechanically there was limited additional mitigation that could be provided but that physical screening of the inverters could be an option. Ms Hawkins said that whilst the view of Mr Reeve was that this was not necessary from a noise effects perspective, the applicant was willing to offer screening of the inverter closest to the nearest residential dwelling (that is on the Kewish property). This would reduce noise levels by 5dB and was now secured by proposed condition 29.

8.60 I have studied the proposed conditions of consent. Subject to one matter, I am satisfied that they appropriately deal with the control of noise, both in the construction and operational stages. However, after carefully considering this issue, I have concluded that the Kewish family has a proper basis for concern regarding operational

[234] *Gabler and Others v Queenstown Lakes District Council* [2017] NZHC 2086

noise levels, given the proximity of the dwellinghouse to the solar farm. Because of this, I am of the view that there is a need for the screening of the inverter closest to the Kewish dwellinghouse. I have noted the terms of the proposed Condition 29. In my view the wording in this condition does not go far enough and needs to make reference to the construction of a fence which does reduce noise levels by no less than 5dB. It would be for the applicant to ensure that the acoustic fence achieves this standard.

8.61 Subject to the above condition affecting the Kewish property, I have concluded the noise effects associated with the operation of the solar farm will be acceptable and no more than minor. I have paid particular attention to the fact that the noise generated by the solar farm is likely to be different in character from the ambient noise level which is experienced at the present time. Undoubtedly residents will be able to perceive the difference. But in my view the noise levels are sufficiently low to lead me to the conclusion that the noise generated by the solar farm is unlikely to have an unduly negative effect on the rural amenities which are experienced at present. In case I am wrong, and the operation of the solar farm gives rise to significant noise problems, I have noted the passage in the *Gabler* judgment [235] where Nicholas Davidson J stated …

> *The Council recognise the activity involved several sources of noise. It recognised the rural setting and the discrete placement of the activity on the site. It recognised the utility of the noise limits, as a measure of effect, then as a fundamental control on the proposed activity. The Council can intervene if the application is found to have contained inaccuracies in assertions about noise levels, including failure to comply with the noise limit. The Council can also review the conditions, and if necessary, cancel the consent under ss128 and 132 of the Act.*

8.62 It follows from the above that the Council will be in a position to ensure that noise levels are adhered to. On the basis of the evidence I have heard, and subject to the above, I am of the view that the noise effects will be no more than minor and within acceptable limits.

---

[235] At paragraph [89]

REVERSE SENSITIVITY

The evidence and reports

8.63 The issue of reverse sensitivity is addressed in the S42A report where Mr Aimer considers several concerns regarding reverse sensitivity effects which have been raised in the joint submission. [236] He noted that in relation to each of the potential effects identified by the submitters, there was no expert evidence to support concerns. He said that he considered that risks could be taken into account under s3(f) of the Act but that to do so potential impact must not be simply a hypothesis.

8.64 Firstly Mr Aimer dealt with the issue of attraction of birds, noting the ecological report stated there was common and widespread forest bird species may breed in the shelterbelts. However, Mr Aimer said that the submitters had not provided any evidence from a qualified expert to substantiate the concern that the proposal would generate significant increase in additional bird population or the crop damage that might occur and said that he considered that little weight could be placed on these concerns. He said that shelterbelts were common in the landscape and that shelterbelts were proposed to be removed from the internal boundaries of the site.

8.65 Mr Aimer then went on to deal with electromagnetic radiation on the ability of bees to pollinate. He said that without any evidence he did not consider that any weight could be placed on this radiation as grounds to require conditions or to decline consent.

8.66 Mr Aimer then went on to refer to the reduction in soil moisture and nutrients for crops noting that no evidence had been produced regarding the impact of the proposed plantings on the soil moisture and nutrients and did not consider that any weight could be placed on this alleged effect.

8.67 Mr Aimer then went on to refer to shading of neighbouring properties, a topic which I deal with later in this decision and will not repeat my findings at this point.

---

[236] Paragraphs 123 to 131 inclusive

8.68 Lastly Mr Aimer dealt with the issue of dust noting that the notification decision contained an assessment of the risk of dust generated from ploughing. Mr Aimer said that this particular issue had not been raised by submitters as a matter of concern but went on to state that the applicant had not viewed this as a particular concern because the Canterbury rain was sufficient to keep the panels clean and the proposed planting would provide some dust mitigation from adjoining primary property activity. In addition, he referred to the proposed vegetation assisting to reduce but not eliminate dust and that any cultivation or soil disturbance was likely to be seasonal. He also noted that cultivation and soil disturbance was provided as a permitted activity in the ODP, which protects the ability of adjoining properties to continue to undertake legitimate farming practices.

Reverse sensitivity / my findings

8.69 I appreciate that the issue of attraction of birds is a concern, particularly to Mr Casey. However, I do not consider that I can give this matter significant weight, in the absence of evidence from a qualified expert to the effect that the proposal would substantially increase the bird population. Further, I must consider that shelterbelts are widespread in the region and permitted. That, as Mr Aimer has noted, some shelterbelts are proposed to be removed from the internal boundaries of the site. Overall, I do not consider that this concern dictates against the grant of consent in this case and consider that the effects are minor or less than minor. I consider that the other matters under this head (reverse sensitivity) do not give rise to effects which are more than minor.

EARTHWORKS AND DUST

The report

8.70 As already noted, earthworks are proposed to drive piles to support the solar panel frames, trench to lay cables, the disturbing of topsoil to prepare areas for locatable buildings and the other infrastructure equipment. In the S42A report, Mr Aimer deals with both the

construction and operation periods [237]. He notes that during the construction period there is potential for dust to be generated due to the exposure of bare soil and the movement of construction machinery, with the earthworks associated with each stage being visible. He noted that views of the earthworks would diminish across the site and once the installation of the panel framing and panels commenced, the infrastructure would likely dominate the site to a greater extent then the earthworks. He went on to note that in order minimise potential dust effects earthworks would be managed through a Sediment Control Plan that would incorporate a Dust Management Plan.

8.71 Turning to the operational period, to minimise the potential for dust nuisance effects to arise during the operational period, grass cover would be maintained on the site. No stockpiling of material is proposed. As to concerns about maintaining the grass under the panels, the applicant confirmed that it would maintain the grass under the panels but that it may over time become patchy in parts.

Earthworks and dust / my findings

8.72 Having regard to the above, I am of the clear view that ongoing dust nuisance effects are unlikely to present an issue and can be managed through appropriate consent conditions to the extent that any effects will be less than minor.

LOSS OF PRODUCTIVE SOILS

Reports / evidence

8.73 The joint submission has raised concerns regarding the loss of the productive potential of the land at the site, given that it contains Land Use Capability (LUC) Class 2 soils in the north and Class 3 in the south.

8.74 In the S42A report, Mr Aimer stated [238] ….

> *Whilst the grazing of sheep would still be supporting primary production, the productive potential of the land would be reduced.*

He then went on to suggest a condition requiring the land to be returned to pastoral use at the expiry of the economic or operational life of the

[237] At paragraph 150 to 155 inclusive
[238] At paragraph 133

solar panels but went on to state (in relation to the proposed condition) …

> *However, given the applicant has sought an unlimited duration of consent, unless a duration is imposed on the consent, there is no certainty that the site will return to productive use.*

8.75 Later, in the notification decision, Mr Aimer referred again to the issue of loss of productive soils, repeating his view that the grazing of sheep represented a significant reduction in the productive potential of the land. However, he went on to state [239] …

> *Although the area of the site is significant, I do not consider that the reduction in productive potential of the land constitutes a more than minor adverse effect. I note that, in contrast to other land uses, any productive use will be temporary and reversable following the expiry of the 35 year term – meaning that the land could be used for more productive purposes once the solar array reaches the end of its life.*

I note that this view was tied to the 35 year term.

8.76 Mr Aimer presented a summary statement at the hearing in which he accepted that a duration of longer than 35 years would provide the applicant with more certainty. [240] Mr Aimer referred to a condition requiring the land to be used for land based primary production, as defined in the NPS-HPL, and stated that on the basis of that condition there was no need for the 35 year limitation. [241]

8.77 I turn to examine the evidence of Mr Fletcher on behalf of the submitters. He stated that the impacts of the proposal on highly productive land had become heightened since the introduction of the NPS-HPL and referred to the relevant policies. He then went on to refer to the comments made in the notification report by Mr Aimer as to the loss of productive soils, referred to above. He said that the statements in the notification report compared to the assessment provided in the s42A report regarding the loss of productive soils where there was reference to the solar panels being likely to significantly reduce the productive capacity of the land while the solar farm was in operation. Mr Fletcher concluded by stating that the processing planner now considered that the potential effects of the proposed activity would include a significant effect on the productive capacity of the application site. Mr Fletcher went on to state …

> *Given the context or background of the situation whereby the use of highly productive land for primary production should be prioritised*

---

[239] At paragraph 100
[240] Summary statement / paragraph 11.2
[241] Summary statement / paragraphs 3.5 to 3.7 inclusive

(policy 4 of the national policy statement) and that highly productive land should be protected from inappropriate use and development (policy 8 of the national policy statement) it is considered that a proposal which will significantly reduce the productive capacity of the site must be considered to have more than a minor effect on the environment.

Legal submissions

8.78 In her submissions on behalf of KeaX, Ms Hawkins referred to the evidence of the impact of construction and operation of the Proposal on the soil resource submitting that during construction there would be a less than minor impact on the soil resource. That is undoubtedly the case. She went on to refer to the operational stage where she said that the site would continue to be able to be used for land based primary production although at a lesser intensity and said that this was a positive outcome for the soil resources. She referred to the operational life of the solar farm, noting that the land was required to be returned to a state that enabled it to be used for land based primary production and said that there would be no long-term effects on the soil resource. [242]

8.79 At the conclusion of the hearing, I put to Mr van der Wal the question of the extent to which I should take into account any loss of the productive capacity of the land over the term of the consent as an environmental effect. He referred to the definition of "environment" in the Act and said that loss of productivity was an aspect of the environment. He said that he could not see how this was not an adverse effect. He put it that the loss would be significant from the point of the view of enabling people to provide for their wellbeing as required by the Act. He put it that it would be artificial to say there was no jurisdiction for me to consider this matter.

8.80 In her reply legal submissions, [243] Ms Hawkins submitted the Proposal would have minimal impacts on the productive capacity of the land for reasons which she expressed in those submissions. She said there would be minimal impacts on the underlying soil resource which would be protected in the long term. She went on to state that while the current levels of primary production on the site would reduce, this was not relevant to the assessment of effects *on the highly productive land* (i.e. the soil resource). Instead, she said that this was an assessment of

---

[242] Legal submissions on behalf of KeaX / paragraph 33

[243] Reply legal submissions on behalf of KeaX / paragraphs 30 to 3 inclusive

productivity in an economic/viability sense (i.e. the use of the land for dairy farming versus the uses of the land for a solar farm/agrivoltaics. She went on to submit that the use of the land in that sense was largely at the owner's prerogative, relying upon a statement in *NZ Rail Limited v Marlborough District Council* [244] in which it was noted that financial viability of a proposed activity was not a relevant effect. She said there was nothing in the Act or NPS-HPL that *required* the landowner to *use* highly productive land for primary production. The owners of the site could cease their dairy farming operations tomorrow, thereby reducing the economic productivity of the land, with no consequences. She said that the point was the impact on the soil resource. Ms Hawkins submitted that on this basis, the adverse effects on the soil resource of the highly productive land would be no more than minor.

Loss of productive soils / my findings

8.81 I note that in the notification report, Mr Aimer considered the issue of productivity in the context of a 35 year term. As I have noted elsewhere in this decision, a 35 year term is not sought. It was made clear to me on behalf of KeaX that a shorter term is not desired for economic and other reasons and accordingly I am required to assess this application on the basis of an indefinite term. It appears that at the time of the notification decision, there was no consideration of the issue of loss of productivity beyond a 35 year term. Clearly there is a material difference between the effects of a 35 year term and an indefinite term.

8.82 The requirement in s104(1) is to consider …

> *…. any actual and potential effects on the environment of allowing the activity.*

"Environment" is defined as follows …

> *… includes –*
> *(a) ecosystems and their constituent parts, including people and communities; and*
> *(b) all natural and physical resources; and*
> *(c) amenity values; and*
> (d) *social, economic, aesthetic and cultural conditions which affect the matters stated in paragraph (a) to (c) or which are affected by those matters.*

[244] *NZ Rail Limited v Marlborough District Council* [1994] NZRMA 70 (HC)

8.83 It follows from the definition of "environment", that it is not just the direct effects on individuals, such as visual or noise effects on neighbours, which need to be taken into account in making the relevant assessment. Clearly the definition is wide enough to encompass consideration of the impact of loss of productivity over an extended period on people and communities which may be affected.

8.84 Ms Hawkins has stressed that in considering environmental effects, I should not trespass upon the examination of issues of financial viability. As she stated in her reply legal submissions, a landowner is able to do what he or she wants and there is nothing that requires that landowner to use highly productive land for primary production which produces a greater yield than the sheep grazing which is proposed in this case. That is undoubtedly correct.

8.85 Ms Hawkins relied upon *NZ Rail Limited v Marlborough District Council* [245] where the issue of financial viability was considered and dismissed. The court had this to say [246] …..

> *Financial viability in those terms is not a topic or a consideration which is expressly provided for anywhere in the Act. That economic considerations are involved is clear enough. They arise directly out of the purpose of promotion of sustainable management. Economic well-being is a factor in the definition of sustainable management under s5(2). Economic considerations are also involved in the consideration of the efficient use and development of natural resources in s7(b). They would also be likely considerations in regard to actual and potential effects of allowing activity under s104(1) but in any of these considerations it is the broad aspects of economics rather than the narrower consideration of financial viability which involves the consideration of the profitability or otherwise of a venture and the means by which it is to be accomplished.*

NZ Rail Limited emphasises that the broader aspects of economic considerations are able to be considered. This is because "environment" is defined in such a way as to refer the wellbeing of people and communities and clearly their economic wellbeing is one of the factors which is able to be taken into account in assessing environmental effects.

8.86 I accept the submissions of Ms Hawkins that the landowner could carry on a sheep grazing activity, similar to the one the subject of the Proposal, without contravening any planning laws. However, I consider

---

[245] *NZ Rail Limited v Marlborough District Council* [1994] NZRMA 70 (HC)

[246] At page 88

it to be unlikely that in the absence of the solar farm being established, the land would be used for purposes which did not reflect and utilise to a fuller extent than is presently proposed in the Proposal, the productive potential of the highly productive land. This is particularly the case over the length of time which this issue has to be considered, which is for an indefinite term. I need to consider this matter on the basis that the land will not be available for other purposes for an indefinite term, which may traverse more than one generation.

8.87 Against this background I am of the view that restricting my assessment of effects to a concentration on the preservation of the underlying soil resource, which is to be protected in the long term, represents an approach which is too restrictive in the context of my examination of environmental effects. In the present case, and for an indeterminate time, the existence of the solar farm will inevitably restrict the range of land-based productive activities which will be able to be carried on and will be limited to the grazing of sheep. The evidence is clear that this represents a significant reduction in the productive capacity of the site. I rely on the evidence of Mr Casey and the reports by Mr Aimer to the effect that the grazing of sheep in the context of the Proposal represents a significant reduction in the productive capacity for land-based primary activities on the site.

8.88 Given the size of the site, and the quality of the soils, the issue of whether the fact that the land will be restricted in land-based primary productive activities for an indefinite period, during which time the productive potential will not be realised, is a matter of concern to the community beyond immediate neighbours. I am of the view that this particular piece of land is of sufficient importance, given its size and highly productive soils, that the wider public has an interest in whether the restriction of the use of the site over a prolonged period, during which period it will not be able to achieve its primary production potential having regard to the high quality of the soils in question, is acceptable. In adopting this approach, I do not consider that I am trespassing upon the consideration of economic matters as noted in *New Zealand Rail Limited*. The wider issue is whether the availability of this highly productive land for primary production purposes reflecting the quality of the soils should be limited, for the unlimited period of the Proposal.

8.89 I note that in his evidence, Mr Fletcher referred to what he said was the significant reduction in the rural productive potential of the site in that the land would not be capable of producing crops, milk, meat or similar products to the same degree as it can now. But he went on to state that it was fair to consider this effect to be more minor but that this was only really relevant as to the question of notification. [247] The starting point is to make an assessment of effects on the environment before considering the notification position. In my view the issue of loss of productive potential of the site is a matter which must be considered to be an effect on the environment because, as Mr van der Wal has correctly stated, it has significance in relation to the ability of people, including people beyond the immediate site, to provide for their wellbeing by utilising highly productive soils for primary production purposes and reaping the benefits of that use.

8.90 A number of the policies in the NPS-HPL refer to the high value which is placed upon land based primary production. Whilst I accept that the provisions of the NPS-HPL may not be directly relevant to the question of the assessment of environmental effects of the Proposal, the policies serve to emphasise the importance of the consideration of land productivity when considering effects on the environment and not just the preservation of the soil resource. I note that Policy 4 of the NPS-HPL is in the following terms ….

> *The use of highly productive land for land-based primary production is prioritised and supported.*

This appears to me to emphasise the difference between having regard to the use of land for production and the preservation of the soil resource from inappropriate use and development.

8.91 I agree with Mr Aimer that whilst the grazing of sheep would still be supporting primary production, the reality is that the productive potential of the land would not be realised. In this context I do not think that baseline comparisons are of assistance. This is because, whilst other farming activities could be conducted on the subject site which might not result in productivity which exceeds the sheep grazing activity now proposed, as already noted, the likelihood is that, given the highly productive character of the soils, and looking at the indefinite period, the subject site would be likely to be utilised to take advantage of the

[247] Statement of evidence / paragraph 6.8

highly productive soils by carrying out activities which were more productive than the proposed sheep grazing and which would reflect taking advantage of the advantageous position which the highly productive soils present.

8.92 I have given careful consideration to this issue, given the clear implications of my findings on the notification issue. In the result I have concluded that the effects on the environment, represented by the restriction in the productive capacity of these highly productive soils over an indefinite period, are likely to be significant and represent a more than minor effect on the environment. I note that at the hearing Ms Hawkins addressed the issue of the availability of highly productive soils in the District and I refer to the discussion which follows when I deal with clause 3.9(2)(j) of the NPS-HPL. I have formed the view that there is insufficient evidence to establish, with clarity, the effect of the loss of opportunity presented by the highly productive soils on the site on the overall position in the District. I add that the fact that the soils will be required to be returned in a condition which enables the land to be used for productive purposes at the end of the term of the consent does not deal with the issue of the loss of productive availability over the indefinite period of the consent. In summary, I find that the effects of the loss of productive capacity of the highly productive land over an indefinite period are more than minor.

CULTURAL EFFECTS

Introduction

8.93 The application site contains a site of significance to Tangata Whenua within Stage 2, being Wāhi Taonga Management Area C59 (Ovens/Midden located on Lot 2 DP387576 (formerly RS 5974). In accordance with Rule 1.3 of the ODP, earthworks within this area are limited to the disturbance of soils over areas and depths where the soil has previously been disturbed by cultivation.

8.94 The applicant has consulted with the Tangata Whenua Advisory Service and Mahaanui Kurataiao Limited in relation to the proposal. The applicant has agreed to place a 50m fence exclusion buff around the C59 within which no earthworks will be undertaken or solar panels constructed. This zone has been identified on the site plan dated August

2022. The advice received is that the Rūnanga do not consider themselves to be an affected party and that the existing fencing and proposed setback would be sufficient to protect the site. The matter of protection extended to both the Council application as well as the Environment Canterbury Application. The applicant has proposed an accidental discovery protocol, a 10m setback from water races and drains surrounding the site to meet an erosion and settlement control plan and has undertaken to not undertake indigenous planting within the Wāhi Taonga site. [248]

Tangata Whenua / cultural site / my findings

8.95 I consider that the adverse effects on Tangata Whenua / cultural values of the site are appropriately addressed by the above and do not understand there to be any suggestion from any submitters that this is not the case.

HEALTH AND SAFETY EFFECTS

Introduction

8.96 As is noted in the S42A report by Mr Aimer, [249] the joint submission raised a number of potential health and safety risks which were of concern to them, each of which is considered by me.

Electromagnetic radiation

8.97 Mr Gledhill gave evidence on behalf of the applicant in relation to the issue of magnetic fields. I have already recorded what he said earlier in this decision. Importantly, Mr Gledhill noted that measurements taken showed that at distances at more than a metre from the inverter skid, electric and magnetic field levels around the site were very low in comparison to the limits recommended by ICMIRP in 1998 and 2010 and was satisfied that the relevant rules in the ODP and Proposed SDP. He said that the solar panels themselves and the combiner boxes mounted beneath each string of panels only produced weak fields and beyond the security fence the solar farm would make an indiscernible difference to electric and magnetic field exposures. On this basis it was his opinion that electric and magnetic fields from the solar farm would have no effect on the health of people

[248] S42A report / paragraphs 156 to 159 inclusive
[249] Paragraphs 173 to 183 inclusive

around it and that also unlikely that the EMFs would affect these or birds in the neighbourhood. [250]

8.98 In the s42A report, there is reference to the report from EMR Services which concluded that EMF values in respect of both the combiner box and inverter skid were low with respect to IC and IRP limits, that DC electric fields would be low and would rapidly decrease with distance, that EMFs near the combiner box would be well below ICNIRP 1998 and 2010 public limit and make a negligible difference to fields a few 10s of metres from the box, that there would be indiscernible changes to fields outside the security fence around the installation and there would be no electrical fields detectable from any cable installed to feed from the local distribution network. [251]

Electromagnetic radiation / my findings

8.99 On the basis of the above reports, and in the absence of evidence to the contrary, I find the solar farm will make an indiscernible difference to EMF levels in the surrounding area, that EMF's from the solar farm will have no effect on the health of nearby residents and that the solar farm is highly unlikely to make any difference to the ability of bees to pollinate nearby crops or birds to navigate in the area. As to the adverse environmental effects, I agree with Mr Gledhill that an EMF condition is not necessary, should consent be granted to the application to establish the Proposal.

Fire

8.100 The joint submission has raised concerns regarding the batteries at the site catching fire, and the difficulty of extinguishing any such fire. The submitters do not consider that the use of sheep to keep the grass low and thus susceptible to fire, will be effective in practice.

8.101 Mr Aimer went on to note that similar concerns were raised in the first request for further information and were addressed by the applicant in its response. The applicant notes that a Health and Safety Management Plan and a Fire Emergency Plan are required to be provided under the Health and Safety at Work Act 2015 and Ffire and Emergency New Zealand Act 2017 respectively. The applicant also noted that it is

[250] Statement of evidence / paragraph 2.1 to 2.4 inclusive
[251] S42A report paragraphs 174 to 178 inclusive

required to comply with several electrical standards, codes of practice and regulations made under the Electricity Act 1992 and Electricity Industry Act 2010. Any resource consent granted would not excuse compliance with these requirements which are said to provide a relatively comprehensive approach to the management of fire risk associated with the proposal. [252] Further, proposed condition 13 of the conditions of consent provides that the consent holder …

> *Shall provide SDC and the owners of 324 and 265 Branch Drain Road, 180 Grahams Road and 43 Dunsandel Brookside Road with a copy of the Fire Response Plan prepared under the Fire and Emergency New Zealand Act 2017 for information purposes only.*

Fire / my findings

8.102 Having considered the above, I have formed the clear view that whilst, as the submitters in opposition contended, there is the need to consider fire risk and how that is to be managed, the legislative requirements which are required to be met dictate that any adverse effects of fire risk are less than minor and can be appropriate managed in a comprehensive way and I so find.

Chemical leachates

8.103 The findings in relation to the discharge of chemical leachates are to be found in my consideration of land contamination.

Land contamination

8.104 Mr van der Wal referred to the fact that both Mr Aimer and Ms Kelly had urged me not to consider contamination effects as they were, as a Canterbury Regional Council issue, not relevant to this consent. Mr van der Wal submitted that this represented a serious error of law for reasons which he expressed. [253]

8.105 It was noted that the stormwater discharge consent granted to KeaX was only for a period of 15 years and that if I were to accept the evidence of the applicant on this point, then the best that I could accept was that the contamination effects (from stormwater runoff) would be addressed

---

[252] S42A report / paragraphs 179 and 180

[253] Legal submissions on behalf of joint submitters / paragraphs 45 to 55 inclusive

for a period of 15 years. Mr van der Wal submitted that consent could not be granted for a period longer than 15 years on this basis. Mr van der Wal went on to submit that I was able to take into account the effects of activities that would flow inevitably from the grant of consent but which were not before me as decision maker. He relied upon *Pukenamu Estates Limited v Kapiti Environment Action Inc* [254].

8.106 Mr van der Wal went on to submit that the effects confirmed by Mr Henderson's evidence were effects of high potential impact of which there was a real risk that they would occur which rendered them an effect for the purposes of s3(f) of the Act. He submitted that the Council was wrong not to decide that the applications for the Canterbury Regional Council consents had to be jointly heard. He submitted that I could find as a consequence that I am unable to be satisfied that the contamination-related events of the proposal are appropriate when considered in the integrated holistic manner required by the statute. Mr van der Wal went on to submit that certain discharge consents had not been sought or granted being:-

(i) a consent to discharge the range of contaminants for the durations identified in Mr Henderson's evidence;

(ii) a consent to do something that would, but for a resource consent, contravene ss15(1)(d) and possibly (c).

8.107 Mr van der Wal submitted that the site would become industrial or trade premises as it no longer meets the definition of production land in s2 of the Act. He said that this meant that any discharges to land were unlawful under s15(1)(d) (irrespective whether they may enter water or not) and any discharges to air were unlawful under s15(1)(c) unless they were expressly allowed by a resource consent. Mr van der Wal noted that the only consent that had been granted was a consent to discharge "operational stormwater" for land in circumstances where it may enter water. It was said that an option available to me was to exercise the consent authoritiy power under s91 to require an application to be lodged with the Canterbury Regional Council for such discharges but in any event submitted that it was not appropriate for

[254] *Pukenamu Estates Limited v Kapiti Environment Action Inc* HC Wellington CIV-2002-485-22; 17 December 2003

me to disregard the very considerable adverse effects on the environment addressed by Mr Henderson's evidence.

8.108 In her legal submissions in reply, Ms Hawkins responded to the various matters raised by Mr van der Wal in his submissions as to the adequacy of existing consents and the possible need for additional consents. [255] Ms Hawkins submitted that it was not my function to determine whether or not the necessary regional consents were held for a proposal. She said that was the function of the Canterbury Regional Council or the High Court in judicial review. She went on to submit that the necessary regional consents had been obtained and that if either the Canterbury Regional Council or the High Court determined that additional consents were required, these would need to be obtained. She said it was not the position of the applicant that regional-type matters were not relevant at all but rather that the Canterbury Regional Council was the best place to consider them and this had been done through the Canterbury Regional Council consenting process.

8.109 The issue of the discharge of chemical leachates is dealt with in the S42A report [256]. There Mr Aimer said that discharges of contaminates are regulated by the Canterbury Regional Council in accordance with s15 of the Act. He referred to the existing resource consent authorising the discharge of stormwater generated from solar panels and containing maintenance and inspection requirements, along with requirements to avoid any spillage of hazardous substances at the site. Mr Aimer went on to note that the storage of any hazardous substances at the site (including any substances contained within the solar panels and batteries) are managed under other legislative regimes including the Hazardous Substances and New Organisms Act 1996 and the Health and Safety at Work Act 2015. In any event Mr Aimer considers that any risk can be appropriately managed through conditions requiring the maintenance, monitoring and closure of the solar farm.

The contamination issue / my findings

8.110 I am in agreement with the submission that it is not for me:-

---

[255] Reply to legal submissions on behalf of KeaX / paragraphs 79 to 84 inclusive

[256] At paragraphs 181 to 183 inclusive

(i) to comment on the adequacy of such consents that have been obtained from the Canterbury Regional Council, given the matters raised by Mr Henderson;

(ii) to stipulate what further consents might be required from the Canterbury Regional Council or any other regulatory body. If there are concerns (as appears to be the case) regarding the adequacy of consents obtained from the regional council and the possible need for additional consents, this is a matter which can be expected to be dealt with by the Canterbury Regional Council if it is requested to review the position.

8.111 I have listened carefully to the evidence given by Mr Henderson. That evidence gave rise to a number of legitimate concerns about the operation of the solar farm. However, I note that the matter of dealing with discharges, including contaminants, is clearly the responsibility of the Canterbury Regional Council. If concerns remain, those persons affected will be able to raise their concerns with that Council. In the event that if further consents are required to render lawful the discharge of contaminants not already covered by the existing consent, then the applicant will need to obtain the appropriate consents, as is accepted by Ms Hawkins. The corollary of this is that in the event that there is a need for an additional consent or consents, and they are not obtained, the Canterbury Regional Council can be expected to take steps to prevent the continuance of the operation of the solar farm. Against this background, I am satisfied that any contaminants released by the operation of the solar farm will be properly managed and controlled, either in the context of the requirements of the Canterbury Regional Council in relation to any further consents, or by reason of the proposed conditions of consent which require the site to be able to be used for primary production purposes.

SHADING

The report / evidence

8.112 Reference is made to the summary statement of Mr Aimer presented at the hearing [257]. Mr Aimer noted that in the S42A report it was stated that it was likely that planting along the southern boundary would shade the properties to the south between the hours of 1000 and 1400 on the shortest day of the year and considered that any shading effects be mitigated through the requirement of a small setback. He said that he agreed with Ms Kelly that this effect was incorrectly classified as a reverse sensitivity effect. Mr Aimer went on to note that portions of the planting on the southern boundary were replacing existing plantings or filling gaps. He considered that shading from the existing shelterbelts formed part of the existing environment. He acknowledged Ms Kelly's evidence that the proposed setback would result in a staggered shelterbelt and that no concerns regarding the location of the proposed shelterbelt had been raised in Mr Fletcher's evidence and no further evidence from Mr Casey had been provided detailing any potential adverse shading effects. In the light of this, Mr Aimer said that no additional setback from the southern boundary was required.

Shading effects / my findings

8.113 I agree with Ms Kelly and Mr Aimer that any effects relating to the shading of neighbouring properties will be less than minor. Mr Aimer refers to three properties located on the southern boundary of the site, 324 Branch Drain Road, 180 Grahams Road and Caldwells Road. He notes that the dwelling at 324 Branch Drain Road is closest to the existing and proposed shelterbelt but that no change is proposed to the existing shelterbelt. As to the dwelling at 180 Grahams Road, he notes its distance from the proposed southern boundary and is of the view that dwelling is unlikely to experience any shading. He went on to state that given the landscaping will be maintained at a height of 4m he considers any adverse effects from the shading are likely to be less than minor. I agree.

[257] At paragraphs 7.1 to 7.3 inclusive

ECOLOGICAL EFFECTS

Report / evidence

8.114 The issue of ecological effects is dealt with in the S42A report [258]. The report has noted that the application included an ecological impact assessment memorandum completed by an ecologist, Dr Jaz Morris of Boffa Miskell. This application assessment had been reviewed by the Council's Senior Biodiversity Adviser, Mr Andrew Spanton. I note that for the applicant, Ms Kelly was in agreement with Mr Aimer in relation to the views expressed in this report. [259]

8.115 Mr Aimer examined the issue of terrestrial vegetation, stating his understanding is that the site does not contain any indigenous vegetation from an ecological perspective the assessment concludes that the development on the site would have a very low level of ecological effect. Mr Aimer went on to consider avifauna, noting that the assessment found as follows:-

(i) with regard to habitat loss, there would be a permanent loss of habitat due to the construction of buildings and clearance of shelterbelts but that this would only affect a small portion of the site. He noted that permanent habitat modification would occur across the site but, considered the issue of birds that use the site and noted the assessment included that the habitat loss would have a very low level of effect on abifauna;

(ii) construction would also have a very low effect on avifauna as the birds present on the site during construction would be likely to disburse into surrounding habitats.

(iii) during the operational period Mr Aimer said that there was a potential risk of bird strike due to birds potentially mistaking light reflecting off the panels as water. He noted that the assessment concluded that the threat of bird strike, whilst possible, was negligible, and constituted a very low to low level of effect.

---

[258] At paragraphs 160 to 168

[259] Statement of evidence / paragraph 5.3

8.116 Mr Aimer went on went on to refer to the reflection of polarised light from solar panels which had been speculated to have potential adverse effects on some emerge freshwater invertebrate taxa. The Boffa Miskell assessment noted that this possible effect was considered unlike to be of ecological concern and Mr Aimer accepted this assessment. Mr Aimer went on to refer to the water-race along the southern side of Buckley Road which had been identified as a mud fish habitat. He did not consider that the proposal would have any effects on surrounding waterways that supported the Canterbury mud fish.

8.117 Mr Aimer noted that the application had been reviewed by Mr Spanton who had raised no concern regarding the proposal. In particular Mr Aimer referred to the construction of the solar panels occurring outside the main bird breeding season being September to January and notifying the Council's Biodiversity Offices prior to any works if an upgrade of the vehicle crossing was to be undertaken. Mr Aimer noted that the applicant currently proposed to undertake the construction work beginning in September of each year and running for four months which he said fell squarely within the main breeding season of the birds. He said an alternative condition that would allow birds for construction to take place following an inspection of the site by a qualified ecological expert and if any birds found, the preparation of an ecological management plan.

8.118 Mr Aimer noted that the joint submission had raised concerns that the impacts of the solar farm on wild life, invertebrates and aquatic organisms had not been correctly described. However no specific concerns were raised and no expert opinion was provided. Mr Aimer concluded by considering that the ecological effects of the Proposal could be adequately managed with conditions.

Ecological effects / my findings

8.119 For the reasons which were the subject of the assessment by Dr Morris and reviewed by Mr Stanton, I agree that any ecological effects of the Proposal can be appropriately managed with conditions and am of the view that with this approach, the ecological effects will be less than minor.

EFFECTS ON PROPERTY VALUES

Legal submissions

8.120 Mr van der Wal dealt with the suggestion that any potential impact of the proposal on the value or desirability of neighbouring properties was not a relevant effect. Mr van der Wal accepted a statement by Ms Kelly when she said …

> *I advise that the question of adverse effects on property values has been addressed by the Environment Court on several occasions. Some of the case law articulates the idea that if it occurs at all, property value is simply another measure of adverse effects on amenity values.*

8.121 Reliance was placed on *Fott v Wellington City Council* [260]. Mr van der Wal submitted that the effect on property values could not be "irrelevant" as claimed in the S42A report.

Property values / my findings

8.122 No expert evidence was submitted to me recording the view that the Proposal would have associated with it a drop in property values for any property adjacent to the subject site. Whilst Ms Kewish expressed concern about the effect which the establishment of the Proposal would have upon potential buyers, in the event that the Kewish family wanted to sell its property, there was no evidence led which would enable me to reliably make any findings in relation to the possible effect on property values. I adopt the reasoning in *Fott.* I note that I have already made an assessment of effects on amenity values.

9. *STATUTORY AND PLANNING FRAMEWORK / ANALYSIS*

RELEVANT DOCUMENTS

9.1 The statutory and planning documents which are relevant to the Proposal are:-

(i) National Policy Statement for Renewable Energy Generation 2011 (NPS-REG);

---

[260] *Fott v Wellington City Council* W73/98; 2 September 1998, paragraph [256]

(ii) National Policy Statement for Highly Productive Land 2022 (NPS-HPL);

(iii) National Policy Statement for Freshwater Management 2020 (amended 2022) NPS-FM);

(iv) Canterbury Regional Policy Statement;

(v) Operative and proposed plans (ODP and proposed SDP)

NPS-REG

9.2 The objective of the NPS-REG is as follows:-

> *To recognise the national significance of renewable energy generation activities by providing for the development, or operation, maintenance and upgrading of new and existing renewable energy generation activities, such as 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.*

9.3 As is noted in the legal submissions of counsel on behalf of the applicant, the NPS-REG requires decision makers to recognise the benefits of renewable electricity generation and to acknowledge the practical implications of achieving New Zealand's target for electricity generation from renewable sources. Policy A provides for the recognition of the benefits of renewable energy generation activities and Policy B acknowledging the practical implications of achieving New Zealand's target for achieving electricity generation from renewable resources.

9.4 It is clear from Mr McMath's evidence that more renewable energy will be needed to meet the current target for 100% renewable electricity generation by 2030 and it is clear that more renewable energy will be needed to meet the relevant targets which, as counsel for KeaX has stated, can only be achieved through increasing renewable generation infrastructure. Undoubtedly the Proposal enables this. [261]

9.5 The NPS-REG also acknowledges the practical constraints associated with the development operation, maintenance and upgrading of renewable electricity generation activities. Policy C1 states …

[261] Your submissions 23 February 2023 / paragraphs 38 to 43 inclusive

Decision-makers shall have particular regard to the following matters:-

(a) the need to locate the renewable energy generation activity where the renewable energy resource is available;

(b) logistical or technical practicalities associated with developing, upgrading, operating or maintaining the renewable electricity generation activity;

(c) the location of existing structures and infrastructure including, but not limited to, roads, navigation and telecommunication structures and facilities, the distribution network and the national grid in relation to the renewable electricity generation activity, and the need to connect renewable electricity generation activity to the national grid.

9.6 Undoubtedly the Proposal achieves the objectives and policies of the NPS-REG by providing a significant amount of new renewable electricity generation where it can efficiently connect to the distribution network.

9.7 I perceived that the submitters in opposition acknowledged the positive benefits of the Proposal in terms of s7(j) of the Act and the NPS-REG. However, their point was that whilst the fact that the application was for a renewable energy generation proposal was a key positive consideration, to which I was to give significant weight when exercising any discretions conferred on me by statute, this did not permit me to under-assess, downplay or ignore the adverse effects of the Proposal. [262]

9.8 I should add that I see no conflict between the provisions of the NPS-REG and the NPS-HPL and consider that their provisions can be read together and in harmony. I note that the NPS-HPL recognises the importance of renewable energy generation the subject of NPS-REG in its consideration of the treatment of electrical infrastructure.

NATIONAL POLICY STATEMENT FOR HIGHLY PRODUCTIVE LAND 2022 (NPS-HPL)

Introduction

9.9 As the hearing of this application developed, it became apparent that consideration of the provisions of the NPS-HPL was going to be of pivotal importance in this case.

9.10 The NPS-HPL came into force on 17 October 2022, some seven months after the application was lodged. I comment that a surprising feature of

[262] See legal submissions of Mr van der Wal / paragraphs 8 and 9

the introduction of the NPS-HPL was that it did not contain any transitional provisions to deal with the fact that the provisions of the NPS-HPL would have retrospective effect, in a case such as this. Clearly the NPS-HPL represents a significant hurdle to applicants who are seeking to develop highly productive land. Notwithstanding the absence of what may be seen as this surprising feature of the instrument, I comment that all parties are in agreement that the provisions of the NPS-HPL have effect and must be considered by me.

9.11 The principal clause which is of relevance in this case is clause 3.9 which, by reason of its importance, I set out:-

> ***3.9 Protecting highly productive land from inappropriate use and development***
>
> *(1) Territorial authorities must avoid the inappropriate use or development of highly productive land that is not land-based primary production.*
>
> *(2) A use or development of highly productive land is inappropriate except where at least one of the following applies to the use or development, and the measures in subclause (3) are applied:*
>
> *(a) it provides for supporting activities on the land:*
> *(b) it addresses a high risk to public health and safety:*
> *(c) it is, or is for a purpose associated with, a matter of national importance under section 6 of the Act:*
> *(d) it is on specified Māori land:*
> *(e) it is for the for the purpose of protecting, maintaining, restoring, or enhancing indigenous biodiversity:*
> *(f) it provides for the retirement of land from land-based primary production for the purpose of improving water quality:*
> *(g) it is a small-scale or temporary land-use activity that has no impact on the productive capacity of the land:*
> *(h) it is for an activity by a requiring authority in relation to a designation or notice of requirement under the Act:*
> *(i) it provides for public access:*
> *(j) it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land:*
> *(i) the maintenance, operation upgrade, or expansion of specified infrastructure:*
> *(ii) the maintenance, operation, upgrade, or expansion of defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990:*
> *(iii) mineral extraction that provides significant national public benefit that could not otherwise be achieved using resources within New Zealand:*
> *(iv) aggregate extraction that provides significant national or regional public benefit that could not otherwise be achieved using resources within New Zealand.*

> *(3) Territorial authorities must take measures to ensure that any use or development on highly productive land:*
> *(a) minimises or mitigates any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their district, and*
>
> *(b) avoids if possible, or otherwise mitigates, any actual or potential revers sensitivity effects on land-based primary production activities from the use or development.*

Clause 3.9 (1)

9.12 The term "avoid" was discussed by the Supreme Court in *Environmental Defence Society Inc v The New Zealand King Salmon Co Limited* [263] where the court considered the term as it was used in s5(2)(c) of the Act and in relevant provisions of the New Zealand Coastal Policy Statement. The majority stated …

> *In that context, we consider that "avoid" has its ordinary meaning of "not allow" or "prevent the occurrence of".*

9.13 I have adopted this approach to the interpretation of this term in this decision. I do not understand there to be any controversy over this approach.

9.14 "Land based primary production" is defined in the NPS-HPL as …

> *… means production, from agricultural, pastoral, horticultural, or forestry activities, that is reliant on the soil resource of the land.*

9.15 It is common ground that the site contains "highly productive land". Clause 3.5(7) of the NPS-HPL states (relevantly) as follows …

> *Until a regional policy statement containing maps of highly productive land in the region is operative, each relevant territorial authority and consent authority must apply this National Policy Statement as if references to highly productive land were references to land that, at the commencement date:*
> *(a) is*
> *(i) zoned general rural or rural production; and*
> *(ii) LUC1,2, or 3 land ….*

The application site contains Land Use Capability (LUC) Class 2 soils in the north and Class 3 in the south. [264]

---

[263] *Environmental Defence Society Inc v The New Zealand King Salmon Co Limited* [2014] 1 NZLR 593

[264] S42A report / paragraph 132

9.16 Ms Hawkins on behalf of KeaX submitted that clause 3.9(1) does not apply to the Proposal because the site will at all times continue to be used for land based primary production. She referred to the replacement of existing dairy farm operations with sheep farming around and under the solar panels which will continue while the solar farm is in operation. Sheep farming is a pastoral activity that comes within the definition of land based primary production. [265]

9.17 Perhaps not surprisingly, Mr van der Wal, on behalf of the joint submitters, took a different approach. In answer to a question from me, Mr van der Wal stated that the matter which triggered the clause was an activity which was not associated with land based primary production.

9.18 Undoubtedly an element of the Proposal involves the land being used for primary production, namely the grazing of sheep. However it is the use of the land for a solar panel farm which is not land based primary production and which must be the focus of the clause. For the purposes of this clause, I do not consider that the proposed use can be treated as a combined or overall use, with the consequence that because of the sheep grazing element, the overall use could be considered to be land based primary production. That is not a realistic approach. Given the extent of the solar farm, this element must be considered as a discrete element for the purposes of considering compliance with this clause. If that approach is taken, then clearly the Proposal contravenes clause 3.9(1) unless it is considered to be not inappropriate when the qualifications prescribed in clause 3.9(2) are examined.

Clause 3.9(2)(f)

9.19 Earlier in this decision, I have referred to the evidence suggesting that clause 3.9(2)(f) applies in this case because land is being retired from land based primary production for the purpose of improving water quality.

9.20 The applicant maintains that the land is not being retired from land based primary production because of the proposal for grazing of sheep. Undoubtedly the cessation of dairy production will have an effect on improving water quality. I do not believe that it can be said that the land is being retired from land based primary production, being dairy

[265] *Legal submissions on behalf of KeaX / paragraph 51*

farming, for the purpose of improving water quality. The primary purpose of the change in the use of land is to establish a solar farm. Whilst there may be some improvement in water quality associated with the Proposal, taking an overall view I find that the Proposal is not consistent with this clause.

Clause 3.9(2)(g)

9.21 Clause 3.9(1) provides that the use or development of highly productive land is inappropriate except where at least one of the prescribed exceptions apply. Clause 3.9(2)(g) provides for a qualification to the use as follows …

> *… it is a small-scale or temporary land-use activity that has no impact on the productive capacity of the land.*

9.22 In answer to a question from me, Ms Hawkins stated that an economic analysis of the activity was not involved. She said that the activity could be regarded as "small-scale" having regard to the impact on the soil. As I understood her, she did not maintain that the activity was "temporary", given the length of time sought for the consent. I agree that the activity could not be regarded as "temporary".

9.23 "Productive capacity" is defined in the NPS-HPL as follows ..

> *….. in relation to land, means the ability of the land to support land-based primary production over the long term, based on an assessment of:*
>
> *(a) physical characteristics (such as soil type, properties, and versatility); and*
> *(b) legal constraints (such as consent notices, local authority covenants, and easements); and*
> *(c) the size and shape of existing and proposed land parcels.*

9.24 Ms Hawkins submits that the activity is "small scale" because it will have no impact on the productive capacity of the land, given that it will be available to be returned at the end of the term of the consent. I do not agree that this is the appropriate interpretation of the clause, this for the following reasons: -

(i) given the size of the solar farm, I cannot see a proper basis for it to be considered to be "small scale" and do not consider that the fact that the activity may ultimately have no impact on the productive capacity of the land when released is determinative;

(ii) it seems to me to inevitable that the establishment of the solar farm will impact on the productive capacity of the land being the ability of the land to support land-based primary production over the long term. This does not mean to say that there will be no primary production over the relevant term. But that is not the test. The ability of the land to support such production must be said to be affected. The establishment of the solar farm restricts the range of land-based primary production which can be carried out and it must be that the ability of the land to support that production is thereby affected.

9.25 Accordingly, I find that clause 3.9(2)(g) does not apply.

Clause 3.9(2)(j)

Introduction

9.26 Understandably significant reliance was placed upon this sub-clause which provides an exception to the general avoidance principle laid out in clause 3.9(1).

The qualification

9.27 As Ms Hawkins has noted, it is not in dispute that the Proposal meets the NPS-HPL definition of "specified infrastructure" because renewable electricity generation activity is recognised in the CRPS as regionally significant infrastructure. See the definition of "specified infrastructure" in the NPS-HPL. In addition, the infrastructure delivers a service operated by a "lifeline utility". As the definition of this term indicates, this has the meaning in s4 of the Civil Defence Emergency Management Act 2002. So, if there is a functional or operational need for the use or development of the activity to be on the highly productive land, then it will satisfy the requirements of clause 3.9(2)(j).

"Functional need" and "operational need"

9.28 Local authorities are required to use the definitions as defined in the National Planning Standards. [266] "Functional need" is defined as follows …

> *… means the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment.*

"Environment" has the same meaning as in s2 of the Act.

"Operational need" is defined as follows …

> *… means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints.*

The difference in approach between "functional need" and "operational need" is to be noted and care must be taken in considering and applying these terms.

9.29 During the course of his submissions [267], Mr van der Wal submitted that the use of the definite article before "highly productive land" may suggest the particular piece of highly productive land the subject of the hearing. However, he submitted that such an interpretation was only available if this was read in isolation from (inter alia) the purposes of the NPS-HPL. He also referred to the approach taken in a decision upon which he relied *Archibald v The Christchurch City Council* [268].

9.30 Mr van der Wal went on to submit that the fact that "operational need" was used as an alternative to "functional need" means it must be a high bar. He said that if the bar represented by "operational need" is too low, it rendered otiose the words "functional need".

9.31 Mr van der Wal submitted that having regard to the approach in *Archibald*, it became apparent that "need" was something stronger than simply "advantage" or "convenience". There was a requirement.

9.32 Mr van der Wal went on to submit that there would be no need to consider whether there was a need to locate the activity on highly productive land or whether land that was not highly productive would

---

[266] National Planning Standards November 2019

[267] Legal submissions for joint submitters / paragraphs 76 to 91 inclusive

[268] *Archibald v The Christchurch City Council* [2019] NZ Env 207

also meet the operational needs and find that the requirements referred to the particular land in question, not highly productive land in general. He submitted that the use of the defined term was deliberate and influenced that defined meaning, relating it to "a particular environment" which in this case was highly productive land. He said that the approach contended for was in line with the court's approach in *Archibald* in which it became apparent that "need" was something stronger than simply "advantage" or "convenience". It was a requirement. He submitted that the proper interpretation of the term as used in this context was that there was an operational need to locate such solar arrays on highly productive land.

9.33 Mr van der Wal addressed the functional needs/operational need issue in his submissions. He said that he had been unable to find direct guidance on the term "operational need" but referred to *Archibald v Christchurch City Council* [269] where I note that the following was stated …

> *… That said, for guest accommodation to be contemplated within the Suburban Residential Zone, there must also be an operational need to locate within a residential zone. If, "operational" concerned the activities employed in doing or producing something, per Cambridge Dictionary, then we find the particular proposal being residential in nature, and of a scale consistent with the outcomes for the Residential Suburban Zone has an operational need to locate within a residential zone and that need (meaning "requirement") arises from the character and amenity afforded by residential zones.*

9.34 Mr van der Wal went on to submit that applying *Archibald* and the definition in the National Panning Standards, the term "operational need" was met if the characteristics that were needed for the particular use flowed out of the fact that the land was highly productive land. He submitted that the evidence of Mr Fletcher in particular demonstrated that the fact that the site happened to have a number of the features that on Mr McMath's evidence were necessary for solar array, did not flow from the fact that it was highly productive land as characterised by the NPS-HPL. The fact that it had highly productive soils was not the factor that made it suitable for a solar farm. Mr van der Wal submitted that the S42A report was wrong to conclude that the site may well have features capable of demonstrating an operational need and that that was not consistent with the interpretation which he contended.

---

[269] *Archibald v Christchurch City Council* [2019] NZEnvC 207

9.35 Ms Hawkins on behalf of KeaX submitted that the approach taken by Mr van der Wal attempted to read in or ascribe a meaning to "operational need" that was not here on the face of the words of the definition in clause 3.9(2)(j), in the wider context of the NPS-HPL or in the way this term had been used in the case law. [270] Ms Hawkins went on to submit that "functional need" and "operational need" were different terms with different meanings and different thresholds. "Functional need" had a higher threshold and meant that an activity could *only* locate in a particular environment. "Operational need" while still a "need" and not a "want" had a lower threshold and instead required a technical, logistical, or operational justification to the particular location.

9.36 Ms Hawkins went on to submit that the suggestion that, in this context, the operational need of an activity must relate to the fact that the land is highly productive land, rendered the technical, logistical or operational aspect irrelevant. She said that this could not be the intention of the clause. She went on to submit that a broader consideration of the technical, logistical or operational characteristics or constraints in the particular environment was required. In this case the particular environment was not characterised solely by the fact that it was highly productive land. A substation was located on it with sufficient capacity and resilience to accommodate the Proposal and was free of physical constraints.

9.37 I am in little doubt that the interpretation contended for by Mr van der Wal in relation to the impact of the word "the" in clause 3.9(2)(j) cannot be upheld. I agree with Ms Hawkins that the presence of the word "the" clearly identifies the particular site as the focus of examination of the functional or operational need. To read the clause in the manner suggested by Mr van der Wal would effectively mean that the word "the" had to be disregarded in the clause. This cannot have been the intention of the legislature and I find accordingly.

9.38 The question of whether there is a functional or operational need for the solar farm to be on the highly productive land on the site in question is a matter of complexity. In the evidence of Mr McMath, he outlined the reasons why the site had been chosen, most importantly by reference to the presence of the substation site and also other

[270] Reply legal submissions / paragraphs 101 to 107 inclusive

factors. I will not repeat what he said in this part of the decision. Suffice to say that he prayed-in-aid the factors in support of the submission that there was an operational need for the particular development, being the solar farm, to be on the subject site.

9.39 In the legal submissions on behalf of KeaX, Ms Hawkins gave a number of examples in recent case law dealing with the issue of operational or functional need.

9.40 The first case referred to was the decision of the Environment Court in *Te Runahga o Ngati Awa v Bay of Plenty Regional Council* [271] where the court dealt with a proposal to package water into bottle associated with a water take from an aquifer. The court found that there was a demonstrated functional need for the activity given the assurance of access to the water resource in the area and the requirements for marketing that resource. [272] There was then reference to the decision of the Environment Court in *Woolworths New Zealand Limited v Christchurch City Council* [273] where it was held that there was a operational need for carparking areas to co-locate with a supermarket development. Because of an encroachment, policy and objective were triggered which restricted the establishment of the particular activity on the land in question unless the activity had a strategical or operational need to locate within the residential zone. It was held that there was an obvious operational need for the carparking area and loading bay areas to co-locate with the rest of the supermarket development. [274] Lastly there was reference to the decision of the Environment Court in *Pickering v Christchurch City Council* [275] where it was held that there was an operational need for a wind turbine to locate on a ridgeline. In this case it was held that there was an operational need to locate the wind turbine on rural land. [276]

9.41 In her reply legal submissions, [277] Ms Hawkins submitted that the technical, logistical, or operational characteristics or constraints of the

---

[271] *Te Runahga o Ngati Awa v Bay of Plenty Regional Council* [2019] NZEnvC 196
[272] At para [225]
[273] W*oolworths New Zealand Limited v Christchurch City Council* [2021] NZEnvC 133
[274] At para [192]
[275] *Pickering v Christchurch City Council* [2016] NZEnvC 237
[276] At para [117]
[277] At paragraphs 108 to 110 inclusive

Proposal which required it to be located at the site were (as described by Mr McMath):-

(i) the solar farm could not operate without a network connection (i.e. substation);

(ii) it was not as simple as selecting a site and establishing a substation. A broader network was designed and planned to meet demand for electricity and for resilience to internal and external problems. Planning was done on a 10 year basis. The insertion of a new substation in the 10 year planning would impact load and the safe and efficient operation of the network. Even if a new substation could be safely accommodated outside the 10 year planning, the duplication of such significant infrastructure would be inefficient;

(iii) within the network there is a 66kV line and a 33kV line and the scale of the Proposal dictates that it must connect to the 66kV line;

(iv) the substation was not just a means of distribution of power, it was a substantial infrastructure asset which was a key aspect that made multiple contributions to the network;

(v) networks were planned and constructed based on resilience and that if one line into or out of a substation went down, others needed to be in place;

(vi) as to the suggestion that other land could be found for the solar farm, Mr McMath had explained from a technical and operational perspective there were significant inefficiencies, costs and increased GHG emissions associated with that level of transmission distance;

(vii) industry objectives for renewable electricity generation included energy trilemma (decarbonisation, affordability and resilience) and that the proposed location achieved those objectives;

(viii) the solar farm required a large contiguous flat area with no physical or legal constraints.

9.42 Ms Hawkins responded to the suggestion that the Proposal could be located elsewhere in the District on non-highly productive land. She said that in this part of the District much of the land was LUC 1 to 3. She referred to the Orion network plan overlaid with the LUC 1 to 3 areas in the District and said that the plan demonstrated that there was not much land in the area that was available and that even if the whole site was considered to be lost in terms of highly productive land resource, there would be minimal effect on a District wide basis.

9.43 Ms Hawkins went on to submit that the operational need in this case was not simply an advantage or convenience. [278] She said that the site was currently one of few, if not the only location in the Selwyn District, that met the requirements for this proposal.

9.44 Finally, I note that the National Policy Statement for Highly Productive Land / Guide to Implementation / December 2022 provides an interpretive guide and deals with the issue of specified infrastructure in the following terms (referring to the test of functional need and/or operational need) …

> *This test recognises that the functional and operational needs of specified infrastructure … means that they may need to be located on HPL – such as where a new road or transmission lines may need to traverse over an area of HPL. Further, in many cases, the presence of specified infrastructure on HPL does not preclude the balance of the HPL being used by land based primary production. For example, land surrounding structures used for infrastructure can often be used for animal grazing or some forms of horticulture.*

Clause 3.9(2)(j) / my findings

9.45 It is perhaps not surprising that the courts have not at this stage had occasion to consider the interpretation of the terms "operational need" and "functional need" in the context of the NPS-HPL. Ms Hawkins has helpfully directed my attention to the cases referred to above. They are some assistance but do not provide a complete answer to what is clearly a complex legal issue.

[278] Reply legal submissions / paragraphs 108 to 110 inclusive

9.46 The Guide to Implementation referred to above does not have legal effect but provides a useful background commentary on the way in which the interpretation of "functional need" and/or "operational need" should be approached. I have considered this in forming the views which are expressed hereafter.

9.47 Mr Fletcher dealt with the issue of operational need, stating that there needed to be more than an operational advantage. He noted that the key point which made the application site preferable for the activity, was the location of the local substation at the corner of this site. He went on to consider other possible sites, and suggested that there were other sites and locations which would fulfil the operational needs of the activity without having to establish on highly productive land. [279] On the other hand, Mr McMath was at pains to stress the steps which he had taken to attempt to identify other sites. It was clear from his evidence that there were a significant number of barriers in the road of choosing another site and it seemed unlikely that another site in the District would be available. I will not repeat what was said in his evidence but note the unavailability of another substation adjacent to land which was not characterised as highly productive land.

9.48 I accept, as Ms Hawkins has observed, that in this case it is operational need that is relevant and cases on "functional need" do not need to be considered. [280] A question arises as to whether in considering "operational need", which I understand the parties accept is the critical element, there is a need to make an assessment of the cost of the establishment of the proposal in terms of loss of the use of productive soils or whether, on the other hand, the concentration must be on the needs of the proponent of the proposal without casting the net wider. I believe that the answer to this question lies in the combination of clause 3.9(2), and the mitigation clause 3.9(3). Clause 3.9(2) requires regard to be had to the consideration of whether the use or development proposed is inappropriate having regard to the application of the matters raised in clause 3.9(2), but there is the further requirement to apply …

…the measures in subclause (3) ….

---

[279] Statement of evidence paragraphs 5.1 to 5.20 inclusive
[280] Reply legal submissions / paragraph 98

9.49 The term "need" is referable to the proposed use or development, as opposed to the specific needs of the proponent of the development. The proponent of the project may assert that there is a need because of financial or other constraints involving consideration of personal attributes such as ability to afford an alternative site. The concentration must be on the objective need for the particular development to be located on a particular site because of technical, logistical or operational characteristics or constraints. If this approach is taken in this case, then the emphasis shifts away from the particular characteristics of the particular developer and moves to an objective consideration of the proposed use or development to see whether, objectively assessed, there is a need for the development to locate on the land in question.

9.50 I accept that, when viewed from the perspective of the applicant, the evidence of Mr McMath and Ms Kelly establishes that the proposed solar farm has an operational need to locate at the site. It is clear to me that the costs of establishing a new substation and the absence of land available near other substations means that if a solar farm is to be established, there is no practical alternative to establishment on the site the subject of the Proposal. Mr McMath made it clear that the very significant cost of building a substation meant that it was not economic to have a substation dedicated to a solar farm because of costs implications. [281] I believe that Mr McMath satisfactorily answered the assertion by Mr Flecher that there were other locations which would not involve the use of highly productive land, which were available. I accept that the location of the solar farm has associated with it a number of requirements which were outlined by Mr McMath and that these are not able to be met elsewhere in the District. In this case, the need for the solar farm to be on the highly productive land is principally because of its proximity to the substation. Mr McMath was at pains to explain the reasons why further distance from a substation would be unacceptable in transmission line terms.

9.51 I interpolate that the fact that the use of development of highly productive land may be found not to infringe clause 3.9(2) of the NPS-HPL does not relieve the decision maker of the need to weigh positive and negative effects, including the loss of productive capacity, when

[281] Statement of evidence / paragraph 5.6

deciding whether to grant consent to the application in question. However if the application fails to surmount this first hurdle, then it will inevitably fail.

9.52 The second step is to consider whether measures are being taken to ensure that there is a minimisation or mitigation of any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in the District. It seems to me that in order to make a judgment as to whether the mitigation measures can be said to properly minimise or mitigate the losses referred to, there needs to be an examination of the extent of the loss of (in this case) productivity which would follow the establishment of the activity. The necessity for this examination arises from the wording of clause 3.9(3)(a) where there is reference to ……

> ……..actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their District …..

I note that it is not just productive capacity which is relevant, but also availability.

9.53 I am unable to see that an assessment under clause 3.9(3) is able to be made in the absence of an assessment of the impact of the loss of the land in question. I am conscious of the submission of Ms Hawkins, based on Appendix 3 to her submissions in reply, that even if the whole site was considered to be "lost" in terms of the highly productive land resource, there would be minimal effect on a District-wide basis. [282] However no evidence was called in relation to the District-wide effect of the loss in question and I do not regard reliance upon Appendix 3 as justifying the inevitable conclusion that the loss on a District-wide basis is not significant. That may be the case but such a finding is not able to be made in the absence of appropriate evidence.

9.54 I summarise the position by stating that Mr McMath has established that, objectively viewed, there is an operational need to locate on the subject site. I am satisfied that there are significant impediments to the solar farm being located elsewhere in the District, given the need for adjacency to a substation and other factors mentioned above. However the examination of the adequacy of the mitigation measures

[282] Submissions in reply / paragraph 109.2

proposed in this case, namely sheep grazing, is not able to be carried out in the absence of proper evidence and analysis of the extent of the loss of productive capacity of the highly productive land in the District. I find that there is a need to be satisfied as to the adequacy of the mitigation steps proposed, in this case sheep grazing. Accordingly, at this stage it is not possible to make a finding that the Proposal fulfils the requirements of clause 3.9(2).

NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT 2020 (AMENDED 2022)

9.55 An assessment of the proposal against the National Policy Statement for Freshwater Management 2020 ("NPS-FM") was undertaken by the Canterbury Regional Council in the S42A report in relation to consents which were ultimately issued. For the reasons addressed in that report Mr Aimer considers that the proposal is consistent with the NPS-FM. [283]

9.56 As no submissions have been addressed to me to the effect that the Proposal would be contrary to the NPS-FM, and in the absence of the expression of a contrary view, I accept that the Proposal is consistent with the NPS-FM.

ODP

9.57 In his report under s42A of the Act, Mr Aimer discusses the objectives and policies in the ODP which are relevant to the Proposal. I will not repeat his analysis of the various objectives and policies because they did not feature prominently at the hearing. I note that the applicants have provided an assessment of the Proposal against the relevant provisions of the ODP relating to natural resources, being soils, vegetation, ecosystems and waterbodies, physical resources and peoples' health and safety. For the reasons addressed in the S42A report, Mr Aimer considers that the Proposal is largely consistent with the provisions of the ODP with the exception of Policy B2.2.6. This policy requires utility structures to be made of low reflective materials. Mr Aimer notes that whilst the solar panels are made of reflective material, the finding in the applicant's report on glare that the panels be no more reflective than water and other elements in the natural environment is accepted. Mr Aimer did not consider the proposal to be

[283] S42A report at paragraph 282

consistent with Policy B2.2.6 as the panels are not made of "low reflective" materials.

9.58 Given my findings as to notification, I make no finding as to consistency with the objectives and policies of the ODP.

PROPOSED DISTRICT PLAN

9.59 As noted in the S42A report, the Council is currently in the process of preparing its Proposed District Plan. It is understood that no decisions on submissions have yet been issued. [284] In his report Mr Aimer expressed the view that the Proposal was consistent with objectives and policies relating to strategic directions, energy and infrastructure, transport, contaminated land and hazardous substances, ecosystems and indigenous biodiversity, natural character, earthworks, noise, and the general provisions of the General Rural zone. Overall, he considers the Proposal to be consistent with the outcomes in the listed Proposed District Plan objectives and policies.

9.60 Given my findings as to notification, recorded later in this decision, I make no finding as to consistency with the objectives and policies in the Proposed District Plan.

CANTERBURY REGIONAL POLICY STATEMENT

9.61 Mr Aimer deals with the provisions of the Canterbury Regional Policy Statement in the S42A report [285]. I note that the submitters in opposition have not placed reliance on this instrument and it is not necessary for me to deal with the Canterbury Regional Policy Statement in detail. I note that Mr Aimer considers that the proposal is consistent with the CRPS objectives and policies which he listed in the S42A report.

9.62 Given my findings as to notification, recorded later in this decision, I make no finding as to consistency with the objectives and policies in the Canterbury Regional Policy Statement.

---

[284] At paragraphs 229 to 249 inclusive
[285] At paragraphs 250 to 260 inclusive

10. *NOTIFICATION ISSUE / SECTION 104(3)(d) OF THE ACT*

Introductory comments

10.1 Section 104(3)(d) of the Act provides that a consent authority must not grant a resource consent if the application should have been notified and was not. The submitters in opposition have urged me to decline consent to the application because of their submission that the application should have been the subject of public notification. This issue is complex and has associated with it a number of difficulties which I now address.

10.2 I proceed on the basis that there is now no presumption of public participation. Prior to the Resource Management Amendment Act 2009, the general policy of the Act was that the consent process was to be public and participatory, to ensure that the consent authority was adequately informed of the issues relevant to the substantive decision being made on the application. There is no longer a statutory presumption in favour of public participation and accordingly there is a need to treat previous case law with caution to the extent that it deals with this issue. However, notwithstanding the lack of a presumption, the involvement of parties with a legitimate interest in proposed activities is still an important element of resource management decision making.

Appropriate test / the case law

10.3 As Ms Hawkins has noted in her submissions [286] s104(3)(d) of the Act is usually raised in the context of judicial review of a non-notification decision. On one view of matters, the examination of the question of whether an application should have been notified and was not involves a duplication of the judicial review function. However, this cannot have been intended by the legislature. The case law which I now discuss supports an approach which differs from what is in effect the exercise of a judicial review function to review the original notification decision.

10.4 The Environment Court in *Te Rūnunga o Ngāti Awa v Bay of Plenty*

[286] Submissions on behalf of KeaX / paragraph 45

Regional Council [287] concluded that the requirement in the relevant statutory provision could be met by either public notification or limited notification. However in an earlier decision, which was apparently not referred to in *Te Rūnunga o Ngāti Awa*, *Maungaharu-Tangitu Trust v Hawkes Bay Regional Council* [288] the court concluded that s104(3)(d) was not met if only limited notification had been undertaken. In *Goodwin and Others v Wellington City Council* [289] (*Goodwin*) these cases were considered but no preference expressed although the court in *Goodwin* confirmed that s104(3)(d) required the decision maker to make a determination as at the time of considering the application, rather than a retrospective view of the notification decision. This is consistent with my view of the differing functions of judicial review and examining whether an application should have been noted under s104(3)(d).

10.5 The position of KeaX is that I do not need to delve into this issue because the evidence of the applicant is that the effects of the Proposal in all respects are no more than minor, that is to say below the public notification threshold and accordingly public notification was not required at the time of the Council's notification decision and is not required now. [290]

10.6 Mr van der Wal referred to *Oasis Clearwater Environmental Systems Limited v Selwyn District Council* [291] where the court refused to overturn a decision of the Council on appeal to the effect that it could not grant consent because the effects were more than minor and therefore s104(3)(d) of the Act deprived it of jurisdiction to grant consent. Mr van der Wal submitted that the current situation was much the same as *Oasis Clearwater* because the evidence on behalf of the joint submitters showed that the effects were more than minor. [292]

10.7 Mr van der Wal submitted that using the approach to interpretation prescribed by s10 of the Legislation Act 2019, s104(3)(d) required the test to be applied at the time of the original notification determination.

---

[287] *Te Rūnunga o Ngāti Awa v Bay of Plenty Regional Council* [2019] NZEnvC 196, (2019) 21 ELRNZ 539

[288] *Maungaharu-Tangitu Trust v Hawkes Bay Regional Council* [2017] NZRMA 147

[289] *Goodwin and Others v Wellington City Council* [2021] NZEnvC 9

[290] Legal submissions on behalf of KeaX / paragraph 46

[291] *Oasis Clearwater Environmental Systems Limited v Selwyn District Council* [2007] NZRMA 497 (EnvC)

[292] Legal submissions for joint submitters / paragraphs 60 to 62 inclusive

He said that this flowed from the text and its purpose. He referred to the tense of the wording in s4(3)(d) being critical should *have been* notified. He said that applying this at the time of the hearing meant that those who had made a submission had no say in whether the mitigation has indeed achieved what was required and that this undermined the purpose of s104(3)(d).

Appropriate test / my findings

10.8 Having carefully considered this issue, I prefer the approach in *Goodwin*. In that decision, the Environment Court examined the issue of the timing of consideration. In that case it was submitted that s104(3)(d) "asks, in effect, whether the notification decision was correct on the material before the Council at the time", reflecting submissions made on behalf of the applicant in the case in question. The court disagreed with this approach for two reasons ……-

> *Firstly, s104 is applicable to consent authorities or the Court at the time of considering applications. It would be artificial and illogical if, in making a determination as to whether or not notification should have been undertaken, a consent authority and/or the Court could not have regard to all of the information before them but were limited to consideration of information available to consent authority officers at the time the notification was made;*
>
> *Secondly, the approach suggested by Mr Robinson clearly intrudes into a judicial review function on notification which is the province of the High Court.*

10.9 I agree with this approach and proceed to determine this matter on the basis of the information which was available at the hearing before me. I find the reasoning referred to above to be persuasive. The suggestion that the matter should be determined on the basis of information which was available at the time of notification is contrary to my perception of my role in exercising my judgment under s104(3)(d) of the Act.

Does limited notification suffice?

10.10 By way of background, it is noted that originally, s104(3)(d) included the following wording ….

> *… grant a resource consent if the application should have been publicly notified and was not.*

10.11 The relevant provision was amended by the Resource Management (Simplifying and Streamlining) Amendment Act 2009 ("the

Amendment Act") so as to omit the word "publicly" in the relevant statutory provision. That left the section in its present form. Further, the Amendment Act provided for the following meaning of notification ……

> ***Notification***
>
> *Means public notification or limited notification of the application or matter.*

10.12 A question arises as to whether limited notification suffices in terms of the requirements of s104(3)(d). Mr van der Wal urged upon me the submission that because the relevant statutory provision only used the term "notified" without the qualifying "public" the omission of that qualify must be assumed to be deliberate and given effect. He said that would signal that it was intended to apply to both forms of notification.

10.13 Mr van der Wal went on to submit that it could not be that Parliament had intended that the protection that s104(3)(d) provides would apply to only those who were deprived the opportunity to make submissions by the failure to publicly notify, but not to a person deprived of that opportunity by the failure to limited notify them. He went on to submit that if I did not consider the adverse effects of the proposal were more than minor then s104(3)(d) still deprived me of the jurisdiction to grant consent because there were persons who ought to have been notified but were not. [293]

Does limited notification suffice? / my findings

10.14 I have carefully considered the submissions in relation to this issue and determined that I should adopt the approach taken in *Maungaharu-Tangitu Trust* where the submission that the finding that an application should have been publicly notified was not fatal if it was processed with limited notification was rejected. The court noted the provisions of s95A, 95B and 95E of the Act and said that there was a common issue to be addressed under the relevant provisions, namely determining the effect of a proposed activity on either the environment or an affected person:-

> *(i) If an activity is likely to have an effect on the environment which is more than minor then there must be public notification under s95A(2);*

[293] Legal submissions on behalf of joint submitters / paragraphs 70 and 71

(ii) *If an activity is likely to have an effect on an affected person which is minor or more than minor (a more stringent test than S95A(2)) then there must be limited notification to that affected person under ss95B(2) and 94E(1).* [294]

10.15 I note that it is not necessary for me to make a final determination of whether, in the event that public notification was not required, the failure for persons to be notified on a limited notification basis would trigger the need to decline consent in terms of s104(3)(d) of the Act. My provisional view is that if limited notification was required, consent would need to be refused.

THE NOTIFICATION ISSUE / MY FINDINGS

Public notification

10.16 The question of whether the application should have been the subject of public notification, and a determination made under s104(3)(d) of the Act, is a matter of complexity and has significant consequences for the fate of the application. It is common ground that public notification would have been required if the activity could be said to have an effect on the environment which is more than minor.

10.17 Before commencing my analysis of this matter, I remind myself that there is no longer any presumption of public participation. Prior to the Resource Management Amendment Act 2009, the general policy of the Act was that the consent process was to be public and participatory, to ensure that the consent authority was adequately informed of the issues relevant to the substantive decision to be made on an application. There is no longer a statutory presumption in favour of participation. [295] Whilst there is no statutory presumption, clearly the issue of whether an application should be publicly notified is a matter of considerable importance.

10.18 There may be natural reluctance to interfere with the notification decision in this case, given the obvious care with which each of the possible environmental effects was analysed by Mr Aimer. It appears clear that the notification decision was made on the basis of what was understood to be a proposal for a 35 year term. The issue of productive

[294] At paragraphs [201] to [206] inclusive
[295] See Brookers Resource Management paragraph A95A.02(1)

loss which was said to be temporary and reversible following the expiry of the 35 year term was not at that stage examined in the context of a longer indefinite term, [296].

10.19 Mr Aimer addressed the issue of the loss of productive soils in the S42A report when he stated that given that the applicant had sought an unlimited duration of consent, unless a duration was imposed on the consent, there was no certainty that the site would return to productive uses. [297] Thereafter in his helpful summary statement [298], Mr Aimer considered the issue of highly productive land and formed the view that because the land would continue to be used for land based primary production as defined in the NPS-HPL, there was no need for a condition limiting the consent to a 35 year duration. However whilst the issue of compliance with the NPS-HPL was considered, the issue of loss of any productive capacity over the extended period of the consent sought does not appear to have been the subject of comment.

10.20 I acknowledge that Mr Aimer was later satisfied, on the basis that the land would continue to be used for primary production, that there was no need to limit the term to 35 years. I have not considered the question of whether limiting the consent to that term would have made any difference to the issue of notification as I am not reviewing the notification decision.

10.21 Having regard to the findings which I have made earlier in this my decision relating to the environmental effects of the Proposal (which I will not repeat here), and noting my finding that the loss of productive potential in the sense to which I referred to this matter earlier in this decision gives rise to environmental effects which are more than minor, I am required to decline to grant a resource consent in this case because of my view that the application should have been the subject of public notification and was not.

Limited notification

10.22 In his evidence, [299] Mr Fletcher expressed the view that properties on the eastern side of the site including 870 and 932 Hanmer Road and

---

[296] See notification decision at paragraphs 99 and 100
[297] S42A report at paragraph 135
[298] At paragraphs 3.1 to 3.8 inclusive
[299] Summary statement at paragraphs 3.8 and 3.9

365, 375 and 381 Brookside and Irwell Roads should have been notified, as against the background of his assessment of possible affects. Had my decision been that public notification was not required, it would have been necessary for me to consider the question of whether others should have been the subject of limited notification. But in the light of my findings as to public notification, it is not necessary for me to express a view about this matter and I decline to do so.

11. ***CONCLUSION***

11.1 As noted, I am required to decline to grant a consent to the application because of the view which I have reached as to public notification. This is against the background that I have carefully considered the various matters raised by submitters in opposition relating to environmental effects and found that, in the main, the perceived effects, controlled by the most recently proposed conditions, are acceptable and will be able to be accommodated by the revised proposed conditions of consent.

11.2 As previously noted, I have formed the view that given the size and importance of the land comprised in the site, and having regard to its character as highly productive land, the proponent of the Proposal, and the neighbours who were the subject of limited notification, should not be treated as the sole arbiters of the effects of the establishment of the solar farm on that piece of land. I have formed the view that there is a wider effect which requires consideration, namely the effect on the District and the Region of the loss of the opportunity for full productivity as a substantial area of land over an indefinite term. Had the matter been the subject of public notification, it may have been that any cause for concern over the issues I have identified would have been considered and the view taken that the issues were not an impediment to the granting of consent. However, that cannot be assumed in the absence of knowledge of the response which there may have been to public notification of the application.

11.3 Given the views I have expressed as to the need for public notification, and notwithstanding my findings as to environmental effects recorded in this decision, it is not appropriate for me to express a concluded view as to the merits of the application, beyond the findings and comments which I have made to this point. This is because, in the event of public

notification, the submissions and evidence of other parties would be likely to have to be considered.

DATED this 27th day of March, 2023

A C HUGHES-JOHNSON KC
COMMISSIONER

SelwynDistrictCouncidecisionKeaFINAL