BEFOR THE SELWYN DISTRICT COUNCIL

RC225180

In the matter of	the Resource Management Act 1991	
	Sections 88-120, Resource Management Act 1991	
Between	**Party**	KeaX Limited
	Role	Applicant
And	**Party**	Robyn Casey, Clark and Elizabeth Casey and Dave and Donna Kewish ("Joint Submitters")
	Role	Submitter

EVIDENCE OF PAUL ANDREW SMITH
Date 16 February 2023

J M van der Wal
Barrister
40 Walker Street Chambers
Christchurch
Also at 14 Queen Street
Blenheim

INTRODUCTION

1 My name is Paul Andrew Smith. I am a Senior Landscape Architect employed by Rough Milne Mitchell Landscape Architects (**RMM**) (formerly Rough & Milne Landscape Architects), which is a Christchurch based Landscape Architecture consultancy established in 2010.

2 I hold a Bachelor of Landscape Architecture (Hons) degree from Lincoln University and am a Registered Member of the New Zealand Institute of Landscape Architects Inc.

3 I have been practising as a landscape architect, primarily in the field of landscape planning, since 2012. I was employed by Vivian and Espie Limited, a specialist resource management and landscape planning consultancy based in Queenstown from 2012 – 2017, and then by Beca Limited as a landscape architect, specialising as a landscape planner from 2017 – 2019. Since 2019, I have been employed by RMM in the same role.

4 The majority of my work involves advising clients regarding the protection of landscapes and amenity that the RMA and District Plans require. I also produce Landscape Assessment Reports and provide evidence for local authority and Environment Court hearings in relation to proposed developments. The primary objective of these assessments and evidence is to ascertain the effect of proposed development on the landscape and amenity values of the surrounding landscape.

5 Whilst working for RMM I have worked on the following solar farm projects which are relevant to the proposal:

5.1

5.2 A 16ha solar farm in Ngawha, Far North District. Approved through a non-notified process.

5.3 A 12.5ha solar farm in Maungatūrorto, Kaipara District. Approved through a non-notified process.

A 39ha solar farm in Albury, Mackenzie District. Approved through a non-notified process.

A 24.4ha solar farm in Waimate, Waimate District. Approved through a non-notified process.

I am currently working on six other solar farm projects within Aotearoa New Zealand. These projects are in varied positions through the community consultation and Resource Consent process.

5.4

5.5

6 I have been engaged by Robyn Casey, Clark and Elizabeth Casey and Dave and Donna Kewish ("Joint Submitters"), who have made a joint submission and an individual submission in opposition to Application RC225180 ("the application"), to provide expert landscape planning evidence.

CODE OF CONDUCT

7 I have read the Environment Court's Code of Conduct for Expert Witnesses, contained in Part 9 of the Environment Court Te Kōti Taiao o Aotearoa Practice Note 2023, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

8 The scope of my evidence is to provide an additional peer review[1] of the Boffa Miskell Ltd (**BML**) Landscape and Visual Effects Assessment and its Graphic Supplement, and a peer review of Ms Anthony's Statement of Evidence, and its accompanying Visual Simulations.

9 In brief, I agree with many points raised in the Landscape Effects Assessment and Ms Anthony's Evidence. Therefore, rather than providing a full assessment my evidence focuses on gaps in the information provided and on areas of disagreement.

[1] In addition to the Landscape Review of Mr Graham Densem on behalf of Selwyn District Council.

10 Also, it includes an assessment from the Joint Submitters properties:

Robyn Casey (265 Branch Drain Road). BML Graphic Supplement #13, #21 and a triangular wedge of land immediately east of #21.

10.1 Clark and Elizabeth Casey (180 Branch Drain Road). BML Graphic Supplement #10, 20, and 22.

10.2 Dave and Donna Kewish (324 Branch Drain Road) properties. BML Graphic Supplement #16.

10.3

11 I have read and reviewed the following information:

11.1 The Application and AEE document prepared by Boffa Miskell Ltd, dated 9 March 2022 (AEE).

11.2 The Landscape and Visual Effects Assessment and its Graphic Supplement, prepared by Boffa Miskell Ltd, dated 9 March 2022.

11.3 The Operative Selwyn District Plan.

11.4

11.5 The Joint and Individual Submissions prepared by the Joint Submitters.

11.6 The Applicants Response to the Landscape Matters raised in Selwyn District Council's Request for Information #1 – 10 May 2022, and #2 - 12 August 2022.

11.7 The Landscape Review, prepared by Mr Graham Densem, dated 19 September 2022.

The Statement of Evidence of Amanda Leigh Anthony, Landscape Planner, dated 9 February 2023. The amended 'Site Plan – Revision 3', Figure 3 Attached to Ms Anthony's Evidence, August 2022 and Appendix 2 - Visual Simulations. 01 September 2022.

Appendix 4 of the Statement of Evidence of Claire Kelly, Planning Evidence, dated 9 February 2023.

12 A site visit was undertaken on the mornings of 8 and 13 February 2023. This included viewing the site from the surrounding public roads and the submitters properties.

11.8

13 My brief of evidence is formatted under the below headings, which follows the same format as the Landscape Assessment and Mr Densem's Peer Review.

METHODOLOGY

14 I agree with Mr Densem that the methodology followed by Ms Anthony in both the Landscape Assessment and her Statement of Evidence is appropriate.

PROPOSAL

15 It is proposed to locate a 258ha solar farm at 150 Buckleys Road, Brookside, Canterbury. The solar farm will consist of long rows of solar panels running east to west, that are fixed at a 30-degree angle facing north. The solar panels will be fixed to a steel structure and will stand no taller than 3.02m above ground level. The structure they are attached to will allow sheep to graze and maintain the grass underneath them.

16 I note that the plans were prepared at a large scale being 1:9000, with the green and pink lines illustrated on BML Graphic Supplement Figure 3 being approximately 8m wide. Therefore, the detail regarding boundary treatments, and the amount of space between dwellings, property boundaries and the solar panels themselves is difficult to understand. Cross sections illustrating the height of the proposed vegetation at the varying years of maturity for each boundary would have assisted.

17 The finer details of the proposal have been described in the Landscape Assessment, the AEE and the Draft Conditions included in Appendix 4 of Ms Kelly's Planning Evidence. As I understand it, the most up to date information describing the boundary treatment is included in Ms Anthony's

Evidence, RFI #2 Response and the Conditions in Appendix 4 of Ms Kelly's Evidence. The description below is my understanding of the proposed boundary treatment for the site.

18 The type of vegetation that will be located along the site's boundaries is illustrated on Figure 3 of the Landscape and Visual Assessment Graphic Supplement dated February 2022.

19 The native plant species will generally consist of the following. I have included the approximate growth rates of these plants, which was sourced from the Southernwoods Nursery website.[2]

- Harakeke / NZ flax - Height after 5 years - 2m. Mature height 3m.
- Lowland ribbowood - Height after 5 years - 4m. Mature height 12m.
- Mikimiki (Coprosma propinqua) - Height after 5 years - 3m. Mature height 3m.
- Kanuka - Height after 5 years - 3m. Mature height 8m.
- Narrow-leaved Houheria - Height after 5 years - 3m. Mature height 6m.
- Kohuhu - Height after 5 years 3m. Mature height - 6m.
- Tarata - Height after 5 years 3m. Mature height - 12m.

20 I have come to learn through individual conversations with the Joint Submitters that the growth rates of vegetation that are not maintained in

20.1 Brookside is surprisingly slow. For example:

20.2 The existing pittosporums along Branch Drain Road and the Site are approximately 21 years old and stand approximately 1.5 – 2m tall.[3] Refer to Figure 2 in Appendix 2, of Ms Anthony's Evidence.

The existing pittosporums along Branch Drain Road and 198/180 Branch Drain Road are 5 years old and stand approximately 1.5m tall. Refer to **Photos 5 and 6** on Page 17 of my evidence.

[2] https://www.southernwoods.co.nz/

[3] Aerial Imagery dated 2005-2009, 2010-2014 and 2015-2019 on canterburymaps.govt.nz confirms this.

21 In addition to the above, Paragraph 10.3(b) of Ms Anthony's Statement of Evidence outlines that 2m tall Ribbonwood, Kanuka and Hoheria to be faster growing, bushy species to assist with immediate visual mitigation of the proposal. Ribbonwood and Hoheria are both narrow leaved, with all three plant species being relatively spindly and transparent in there juvenile years, including at 2m tall, refer to **Photo 1**.

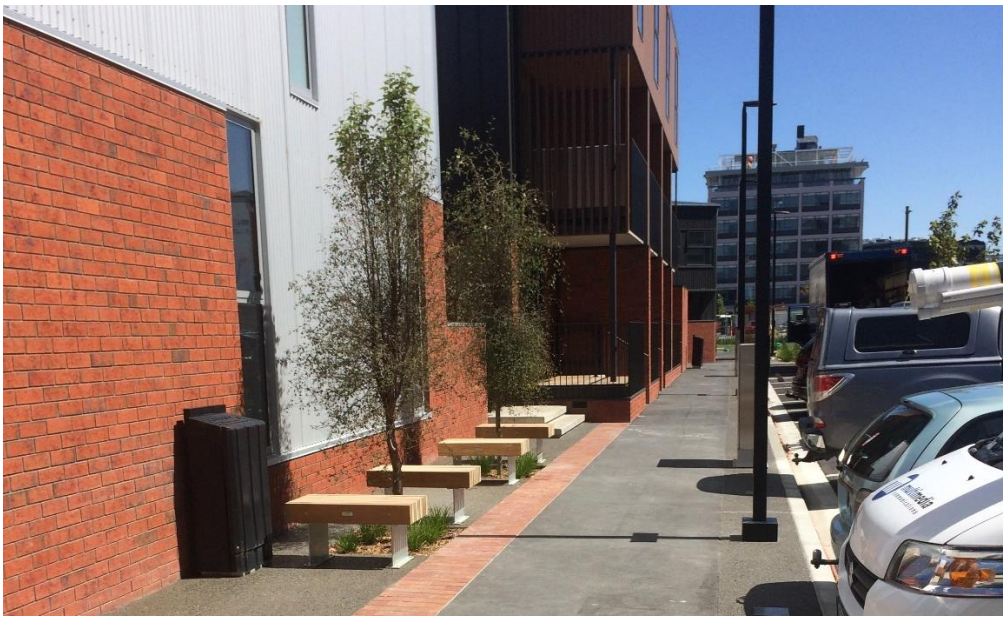

Photo 1: An example of a ribbonwood tree standing just over 2m tall and its relatively transparent appearance.

22 Additional to growth rates, from experience I have found that vegetation planted at a taller height may struggle to establish, and their first few years of growth can be slower than smaller grades of plants. Therefore, the establishment rate and growth rates of a larger plant are unlikely to be the same as a smaller grades.

23 Regarding irrigation, RFI #2 response states that "*We will irrigate the new planting for the first 2 – 3 years.*" Based on this, there is no certainty that plants will be irrigated following this timeframe. Therefore, the mitigation vegetation relied upon to screen Stage 3 may not be irrigated for the year prior to its construction. Based on the above, this is likely to stunt the mitigation vegetations growth rates and lengthen the timeframes for this vegetation to screen the proposal, if at all.

24 A Landscape Management Plan (**LMP**) will be prepared following the granting of the Resource Consent Application, which will be in accordance with the following conditions.

Landscaping Management Plan

13. At least 30 working days prior to the commencement of landscaping the Consent Holder shall submit to SDC for certification a Landscape Management Plan (LMP). The LMP shall include (but not be limited to):

13.1 Identification of planting zones in accordance with the approved Site Plan (Dated August 2022), Figure 3 of the Landscape and Visual Assessment Graphic Supplement dated February 2022 and the recommendations in the Visual and Landscape Assessment (dated XXXX) and to address Conditions 14, 16, 17, 18 and 19 below.

13.2 For each planting zone, details of species, spacing, size and planting;

13.3 Timeline for planting works;

13.4 Details of site preparation and maintenance required for plant establishment;

13.5 The location and design of fencing of the Site;

13.6 Details of ongoing maintenance including weed control management and monitoring;

14. All landscaping shall be implemented and maintained in accordance with the certified management plan required under Condition 13.

16. The Consent Holder shall take all reasonable measures to ensure that existing heritage trees identified in AEE set out in Condition 1 as being recommended for retention, are protected from damage during construction.

17. The Consent Holder shall retain all existing Site boundary shelterbelts and vegetation, with the exception of:

(a) the shared Site boundary with 180 Grahams Road, where the exotic shelterbelt shall be removed and replaced with a 3m wide indigenous buffer planting (as part of the Stage 1 works). The clearance shall occur

outside of the main bird breeding season (September – January) to avoid any risk of impacts to nesting indigenous birds.

(b) the planting along Branch Drain Road, where the existing vegetation will be removed once the new indigenous planting has achieved a height of 2m.

18. The Consent Holder shall ensure that all shelterbelt planting is 2 metres in height and 3 metres in width:

14.1 along Buckleys Road (the northern boundary of Lot 2 DP 54392)) prior to Stage 1 construction works commencing.

14.2 along Buckleys Road (the northern boundaries of Lot 1 DP 7545, RS 8955 and Lot 2 DP 387576) prior to Stage 2 construction works commencing.

14.3 adjacent to or within 10m of Branch Drain Road prior to Stage 1 construction works commencing.

19. The planting along the boundary with Branch Drain Road, and along the boundary with Lot 1 DP 37121 and Lot 1 DP 21302, must be setback 10 metres and retained to a height of 4 metres.

20. The Consent Holder shall take all reasonable measures to ensure that existing heritage trees on Hanmer Road identified on the Site Plan and in the AEE, are retained and protected from damage during construction.

21. The Consent Holder shall utilise locally appropriate indigenous species that are sourced in this corresponding order: firstly, where practicably obtainable from within the Low Plains Ecological District, and secondly from the wider Canterbury Plains Ecological Region.

22. The perimeter security fencing shall be located internally and screened from outside views by the existing and proposed planting.

23. In the first planting season following the grant of this consent, and prior to the construction of Stage 1, the Consent Holder shall implement the Landscape Management Plan required under Condition X above.

25 Based on the above, I consider that the detail relating to the proposed mitigation vegetation at the Resource Consent Stage remains relatively unresolved. I consider that the level of detail that will be provided in the LMP should be included at this stage as to provide certainty that future vegetation will establish and mature[4] so it visually screens the proposal from the surrounding public and private places.

EXISTING ENVIRONMENT DESCRIPTION

26 I generally agree with the description of the existing environment and its landscape values that has been provided. In particular, the perceptual values that stem from the expansive areas of open pasture which contribute to a pleasant agricultural aesthetic, open rural character and visual amenity that people experience from their properties and along these roads. This includes the ability to gain long distant views to both the Port Hills and Southern Alps.

27 I note that there is some confusion regarding the description of the site's southern boundary along Hanmer / Caldwells Road. Context Photograph 8 illustrates the site boundary to situated alongside the mature row of macrocarpa trees. This is incorrect. Rather these trees will be removed as the site's southern boundary is highlighted by a low gorse hedge, which extends along approximately two thirds of this boundary. Regarding the Site Plan, there is no exotic shelterbelt along the section of the southern boundary that runs northeast to southwest.

STATUTORY PROVISIONS

28 I agree with the Statutory provisions that have been taken into consideration.

29 In addition, the National Environmental Standard for Renewable Electricity Generation 2011 (**NES-REG**), is relevant. In particular the one Objective which all eight policies relate to.

[4] Condition 13.4 only focuses on maintaining plants whilst they become established. Beyond their establishment, the proposed condition does not require a landowner to ensure that they thrive and mature in height and width.

"*To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation solar farm.*"

ASSESSMENT OF EFFECTS

30 I agree with the general introduction outlined in S6 of the Landscape Assessment, including the potential landscape issues, stating that the proposal may detract from the open space and rural landscape values and the amenity afforded by this rural outlook. However, I consider that the Landscape Assessment downplays these issues by using terms like 'multiple structures' when describing the amount of built form that will be located within the site.

31 Like Mr Densem, I will discuss Visual Effects first and Landscape Effects second.

VISIBILITY AND VISUAL EFFECTS

32 I generally agree with the introduction in S6.2 of the Landscape Assessment. I also consider that visual effects are likely to be of a higher degree when experienced by people who frequent the area daily who have a more intimate relationship with this landscape. This may include people experiencing the proposal from the same stretch of road every day, their dwellings, main outdoor living areas, and areas of work.

33 I agree that the visual catchment of the site is limited to five public roads that wrap around the site and neighbouring properties. Regarding neighbours, my evidence focuses on the Joint Submitters properties as I have been able to visit them. However, as I have outlined, the mitigation vegetation may not be able to be relied upon and that adverse visual effects on other neighbours may be greater than what has been previously assessed.

Clark and Elizabeth Casey - 180 and 198 Branch Drain Road. BML Graphic Supplement #10, 20, and 22.

34 Mr Clark and Mrs Elizabeth Casey's properties located at 180 and 198 Branch Drain Road are adjacent to the sites south and west boundaries.

35 The Casey dwelling is located near the Site's southwest corner, is two storeys tall with three bedrooms facing north over their property and part of the site. The existing shelterbelts screen the majority of the site, with a small portion of the site being visible where there is a 280m gap in the shelterbelt, being seen from these upstairs bedrooms, refer to **Image 2**. **Image 3** illustrates that the shelterbelt adjacent to the dwelling has been topped so this view is maintained. Whereas, the section of shelterbelt to the west is approximately 1.5m taller.

Image 2. This image illustrates the view gained from the upstairs bedrooms, including the master bedroom within the Casey Dwelling.

Image 3. This image illustrates how the shelterbelt is maintained so open and unobstructed views are gained from upstairs bedrooms within the Casey Dwelling.

36 The sheds and main farming operation are located alongside the dwelling. Unlike the subject site, the Casey property is used for growing crops. Due to the intensive nature of this land management regime, Mr Casey spends much of his time working his land in a tractor, harvester, motor bike or truck. From these vehicles his eye height varies between 1.2 – 4.5m above ground level. When travelling north-south and east-west through these paddocks views of the site can be gained through the single row shelterbelts that have been grazed on by cattle, refer to **Image 4**.

37 The rural outlook and amenity that the Casey's experience on a day-to-day basis, including the views over the site and to the Southern Alps and Port Hills is highly valued.

Photo 4. This photo illustrates the lack of screening provided by the existing shelterbelts, albeit these are proposed to be removed and replaced with native vegetation.

38 Ms Anthony, in Paragraph 9.14 in her Statement of Evidence mentions that during engagement between the Applicant and Mr and Mrs Casey, Mr and Mrs Casey would prefer native vegetation along their boundary, in preference to the existing shelterbelt. From my conversations with Mr Casey, their preference has been misconstrued. I am advised by Mr Casey that he did not identify any particular plant species. Rather he had requested that the boundary planting screen the solar farm, which the current shelterbelt or proposed native vegetation will not do. Also, that the boundary treatment is done properly and in a tidy manner, so he is not left with a mess to deal with for the next 35 years.

39 The existing shelterbelt that provides visual mitigation of the proposal from upstairs views is proposed to be removed and replaced with native vegetation that will be maintained in the long term at approximately 4m tall. This boundary treatment will occur along approximately 2.4kms of their shared boundary.

40 Regarding the views from the upstairs bedrooms in the Casey Dwelling, the proposed vegetation will allow open views over the site, in which a large portion of the 256ha solar farm will be clearly seen.

41 From the Casey paddocks, Stages 2 and 3 will be clearly seen until such time as the native vegetation reaches 4m tall (if at all). I agree that when standing, or in a regular vehicle, the solar farm will be screened when the proposed vegetation is 2m tall and has widened out to create a thick hedge. From taller farm machinery, views of the solar farm will be gained for a much longer period of time and it may never be screened from the harvester.

42 I reviewed Ms Anthony's Visual Simulation 2 – Figures 4 and 5 from Branch Drain Road, near the Casey Dwelling. I find that these two visual simulations (years 2 and 5) to be inaccurate when compared with the description of the proposal and the growth rates of the plant species. This is because the simulations illustrate the proposed native vegetation at approximately 3m tall and 8m tall respectively; a height that these plants will not grow to in these time frames. Also, these plants will be maintained at 4m tall, not the same height as the shelterbelt, and that the existing shelterbelt has not been replaced with natives. For these reasons, I do not place any weight on these two visual simulations.

43 In addition to the visibility of the solar farm, there is the potential for glint and glare to exacerbate the visibility and visual impacts of the solar farm. In particular in the morning when traveling north to south through the paddocks alongside Branch Drain Road and in the evening when travelling east to west through the paddocks alongside the subject site's southern boundary. This is because the glare has a 'skimming stone' affect from solar panels fixed in place. The sunlight or glare is reflected at the angle of incidence off the face of the solar panel resulting in a level of glare experienced at certain times of day and year.

44 Apart from understanding the above principles, I am not an expert in this field. From my experience when undertaking a visual effects assessment, it is necessary to rely on specialists to provide this detail. I note that there is

no detail in the Glint and Glare Report or Mr Aaron Williams Statement of Evidence that assists in understanding what these effects may be.

45 Overall, I consider that the proposed solar farm will have a **high** degree of adverse visual effects when viewed from the three upstairs bedrooms within the Casey Dwelling, which will not be mitigated. When seen from the paddocks, the adverse visual effects will be of a **moderate-high** degree, and potentially a higher degree during those time when glare could result. These adverse visual effects may reduce if proposed vegetation achieves its desired outcome. However, there is a lack of certainty regarding this and the timeframe it would take.

Robyn Casey - 265 Branch Drain Road. BML Graphic Supplement #13, #21, and a triangular wedge of land immediately east of #21.

46 Ms Robyn Casey's property containing her dwelling is located at 265 Branch Drain Road, located immediately west of 198 Branch Drain Road. Ms Casey also owns a paddock immediately south of Mr Casey's and is accessed off Grahams Road and a triangular paddock along Caldwell Road. The northern point of this property is on the opposite side of the road to the site. Refer to BML Site Context Photograph 8.

47 Ms Casey's dwelling is located predominantly behind a mature hedge which provides her privacy from the road and screens her view to the northeast. Ms Casey has recently renovated her dwelling, which included extending her dwelling to the south creating a new master bedroom. **Image 5** shows the view to the southeast from the master bedroom, which includes the view from her bed, the veranda and the garden. Also, **Image 6,** shows the view leaving her driveway facing east towards the site.

48 The rural outlook and amenity, including the views of the Port Hills, that Ms Casey enjoys from this part of her dwelling and property on a day-to-day basis is highly valued.

Photo 5. This photo represents the view facing east towards the site from Ms Casey's master bedroom, veranda and garden areas.

Photo 6. This photo represents the view facing east towards the site when exiting Ms Casey's driveway.

49 The Site, which is 395m away, is currently visible through the 280m gap in the shelterbelt, along the Site's western boundary. Also, views of the site are possible through the gaps in the existing shelterbelt. This means that the southern half of the solar farm will be seen prior to the proposed vegetation reaching 3-3.5m[5] in height and forms a thick hedge. During this time, the large extent of built form and its rural utility / industrial character will degrade the outlook and rural amenity that is experienced. There is concern, as previously mentioned, that there is a lack of certainty that the proposed

[5] The proposed vegetation may need to be 3.5m tall because Ms Casey's dwelling is approximately 0.5 above ground level.

vegetation will reach its desired height and / or timeframe in which it will take.

50 In addition to the above, there is the potential for glare to exacerbate the visual effects of the solar farm, in particular in the morning when the sun is low in the sky.

51 Overall, I consider that prior to the proposed vegetation maturing the proposed solar farm will have a **moderate** degree of adverse visual effects when experienced from the master bedroom, veranda, garden and when existing her driveway. Adverse visual effects from the remainder of the dwelling and property will be of a **very low** degree, or **no** effect at all.

52 The adverse visual effects described above may be potentially higher should glare become a factor. However, these adverse visual effects could reduce if the proposed vegetation achieves its desired outcome. However, there is a lack of certainty regarding this and the timeframe it would take.

Dave and Donna Kewish - 324 Branch Drain Road. BML Graphic Supplement #16.

53 Mr Dave and Donna Kewish's property is located immediately south of the solar farm within Stage 1 and some 400m east of the solar farm within Stage 2. The Kewish's dwelling and main outdoor living areas are physically separated from the site by a mature shelterbelt, which mostly screens their view to the north. However, the site is seen through gaps in this shelterbelt, refer to **Photos 7 and 8**.

54 Also, views to the east, towards the solar farm within Stage 2 are gained from the main outdoor living area and garden, refer to **Photo 9**. I note that the majority of the amenity trees within the Kewish's property are deciduous. Therefore, the views over Mr and Mrs Casey's property, to the site, with the Port Hills in the distance are more readily gained in the winter.

Photo 7. This photo represents the view facing north towards the site, including gaps in the shelterbelt from the patio directly outside the Kewish's dwelling.

Photo 8. This photo represents the view facing north towards the site, including gaps in the shelterbelt from the lawn area east of the Kewish's dwelling.

Photo 9. This photo represents the view facing east towards the site, from the lawn area east of the Kewish's dwelling.

55 I have reviewed Ms Anthony's visual effects assessment in Paragraphs 9.8 - 9.14 of her Evidence from the Kewish's property and disagree with it, in part.

56 It appears that Ms Anthony has based her assessment on her experience of the Kewish's property from where her photograph in Image 3 was taken from. I consider this more distant location to be inappropriate for such an assessment when the dwelling and main outdoor patio are some 10 – 15m from the shelterbelt, and their lawn area is adjacent to the shelterbelt.

57 Ms Anthony's photo does not show the gaps that exist in the mature shelterbelt which are not easily seen or illustrated in a photograph. I note that a photograph taken from 13-14m north of the shelterbelt would have been more representative, being the same distance between the shelterbelt and the Kewish's dwelling.

58 When on site, Mrs Kewish informed me that this shelterbelt is situated in a box drain, and this was reiterated by Ms Clark. Over time, this box drain has become filled with pine needles and during large rain events water sheets across the site and through the northeast part of the Kewish's property. This appears to be a maintenance issue, rather than a landscape matter. However, if this shelterbelt is required to be removed to remedy this issue

the views to the north would be entirely opened up and the solar farm within Stage 1 would be clearly seen.

59 Ms Anthony's Evidence has recommended that an additional shelterbelt two rows deep be implemented within the site, near the boundary shared with the Kewish's Property only and not along the entire southern boundary.

60 Due to the location of the existing shelterbelt, I recommend that the shelterbelt proposed by Ms Anthony is extended along the entire length of this boundary, as to provide the desired screening. The recommended shelterbelt may need to be located 10m from the drain, being 12m from the boundary line so the drain can be regularly maintained, and a large hedge trimming machine can maintain both sides of the shelterbelt. Also, the timing of this work may need to be staged, so continuous screening of the solar farm to the north is provided.

61 The view to the east includes views to the solar farm within Stage 2, in which native vegetation is proposed to screen it from view. I repeat my concern as to the certainty of this planting establishing and thriving, and therefore achieving its desired outcome.

62 Regarding this, the solar farm within stage 2 will be seen for up to two years following the planting of any vegetation and the western side of Stage 3 will be seen for up to three years following planting. Therefore, the solar farm will be seen at 600m away (at its closest) prior to the proposed native vegetation reaching 3m in height. During this time, there is the potential for glare to exacerbate the visual effects particular in the morning when the sun is low in the sky.

63 Overall, I concur with Ms Anthony's recommendation regarding the use of an additional shelterbelt to visually screen the proposal to negate any adverse visual effects. However, I recommend that the shelterbelt should extend along the entire southern boundary and be offset from the waterway. If this recommendation is not included, the potential adverse visual effects will be greater.

64 With regard to the solar farm to the east, I consider that prior to the proposed vegetation maturing it will have a **low-moderate** degree of adverse visual effects when experienced from the lounge, main outdoor living and garden areas. Adverse visual effects from the remainder of the dwelling and property will be of a very low degree, or no effect at all.

65 These adverse visual effects experienced from the lounge, main outdoor living and garden areas may be potentially higher if there is resulting glare effects. These adverse visual effects may reduce if the proposed vegetation achieves its desired outcome. However, there is a lack of certainty regarding this and the timeframe it would take.

Surrounding Public Roads

66 I have reviewed S6.2.1 of Ms Anthony's Landscape Assessment and generally agree with the way in which she has undertaken her assessment. However, there are three points of disagreement.

67 Firstly, and as previously discussed, I consider that there is a lack of certainty regarding the proposed vegetations ability to establish and mature to a hight and width that will visually screen the proposed solar farm. If this is not achieved, including within a timely manner, the rural utility / industrial character will degrade the rural amenity that is currently appreciated when travelling along these rural roads. Also, without appropriate screening, there is the potential for glare to exacerbate the visual effects from along Branch Drain Road, and Hanmer / Caldwells Road.

68 As mentioned above, I reviewed Ms Anthony's Visual Simulations and I find that the inaccurately illustrate the plants growth rates being faster than what they are. In particular, when they will not be irrigated after 3 years and there is a lack of detail regarding their long-term maintenance.

69 Secondly, there are instances where Ms Anthony relies on single rows of mature trees to provide continuous long term screening of the solar farm. In doing so, Ms Anthony does not appropriately consider the lifespan of this vegetation and the need to replace it, and the resulting effects during such time.

70 Thirdly Ms Anthony states in S6.2.3 of Landscape Assessment that 'Public Locations are considered to be least affected by the proposal due to the transient nature of road users.

71 I agree that a person travelling along a road will gain a more fleeting view, when compared with a stationary view. However, based on the BML Graphic Supplement, aerial imagery and on-site experience, there are a lot of people who reside in the area, who would regularly travel along these roads. I also noticed people riding around these roads.

72 So even though it is not experienced by lots of people e.g a state highway, it is experienced by the local community who are likely to have a more intimate relationship with the site and its surrounds. Therefore, this viewing audience will notice small, nuanced changes to the landscape, and will have their amenity more affected when compared with a person travelling through this area on a one-off occasion.

73 Overall, I consider that prior to the proposed vegetation maturing the proposed solar farm will have a **moderate** degree of adverse visual effects when seen from **Buckleys Road, Branch Drain Road, and Hanmer / Caldwells Road**. The adverse visual effects described above may be potentially higher should glare become a factor. When seen from **Grahams Road**, these adverse visual effects will be of a **low-moderate** degree, and glare will not be an issue.

74 If the vegetation establishes and matures, these adverse visual effects would reduce to a very low degree.

LANDSCAPE EFFECTS

75 I have reviewed S6.1 of Ms Anthony's Landscape Assessment and Mr Densem's peer review, Paragraphs 57- 73.

76 I generally agree with Mr Densem's peer review that the character of the site will change from a rural open pastoral character to a predominantly rural utility / industrial character.

77 I agree in part that the proposal will maintain an underlying pastoral use, which will contribute to the rural character. However, there is no detail in the application regarding how much of the site will have solar panels standing above pasture grass, and therefore how influential the underlying land use will contribute to rural character.

78 From experience, the solar farms I have assessed cover approximately 30% of their respective sites, with 70% of the site to mostly remain as pasture. In Also, the panels in the solar farms tilt so when parallel to the ground and standing at 2.45m tall[6], open views over the pasture are gained, refer to **Photo 10**.

Photo 10. This photo represents the open views under a solar farm consisting of tilting panels in Wairau Valley, Marlborough, accessed off SH63.

79 Also, I agree with Mr Densem that the proposed vegetation is not in keeping with the rural character of the area, which is mostly comprised of shelterbelts and hedgerows delineating boundaries between paddocks / properties. Whereas an exotic shelterbelt would be the most visually prominent aspect of the proposal, it would be in keeping with the vegetation patterns within the receiving environment and would provide a

[6] Similar height a standard ceiling height.

visual buffer that would contribute to rural landscape character and amenity of the area. Although it is noted that native vegetation can be planted as of right and has ecological benefits.

80 As I have outlined above, there is concern regarding the proposed vegetations ability to screen the proposal from surrounding public and private places. Regarding the Casey's property, the boundary treatment as it is currently proposed will not be able to be visually mitigate the solar farm from there upstairs bedrooms and when seen from their larger farm machinery.

81 Overall, due to the uncertainty regarding the proposed vegetations ability to visually screen the proposal, I consider that the proposal will have a **moderate** degree of adverse effects on the landscape character of the site its surrounds.

CONCLUSION

82 It is proposed to locate a 258ha solar farm at 150 Buckleys Road, Brookside, Canterbury.

83 Based on the landscape treatment as it is currently proposed I consider the Visual effects resulting from the proposed solar farm are summarised as:

83.1 **Clark and Elizabeth Casey, 180 and 198 Branch Drain Road**. The solar farm will have a **high** degree of adverse visual effects when viewed from the three upstairs bedrooms within the Casey Dwelling, which will not be mitigated.

83.2 When seen from the paddocks, the adverse visual effects will be of a **moderate-high** degree, and potentially a higher degree during those time when glare could result. These adverse visual effects may reduce if proposed vegetation achieves its desired outcome.

Robyn Casey, 265 Branch Drain Road. The solar farm will have a **moderate** degree of adverse visual effects when experienced from the master bedroom, veranda, garden and when existing her

driveway. Adverse visual effects from the remainder of the dwelling and property will be of a very low degree, or no effect at all. The adverse visual effects described above may be potentially higher should glare become a factor. These adverse visual effects may reduce if the proposed vegetation achieves its desired outcome.

Dave and Donna Kewish - 324 Branch Drain Road. I concur with Ms Anthony's recommendation regarding the use of an additional shelterbelt to visually screen the proposal to negate any adverse visual effects. In addition, I recommend that the shelterbelt should extend along the entire southern boundary and be offset from the waterway.

83.3

The solar farm to the east, within Stage 2 will have a **low-moderate** degree of adverse visual effects when experienced from the Kewish's lounge, main outdoor living and garden areas. Adverse visual effects from the remainder of the dwelling and property will be of a very low degree, or no effect at all. These adverse visual effects experienced from the lounge, main outdoor living and garden areas may be potentially higher if there is resulting glare effects, but they may reduce if the proposed vegetation achieves its desired outcome.

83.4

Surrounding Public Roads. The proposed solar farm will have a **moderate** degree of adverse visual effects when seen from **Buckleys Road, Branch Drain Road, and Hanmer / Caldwells Road**. The adverse visual effects may be potentially higher should glare become a factor. When seen from **Grahams Road**, these adverse visual effects will be of a **low-moderate** degree, and glare will not be an issue. If the vegetation establishes and matures, these adverse visual effects would reduce to a **very low** degree.

84 With regard to landscape effects, the proposal will not alter the landform, the majority of the land cover and stock (sheep instead of cattle) will continue to graze the paddocks. The solar farm will change the perceptual values within the site as the character will change from a rural pastoral

character to a predominantly rural utility / semi-industrial character, with an underlying pastoral use.

85 The potential adverse effects may not be mitigated by the proposed vegetation, due to the uncertainty around the growth rates of these proposed vegetation, and elevated views from the Casey's Dwelling and farming machinery. Therefore, I consider that the proposed solar farm will have a **moderate** degree of adverse effects on the landscape character of the site its surrounds. This equates to a more than minor adverse effect.

Dated 16 February 2023