Darfield Agrivoltaic Development

Landscape, Natural Character and Visual Assessment Report

Prepared by
Mansergh Graham Landscape Architects Ltd

This Landscape and Visual Assessment Report has been prepared as part of the application to construct a agrivoltaic facility at Darfield.
All work has been undertaken and/or reviewed by a Registered NZILA Landscape Architect.

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EXECUTIVE SUMMARY

Darfield Solar and Energy Storage Ltd is proposing to develop a ground-mounted agrivoltaic development approximately 1.5km northwest of Darfield within a block of land bounded by West Coast Road (State Highway (SH) 73) to the southwest, Homebush Road to the south, Loes Road to the east, Auchenflower Road to the north and the Fonterra Darfield dairy factory site to the west/ northwest.

Existing Landscape Context and Values

Located on the Canterbury Plains between the Waimakariri and Hawkins Rivers, and backdropped by the Malvern, Front, Puketeraki, Mount Oxford and Mount Thomas Mountain Ranges, the site is characterised by its broad and open nature.

The subtle geomorphological features, expressive of the formative processes of the alluvial outwash plains in the wider landscape have been heavily modified by land drainage (flood protection works (stop banks)), irrigation (water race network) and land clearance for farming practices and rural settlements (Darfield urban centre).

The proposed agrivoltaic development site is located within the rural environment on the outskirts of Darfield, to the east of the Darfield Dairy Factory, Kimberly electrical substation, SH73 and the Midland Railway Line. The character of the site is influenced by surrounding pastoral and cropping land use, shelter rows, hedgerows, clusters of specimen trees, woodlots, plantation forests (McHughs Forest Park), pylons, transmission lines, and post-and-wire fencing.

The site is not located in or near any Natural Character values, Outstanding Natural Landscapes (ONL), Visual Amenity Landscapes (VAL), Significant Natural Area (SNA) or Indigenous Biodiversity Management Overlays (IBMO) and does not contain any natural wetlands, lakes or rivers (or their margins), or indigenous planting.

The existing landscape values of the site and the wider surrounding landscape are ***low-moderate.***

Landscape Character

The proposed agrivoltaic development will comprise photovoltaic (PV) modules, inverters, transformers, a battery energy storage system (BESS), a site substation and associated buildings, and will retain pasture and sheep grazing beneath the PV structures. This will create a hybrid landscape, which blends elements of agricultural land use with renewable energy infrastructure.

The introduction of the proposed agrivoltaic development will alter the characteristics of the existing site and immediate surroundings (at the local level), from predominantly rural with industrial and energy generation elements, towards a landscape character with a stronger emphasis on electrical generation with underlying agricultural production, resulting in a ***low-moderate*** adverse effect on existing landscape character values within the site and a ***low*** level effect on the wider surrounding landscape.

Visual Amenity

The visual catchment surrounding the site is constrained by elements in the landscape including buildings, woodlots, shelter belts, curtilage planting, and to a limited extent, topographic variation. The retention of the existing shelter belts along the western boundary of the site and around the existing dwelling within the site will help screen views of the proposed development from the west, south and east. Some screening is afforded by earth bunding in the adjacent Dairy Factory site.

Views of the proposed development will generally be limited to locations immediately adjacent to the site, including along SH73, the railway line, Homebush Road (near the entrances to McHughs Forest Park), Loes Road, and Auchenflower Road. Additionally, views may be possible from the undeveloped part of the Large Lot Residential (LLR) zone, south of Homebush Road.

The development will be difficult to discern from Kimberley Road, Tramway Road, Bleak House Road, Landsborough Drive, Horndon Street and Clintons Road) due it its relatively low profile, distance and existing screening.

The visual absorption capability (VAC) of the landscape surrounding the site, which is a measure of its ability to absorb a particular type of development without a resultant change in landscape character, ranges from ***neutral*** to ***very good*** for most surrounding locations due to screening provided by McHughs Forest Park, surrounding rural plantings and other features in the landscape. ***Poor*** ratings occur in locations adjacent to the site, where existing screening is limited.

The effects of the proposed development on landscape character and visual amenity were assessed from representative view locations within the visual catchment surrounding the site.

The effects of the proposed development on existing landscape character values will be similar from various vantage points around the site, including SH73, the railway line, Homebush Road, Loes Road, and Auchenflower Road. However, the effect on visual amenity will differ based on several factors: the visual prominence and dominance of the agrivoltaic development, visibility of the BESS and substation, the prominence of the adjacent Dairy Factory, the visual complexity of the surrounding landscape, and the extent to which the development protrudes into the mountain backdrop.

Overall, the proposed development will change the existing rural characteristics of the site to one which is more complex and multifunctional, blending traditional agricultural uses with renewable energy infrastructure. While it will reduce the open spatial characteristics and introduce more built elements, it will also reflect modern trends in sustainable land use, potentially adding a point of interest in the landscape.

Glint and Glare

Glint and glare may be experienced from some sections of the roads immediately surrounding the site, potentially creating a traffic safety issue. Mitigation is required for this issue. Glint and glare are not expected to have a significant effect on landscape amenity.

Effect Ratings

Increased levels of activity will draw attention to the site preparation and construction works within the site. The temporary effects on landscape character and visual amenity during construction will range between ***very low*** and ***moderate.*** ***Moderate*** temporary effects will be localised and only occur adjacent to permanent dwellings, for a short duration during construction.

Short-term effects, associated with views into the site will slowly decrease as the mitigation planting establishes. During this time filtered views through the mitigation planting will slowly decrease until visual impermeability is achieved at 4-6 years. The short-term adverse effects on visual amenity values will range between ***very low*** and ***moderate*** and reduce to a ***very low*** to ***low*** permanent effect once the mitigation planting has become established. ***Moderate*** adverse effects will be limited to localised

permanent viewers (immediately adjacent to the site) and public views experienced when exiting McHughs Forest (only at limited times during the day, when glint and glare is experienced).

Mitigation

Glint and glare mitigation is required to reduce the traffic safety effects of glint and glare on road users along SH73, the Midland Railway line, Homebush Road and Auchenflower Road, and on the railway line.

Mitigation is also required to reduce the effects of the proposal on landscape character and visual amenity values on No. 32 and 68 Loes Road and visitors to McHughs Forest Park.

In most cases, the screening required to mitigate the effects of glint and glare (for traffic safety reasons) will mitigate the landscape and visual amenity effects. Where required, PV tracking management will be used to mitigate the effects of glare while the screen planting grows.

While the mitigation planting will alter the spatial characteristics of the site and restrict the ability to look across the wider open rural landscape, it will help maintain rural character by screening the proposed agrivoltaic development while retaining views of the mountains beyond above the planting. Mitigation is not proposed along the less populated sections of the surrounding road, from where the site will be experienced as a hybrid agricultural-energy generation site.

Planning

The proposed development is consistent with the relevant landscape and visual amenity requirements of the operative and partially operative Selwyn District Plans, the Canterbury Land and Water Regional Plan, the Canterbury Regional Policy Statement, and the Resource Management Act 1991 (RMA).

Overall Findings

Overall, with the establishment of the proposed mitigation planting, the adverse effects of the proposed agrivoltaic development on the existing landscape and visual amenity values will be **at or below the *minor*** threshold of the RMA. ***Minor*** RMA effects will be localised and limited in duration (until the proposed mitigation planting becomes established).

INTRODUCTION

Darfield Solar and Energy Storage Ltd is proposing to develop a ground-mounted agrivoltaic development approximately 1.5km northwest of Darfield within a block of land bounded by West Coast Road (State Highway (SH) 73) to the southwest, Homebush Road to the south, Loes Road to the east, Auchenflower Road to the north and the Fonterra Darfield dairy factory site to the west/ northwest. Mansergh Graham Landscape Architects Ltd ("MGLA") has been engaged to assess the landscape and visual effects of the proposed development.

The following assessment examines the potential effects of the proposal on the existing landscape and visual amenity values of the surrounding rural environment, within the context of the relevant planning provisions.

METHOD

A standard assessment approach has been used to identify the existing landscape and natural character of the site and its surroundings and to assess the potential effect of the proposed development on landscape and visual amenity.

In broad terms, the assessment consists of the:

a. Identification of the existing landscape character (including visual amenity) and natural character values in terms of the area's physical, associative, and perceptual attributes.
b. Identification of the key elements and attributes of the proposed development.
c. Analysis of how the proposed development will affect existing landscape and natural character values and the rating of effects.
d. Identification of potential mitigation measures and recommendations.
e. Identification of relevant assessment criteria within the context of the relevant statutory framework.

A combination of mapping analysis and field assessment has been undertaken to identify the potential effect of the proposed agrivoltaic development on the existing character and amenity values of the surrounding area. By considering the above, the likely effects of the proposal can be identified and rated.

The approach undertaken is consistent with the methodology contained within *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines.* Definition of the rating systems used, and a methodological flow chart is contained in the appendices.

For this assessment, the area to be occupied by the agrivoltaic development is referred to as "the agrivoltaic development site". The parent titles within which the agrivoltaic development site will be located are referred to as "the application site".

PROJECT DESCRIPTION & SITE LOCATION

Project Description

The applicant seeks to establish a 148-ha (approx.) agrivoltaic development, also known as a "**solar farm**", within the application site. This will include erecting solar panels (photovoltaic modules), inverters, transformers, a battery energy storage system (BESS), an admin building, a parts warehouse, a switchgear building, a site substation (including a substation building) and underground cable connection to the existing Orion Kimberley Substation. The proposal will also include the establishment of two site entrances (East and South), security fencing and undertaking landscaping in appropriate places. Site works associated with the construction of the development, including earthworks, and tree/shelter belt removal, will also be required to enable the agrivoltaic development to be established. Grazing of sheep will continue within the site after the agrivoltaic development has been constructed.

The following subsections outline those various components of the proposal in greater detail.

Photovoltaic Modules (Solar Panels)

The proposal seeks to establish approximately 188,000 photovoltaic (PV) modules, which are also referred to as solar panels. Each solar panel will be approximately 2.5m long, 1.1m wide and 33mm thick. These modules are proposed to be mounted on Single Axis Tracking Solar Tables (bases). The PV tracking table will be set out in a rectilinear array within the proposed agrivoltaic development site. Each PV tracking table will be mounted on piles and oriented along its long axis to approximately 7 degrees parallel to the existing internal water races (approximately north-south), enabling it to track the sun in an east-west direction.

The proposed PV tracking tables will be arranged in rows comprising individual tables and will be (approximately) 30.3m long, 58.7m long, 87.1m long, or 115m long, with each table correspondingly comprised of either 1 string (24 modules), 2 strings (48 modules), 3 strings (72 modules) or 4 strings (96 modules). At maximum tilt (60° tilt), the PV tracking tables will be approximately 2.5 (minimum) to 3.1m (maximum) high (depending on ground conditions) leaving a gap of approximately 0.3m to 0.9m off the ground. At minimum tilt (0° tilt), the PV tracking tables will be between 1.4m – 2.1m off the ground (depending on ground conditions) and 2.5m wide. Each row of tables will be approximately 5.7m apart, allowing approximately 3.2m clearance between panels, for access and maintenance.

Except during unfavourable environmental conditions, when panels may be stowed at 0-degree tilt, the PV tracking tables will operate year-round during daylight. Backtracking and resetting may occur outside these timeframes.

Overall, it is proposed that the agrivoltaic development will generate a maximum export capacity of approximately 117MW.

Solar Inverters

Twelve pairs of solar field inverters, approximately 4.3m wide by 11.8m long and 2.6m high, coupled with an MV transformer will be located throughout the site and connected to the substation and BESS through a network of underground cables. The inverters convert the direct current (DC) generated by the panels into alternating current (AC) compatible with the local grid. An 8m tall lightening mast will be erected adjacent to each field inverters (not required for the inverters near the site's substation).

Battery Energy Storage Area

Approximately 72 individual battery energy storage system (BESS) units will be located within a hardstand area centrally within the site. Each BESS will be approximately 6.1m long by 2.4m wide by 2.6m high and will look like a shipping container.

The BESS will be used to store energy onsite when generation is at its peak and demand is low. The stored energy can then be released into the national grid during peak demand hours, predominantly in the evening, when demand from households is at its greatest and solar generation is low.

The BESS will provide for approximately 200-400 megawatt hours (MWh) of storage. The batteries will also be able to be charged directly from the grid under certain conditions, such as during high renewable energy (off-site) generation, low solar generation days and low electricity demand.

Substation and Switching

A site substation area will be located immediately west of the proposed BESS area. The substation area will be approximately 76.3m wide x 84.4m long (6436m^2) and will include a substation building and two HV transformers.

A 6.4m high x 5m wide x 11.5m long (approximate) MV switchgear building will be located to the north of the substation area. This will create a new loop-in-loop-out connection point to the Orion Kimberley Substation which is in the adjacent Fonterra Darfield site.

The connection to the Orion Kimberly Substation will be underground (66kV cable trench) and will run along the western site boundary before deviating into the Fonterra Darfield site.

It is also noted that expansion of the existing Orion Kimberley Substation will be required to connect the proposed agrivoltaic development. These changes are yet to be determined and are outside of the project scope and do not form part of this resource consent application.

Admin Building and Parts Warehouse

An admin building and parts warehouse building will be located immediately west of the site substation area. The admin building will have a floor area of approximately 36m^2, while the parts warehouse building will have a footprint of approximately 250m^2.

Fencing, Internal Access, Buffers, and Earthworks

A 10m wide buffer strip will be left around the external perimeter of the site for fencing, access, and mitigation planting. The buffer will also run around the existing dwelling within the site (1352 Homebush Road) and a dwelling on a separate title that protrudes into the site from the Fonterra Dairy Factory (1/3792 West Coast Road).

Water Race: The photovoltaic modules will be set back 10m on either side of the water race within the site, for access and maintenance.

Fencing: A deer-style security fence (2.4m high) will be established around the perimeter of the site for security.

Earthworks: Earthworks will include the formation of internal access tracks, trenching of cables connecting the agrivoltaic development to the substation, and construction of the BESS area.

Existing Infrastructure and Planting

Existing Farm Infrastructure and Shelter belts: The existing internal fencing, and the internal shelter belts and specimen trees will be removed. The shelter belts along the western site boundary, adjacent to the Fonterra Darfield site and the water race which runs through the centre of the site will be retained. The cluster of eucalyptus trees within the east of the site (adjacent to 68 Loes Road) will also be retained.

The existing extensive shelter and curtilage planting surrounding the existing dwellings at 1352 Homebush Road and 1/3792 West Coast Road will be retained.

Proposed Mitigation Planting

Screen planting will be established along the southern (Homebush Road), and southwestern (SH73) site boundaries and part of the eastern (Loes Road) and northern (Auchenflower Road) site boundaries to mitigate the effects of glint and glare resulting from the proposed agrivoltaic development as well as effects on existing landscape character and visual amenity from some surrounding viewer locations. All mitigation planting would be maintained at a height of between 2m and 3m. This can be seen in the following figure:

Figure 1: Mitigation Planting Plan

The agrivoltaic development will require regular maintenance (such as cleaning of the solar PV panels and ground maintenance). Sheep will be grazed within the site to help keep the grass down.

The following overall layout plan shows the general layout of the proposed development. Full site layout plans are appended to this report as appendix four.

N

Key:
- Outside fence
- Install Setback
- Water Race
- Existing overhead line
- New Underground Cable
- Inverter Pairs
- Perimeter Roadway
- Internal Roadway
- Fire fighting water tanks

Yard

Culvert

Inverter Pairs

East Entrance

Culvert

10m perimeter buffer zone
(incl. access and planting)

Culvert

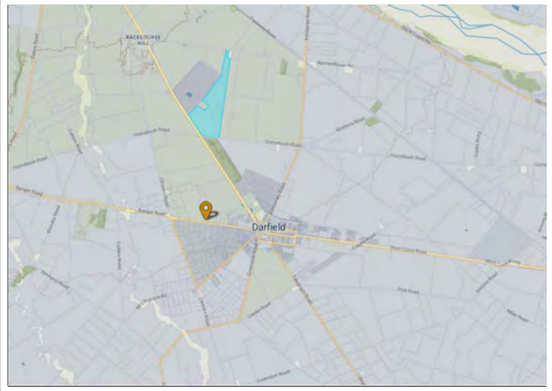
South Entrance

Route to Construction Laydown

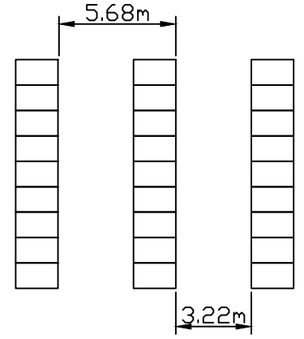
Construction Laydown
(Temporary)

0 100 500 1000

NOT FOR CONSTRUCTION



Panel Frame Layout



Title	Plot Plan
Project	Darfield Solar
Location	1352 Homebush Road Darfield New Zealand
DC Capacity	117.4 MW
Annual	210 GWh / Year

NZ CLEAN ENERGY

NZ Clean Energy
Email: projects@nzcleanenergy.nz
Web: www.nzcleanenergy.nz

Drawing #: DAR-001
Revison #: 10
Date: 19/8/2024
Status: FOR CONSENT APPLICATION
Design: SCOTT BURLING
Drawn: SCOTT BURLING

Examples[1] of the key components of the proposed development are illustrated in the following figures:

Figure 2: Typical solar Single Axis Tracking PV table configuration.

Figure 3: Typical Inverter + MV Transformer.

[1] Subject to change during detail design.

Figure 4: Example of BESS Units.

Figure 5: Example of Site Substation.

Site Location

The application site is located on a rural site at 1352 Homebush Road, Darfield, contained by the Great Alpine Highway (SH73)/West Coast Road and the Midland Rail Line to the southwest, Homebush Road to the south, Loes Road to the east, Auchenflower Road to the north and the Fonterra Darfield and Kimberley substation site to the west. The legal description and title of the site are:

a) Lot 2 DP 60325 (RT CB36A/467)
b) Lot 1 DP 434071 (RT 529207)

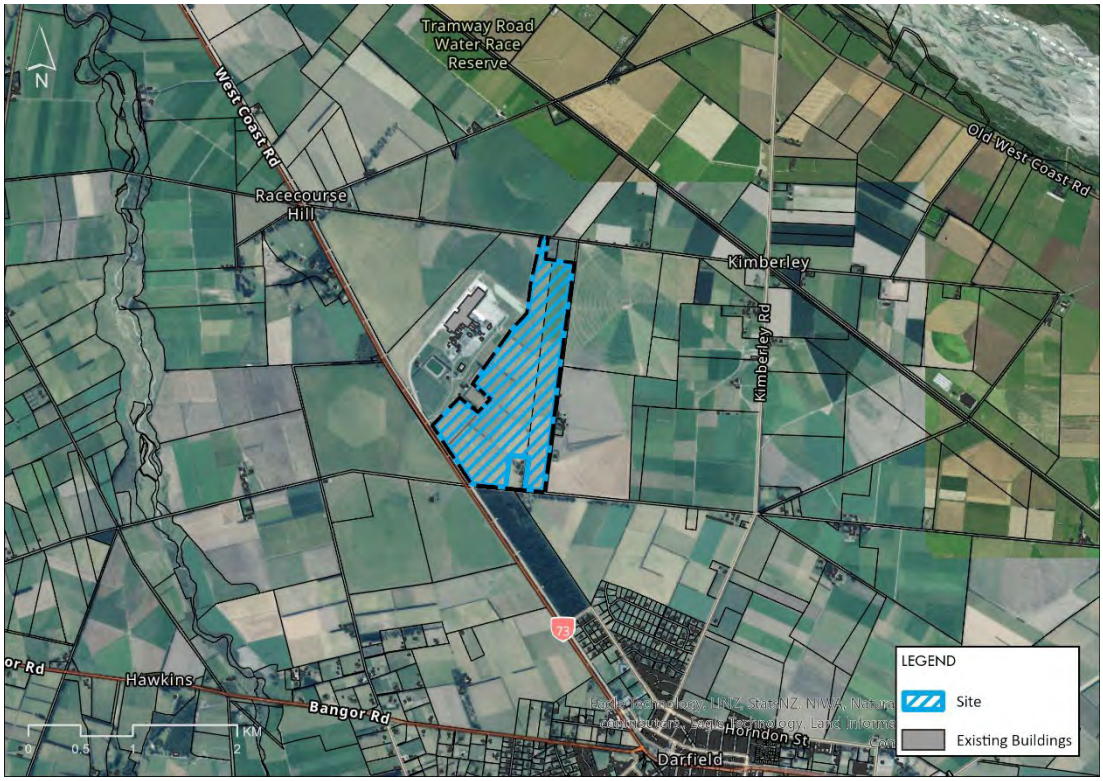


Figure 6: Site Location - 1352 Homebush Road, Darfield.

The agrivoltaic development site is located within the Rural Outer Plains Zone under the Operative Selwyn District Plan (OSDP) and the General Rural Zone ("**GRUZ**") under the Partially Operative Selwyn District Plan (POSDP). The Large Lot Residential Zone within Darfield Township is located immediately to the southeast of the site, while the Fonterra Dairy Processing Zone is located immediately to the west (POSDP). This can be seen in the following figure (Figure 6):

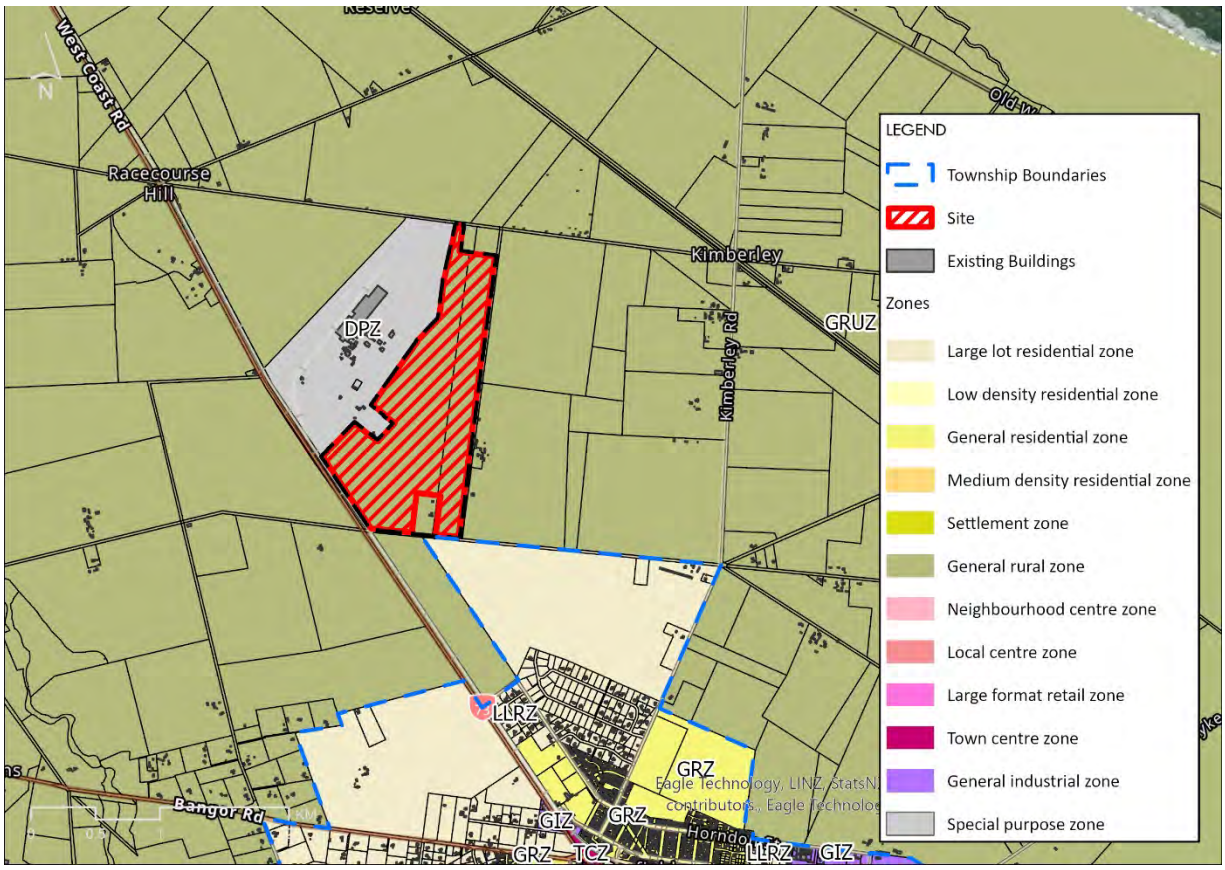


Figure 7: Partially Operative Selwyn District Planning Zones

The site is not located in or near any Outstanding Natural Features of Landscapes ("ONFL"), Significant Natural Areas ("SNA"), Visual Amenity Landscapes ("VAL") or Indigenous Biodiversity Management Overlay ("IBMO"). The closest Outstanding Natural Landscapes (ONL) are the Waimakariri River (POSDP only), approximately 3.5km northeast of the site, the Malvern Hills (approximately 14km west of the site), the Front Ranges (approximately 27km north and Northwest of the site) and the Puketeraki Range and Oxford Foothills ONL (approximately 24km north of the site). The closest VAL is the Malvern Hills. The closest IBMOs are the Malvern hills and the Waimakariri River. The closest SNAs are along the Waimakariri Rover (approximately 18km east of the site).

EXISTING LANDSCAPE CONTEXT AND VALUES

Current professional practice conceptualises landscape in terms of the following overlapping dimensions:

- Physical (the physical environment – its collective natural and built components and processes);
- Perceptual (how we perceive and experience places); and
- Associative (the meanings and values we associate with places).

The following section of this report describes the existing physical landscape and identifies its perceptual and associated values. The wider landscape surrounding the site is described to provide the context within which the application site and its surroundings (i.e. that part of the landscape potentially affected by the proposal) are experienced. While the proposed development is not likely to affect the existing wider landscape context (in a discernible way), it is important to understand the relationship between it and the landscape characteristics of the site and its immediate surroundings.

This approach is consistent with the current best practice approach and the recommendations contained within the *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines.*

The Wider Surrounding Landscape Context

Situated to the immediate north of Darfield, New Zealand, the landscape contains a mosaic of natural and man-made elements. Set within the larger geological context of the Canterbury Plains, the area is bounded by the Front Range (Torlesse, Big Ben and inland Craigieburn Ranges) to the northwest, Wilson Hill, Mount Oxford, Mount Thomas and the Puketeraki Range to the north, the Waimakariri River to the east, and the Malvern Hills (including the headwaters and upper reaches of the Hawkins, Waianiwaniwa and Selwyn/Waikirikiri Rivers) to the west and northwest. The formative processes shaping this landscape include tectonic activity, erosional forces, glaciofluvial and sedimentary deposition, resulting in flat plains, mountains, and low-lying hills.

Key Features Influencing the Landscape:

a. Location within the flat, open, and expansive lowland plains landscape, forming the central portion of the wider Canterbury Plains. Bounded by the undulating Malvern Hills to the west and northwest, the distant Front Mountain Ranges (Torlesse Range and Big Ben Range) to the northwest, Wilson Hill, Mount Oxford and the Puketeraki Ranges to the north.
b. Varied topography, ranging from mountains and undulating foothills to flat plains.
c. The erosional activity of the Waimakariri, Hawkins, Waianiwaniwa and Selwyn/Waikirikiri Rivers, the floodplains of historic river alignments and the outwash plains of glacial events of the mountains to the northwest have carved the landscape.
d. Limited (0.5%) original indigenous vegetation exists within the plains after extensive modification through land drainage and clearance for farming practices.
e. Areas of plantation forestry and woodlots.
f. Agricultural land use, predominantly dairy farming, dryland sheep farming and cropping.
g. Infrastructure elements such as local roads, State Highway 73 (SH73) (AKA the Great Alpine Highway and West Coast Road), State Highway 77 (SH77), the Midland Railway Line, the Kimberley Substation and transmission lines crisscross the open plains landscape.
h. Scattered rural settlements and isolated farm dwellings.
i. Recreational areas, including parks, reserves and river and hiking trails.
j. Agricultural infrastructure, including pivot irrigators, barns, and sheds.
k. Darfield urban area.

Over time, land development practices have altered the original native forest, shrubland and tussock grasslands within the Canterbury Plains, transforming it into a mosaic of agricultural land containing pasture, crops, shelter belts and rural settlements. These features provide the context within which the application site and its immediate surroundings are interpreted and assessed.

The various characteristics of the wider landscape can be seen in the following photographs:

Figure 8: Flat alluvial landscape associated with the low altitude central Canterbury Plains looking west towards the Malvern Hills and Front Ranges (Big Ben Range and Torlesse Range) from Kimberley Road.

Figure 9: Midland Railway Line, immediately southwest of the site. Flat open rural pasture and internal shelter belts within the site, backdropped by McHughs Forest Park.

Figure 10: Views across the open dryland sheep farm with scattered rural infrastructure (barns, pivot irrigators) to the north of the site. The distant backdrop comprises the Malvern Hills and Front Ranges.

THE APPLICATION SITE AND SURROUNDING LANDSCAPE

The topography of the application site is flat. Located to the west of the Waimakariri River and the east of the Hawkins River, the site is characterised by its agrarian land use and development.

Biophysical Factors

Geology and Geomorphology

Geologically, the mountain ranges, hill country and Waimakariri River act to define the plains, having influenced their formation.

The Malvern Hills, which form the western distant backdrop to the site consist of volcanic rhyolite sheet lava originating from the Mount Somers area to the west. They are undulating, low-lying foothills extending from Round Top to the west of the site, to the Russell Range, to the northwest of the site.

The Front Ranges (Big Ben, and Torlesse Ranges) and Puketeraki Range were formed through tectonic uplifting and consist of uniform greywacke and argillite rocks (sea-floor deposition)[2]. Typically steep and highly dissected by glacial and alluvial erosion, the ranges comprise sharp peaks and relatively smooth flat-topped ridges.

The application site is located within the flat to gently undulating low-land outwash plains, consisting of Quaternary moraine gravels transported from the Southern Alps and deposited during glacial periods in the late Pleistocene (approximately 3 million to 10,000 years ago). The alluvial gravels were deposited as broad, coalescing outwash shingle fans and associated terraces of the Waimakariri River, Selwyn/Waikaririki River, and historic river channels (and their floodplains), which over time formed the alluvial low altitude plains.

The low-land plains are broad and open, with little topographical relief, traversed by the wide braided riverbeds, associated terraces, and wetlands. Soils within the plains are recent, loamy to free draining and fertile, their formation heavily influenced by the historic migration patterns of the Waimakariri, Hawkins and Selwyn/ Waikirikiri Rivers. Deposition patterns tend to reflect their formative processes, with the coarse stony sands found closer to the river's present course than the finer silt loam soils.

The proposed development site is set back from the upper river terrace associated with the Waimakariri River by approximately 3.2km (at its closest point) to the east of the site, and approximately 2.5km (at its closest point) from the upper river terrace associated with the Hawkins River to the west of the site.

Many of the more subtle geomorphological features in the wider landscape have been heavily modified by land drainage (flood protection works (stop banks)) and land clearance for farming practices and development (Darfield urban centre).

The subtle topographical patterns that influence the geophysical character of the site can be seen in the following shade map figure:

[2] Page 22. *Selwyn District Landscape Study*. Boffa Miskell. 12 December 2018.

Figure 11: Topographic map showing subtle variation in the underlying alluvial landform.

Cadastral Patterns, Settlement, Rural Development and Planting Patterns

Subdivision patterns in this part of the Low Altitude Plains (within 3km of the application site) comprise large rural lots, large industrial/ dairy processing lots, medium size large lot residential lots and smaller residential and retail town centre lots. Lots sizes and distribution patterns are typical of an urban-to-rural transect (Figure 11), with smaller lots associated with the residential area in central Darfield, giving way to medium-sized (large lot residential) lots at the periphery of the township and larger industrial, dairy processing (Fonterra Darfield) and rural lots.

Figure 12: Rural to Urban Transect

Subdivision patterns, including parks and reserves, such as the Kimberley Reserve, Kimberley Cemetery and McHughs Forest Park, are typically geometric, with lot boundaries tending to be rectilinear, except for where they follow landscape features such as the banks of the Waimakriri River, and Hawkins River.

The Great Alpine Highway (SH73), the Midland Rail Line, and SH77 divide the Township of Darfield north-south, while the Kimberley Substation and its associated transmission lines and the extensive pivot irrigator systems further compartmentalise the rural landscape surrounding Darfield.

Vegetation Patterns

Historic vegetation cover was predominantly mataī, kahikatea, tōtara, and broadleaf forest[3]. Intensive, large-scale land clearances and drainage for farming practices have greatly modified the plains, with only approximately 0.5% of the original indigenous vegetation remaining in and around the site.

The predominant land use within the site and surrounding plains landscape is pastoral grazing with some forage cropping. Dryland sheep farming is commonly found on shallow stony soils, however, within these areas irrigated, dairy farming is becoming more prevalent, and this land use has produced an expansive, open pastoral landscape dissected by rural planting patterns including shelter belts, hedgerows, plantations and woodlots, scattered clusters of deciduous specimen trees, and curtilage planting.

The site is predominantly open pasture, with some areas used for rotational cropping (such as brassicas and lucerne). The site currently contains several internal shelter belts, hedge rows, and mature specimen trees which will need to be removed as part of the development. Mature shelter belts separate the site from the adjacent Fonterra site along its western boundary. These shelter belts will be retained along with the shelter belts and curtilage plantings around the dwelling within the site. The planting within the site to be removed or retained is shown in Figure 1 (Mitigation Planting Plan).

The McHughs Forest Park (public recreation reserve) immediately to the south of the site is a mixed conifer plantation, dominated by Douglas Fir, with a mix of other exotic conifers. Established in 1893, the trees are mature and provide dense coverage, screening views towards the site from Darfield.

The limited vegetation along the boundaries of the application site (except along the western boundary with the Fonterra Darfield site) contributes to the availability of views across the wider rural landscape from the south, southwest, east, and north. From locations north of Auchenflower Road (such as Bleak House Road and Tramway Road) and east of Loes Road (such as Kimberley Road), views are more highly compartmentalised by hedgerows, shelter belts, clusters of mature specimen trees and curtilage planting within the surrounding rural landscape and the industrial area to the north.

The existing vegetation patterns within and surrounding the site can be seen in the following photographs:

Existing species observed within the site include[4]:

a.	*Pinus radiata*.	Pine
b.	*Cupressus macrocarpa*	Macrocarpa
c.	*Cupressus x leylandii*.	Leyland Cypress
d.	*Betula pendula*	Birch
e.	*Eucalyptus nitens*.	Shining Gum

[3] Page 5. *Darfield Agrivoltaic Facility Assessment of Ecological Effects*. Ecological Solutions Environmental Consultants. June 2024.

[4] Page 9. IBID

Figure 13: Planting patterns within the southern and western parts of the site. Curtilage planting and internal shelter belts surround the dwellings at 1/3792 West Coast Road and 1352 Homebush Road. Mount Oxford and the Puketeraki Range form the distant backdrop.

Figure 14: The site features flat open pasture to the east, with internal shelter belts and curtilage planting in the central to western areas. More densely contained planting patterns are found further northwest beyond the site. The Malvern Hills and the Front Ranges (Torlesse Range and Big Ben Range) form the distant backdrop.

Figure 15: Areas of forage cropping and **o**pen pastoral landscape within the site. Limited existing planting within the northern and eastern parts of the site. Extensive shelter belt planting is seen along the western site boundary, internal shelter belts are seen within the central-southern west of the site and shelter belts and curtilage planting surrounding the residences within the southern part of the site. Looking towards the McHugh Forest Park, which backdrops the site in the distance.

Perceived and Experienced Factors

Landscape Expression, Cohesion and Memorability

The landscape has been modified by rural land use, land drainage (flood protection) and Darfield urban development; however, the formative processes that created the underlying landform are still apparent, influencing the natural characteristics of this part of the landscape.

While the formative processes associated with the wider Canterbury Plains are still evident at a large scale, as gravel fans, shallow depressions, overland flow paths and historic river channels and terraces, the formative processes and landscape features associated with the more recent alluvial deposits within floodplains of and the banks of the Waimakariri and Hawkins Rivers (in the vicinity of the application site) are more evident and manifest themselves as flood paths, dry river channels and the current active braided riverbeds. The shallow stony soils within the site and its surrounds have necessitated dryland sheep farming land use, however, the presence of extensive pivot irrigation systems within the immediate surrounding area suggests a transition from dryland sheep farming to irrigated dairy farming.

Human modification to the site and the surrounding rural landscape includes historic indigenous vegetation clearance and conversion to pastoral farmland, flood protection and irrigation works, modification of natural drainage patterns and the construction of bunds, stop banks, canals and water race networks (including an artificial watercourse which dissects the site north-south, which is part of a 1,700km network of water races used for irrigation and stock water, managed by Selwyn District Council). Immediately to the northwest of the site, the Kimberley Substation and associated transmission lines, and Fonterra Darfield buildings, tanks, Wastewater Treatment Plant, and earth bunds have introduced industrial and utility infrastructure to the northern fringe of the Darfield urban landscape. The Midland Rail Line and SH73 have further modified the landscape immediately surrounding the site.

The plains landscape is expressive of its glaciofluvial and alluvial origins, with its containing topography, the Front Range and Malvern Hills forming the enclosing skylines.

Rural shelter belt planting, plantations, woodlots and pivot irrigation systems generally restrict views of the wider open plains landscape from most surrounding roads and private residences. This means that views are often intimate, areas of open pasture are largely contained, or backdropped and distant views of the mountains are partially obscured or seen above the shelter belts. In some situations, this means that the key attributes that make the Canterbury landscape memorable, that is the natural wide-open spaces and the visual relationship between the plains, the sky, and the mountain backdrop, are diminished.

While the site and its immediate area to the north, south and east manifest a rural character, the proximity of the substation and dairy factory (immediately to the northwest and west) and Darfield to the south (with its urban extent bounded by Homebush Road, immediately to the south of the site) means that the site is peri rural.

On a broad scale, the site is visually cohesive but unremarkable. As such it is not particularly memorable (in the sense that it can be easily differentiated from other parts of the surrounding rural landscape).

Aesthetic Qualities and Visual Amenity

Existing amenity values are primarily derived from the visual characteristics of the site and the wider landscape within which it is contained. The character of the site and its immediate surroundings is influenced by the relatively flat rural pastoral landscape of the low altitude Canterbury Plains, contained by the more dramatic vegetated and snow-capped craggy skyline of the Front Ranges to the north and the less dramatic Malvern hill country to the west. Views across the open pastoral landscape are generally compartmentalised by rural plantings, shelter belts, and plantations and woodlots.

The Torlesse Range is the most striking of the Front Ranges and along with the 'Big Sky' (wide-open vistas above the mountain ranges) is an iconic landmark within the Selwyn district, particularly when viewed from along SH73. The juxtaposition between the flat, rural plains, the mountain ranges and the 'Big Sky' landscapes enhances visual amenity values within Selwyn district.

The more natural margins of the Waimakariri and Hawkins Rivers are juxtaposed by the modified appearance of the canals, water races, farm drains and stop banks, including within the central-eastern part of the site (linear water race).

Landscape and visual amenity values are influenced by the highly developed characteristics of the Fonterra Darfield dairy processing facility, Kimberley Substation and associated transmission lines, Darfield urban environment, SH73, the Midland Rail Line, pivot irrigation systems and the wider surrounding rural landscape.

Key landscape features that contribute to the wider landscape aesthetic qualities and visual amenity include:

a. Views of the open pastoral landscape, dissected by rural planting patterns (shelter belts, plantations (McHughs Forest Park), woodlots, and specimen trees).
b. Views of the Malvern Hills, the Front Ranges, the Puketeraki Ranges, Wilson Hill, Mount Oxford and Mount Thomas.
c. The Waimakariri and Hawkins Rivers.

Objectives and Policies within the Operative and Partially Operative Selwyn District Plan ("**OSDP**" & "**POSDP**") aim to protect the amenity values of the Waimakariri River (Outstanding Natural Landscape and

Indigenous Biodiversity Management Overlay) to the east, the Front Ranges (Outstanding Natural Landscape and Visual Amenity Landscape and Indigenous Biodiversity Management Overlay), to the north and the Malvern Hills (Outstanding Natural Landscapes and Indigenous Biodiversity Management Overlay), to the west of the site. The Puketeraki Ranges, Wilson Hill, Mount Oxford and Mount Thomas are recognised as Outstanding Natural Landscapes within the Operative Waimakariri District Plan.

Attributes which contribute to amenity values in the surrounding landscape can be seen in the following photographs:

Figure 16: Flat, open pastoral landscape with pivot-irrigation allowing dairy farming. Shelter belt, woodlot and clusters of mature specimen trees are seen in the backdrop, along with the Darfield Fonterra and Kimberley substation site. The undulating Malvern Hills form the distant backdrop, along with the Front Ranges (Torlesse Range and Big Ben Range).

Figure 17: Water race alongside SH73 and the Midland Rail, immediately southwest of the site. Views across the open rural landscape to denser vegetation patterns (woodlots, shelter belts and curtilage planting) to the northwest of the site. The Torlesse Range and Mount Oxford form the distant backdrop to the northwest.

Associative Factors

Shared and recognised values within and surrounding the site include:

a. Amenity/aesthetic values associated with the open pastoral rural landscape, the McHughs Forest Park, the Waimakariri, Hawkins, and Selwyn/Waikirikiri Rivers, and views towards/experience of the Front Ranges and Malvern Hills.
b. Recreational infrastructure, including walking and cycling tracks through the McHughs Forest Park (immediately to the south of the site), riverside reserves and walking/cycling tracks, hiking/tramping tracks and mountain biking within the Malvern Hills and Front Ranges.
c. The identified Hawkins, Waireka/ Waianiwaniwa, and Selwyn River Wāhi Taonga Management Areas to the west and southwest of the site (OSDP).
d. Kura Tawhiti and Te Whata a Rama within the Torlesse Range are significant maunga for Ngāi Tahu.
e. The identified Outstanding Natural Landscapes (ONL) comprise the Front Ranges to the north of the site, Malvern Hills to the west of the site and the Waimakariri River.
f. The identified Visual Amenity Landscape of the Malvern Hills.

Of the associated values identified above, the key associations relate to sites of significance to the surrounding natural features (including the McHughs Forest Park, Malvern Hills, Front Range, Puketeraki Range, Mount oxford, Mount Thomas, Waimakariri River, Hawkins River, and Selwyn/Waikirikiri River), as well as the surrounding rural landscape.

Existing Landscape Character and Values

When considered within the context of the landscape biophysical, perceptual, and associative attributes, the existing landscape character and values of the site are influenced by its peri-urban (Darfield), industrial (Fonterra Darfield and Kimberley Substation) and rural location, between the Waimakariri River (to the east), the Hawkins River (to the west) and the distant backdrop of the Malvern Hills (to the west and northwest), the Front Range (to the northwest), and Wilson Hill, Mount Oxford, Mount Thomas and the Puketeraki Range (to the north) of the site.

The key attributes that contribute to the existing landscape value and visual amenity of the site and its wider surroundings include:

a. The spatial relationship between the natural areas (including the Waimakariri, Hawkins and Selwyn/Waikirikiri Rivers within the wider surrounding landscape), the distant hills, mountains and ranges (to the west, northwest and north) and the surrounding modified rural landscape, including the industrial Fonterra Darfield and Kimberley Substation and Darfield rural settlement.
b. The aesthetic values associated with views across the open plains landscape towards the dramatic craggy peaks of the Front Range, Puketeraki Range, Mount Oxford and Mount Thomas, and ‘Big Sky’ backdropping the site to the northwest and north.
c. Aesthetic values associated with the McHughs Forest Park, backdropping the site to the south.
d. The aesthetic and natural values associated with the Visual Amenity Landscapes and Outstanding Natural Landscapes (ONL) features of the Malvern Hills, Front Range, Puketeraki Range, Mount Oxford, Mount Thomas and the Waimakariri River.
e. Modification to the application site and surrounding landscape by historical clearance of indigenous vegetation, drainage of the land and conversion of the land to pastoral farmland/cropping and the urban and industrial areas of Darfield (including the Fonterra Darfield Dairy Factory and Kimberley Substation, immediately to the west of the site and the Large Lot Residential zone immediately to the southeast of the site).

The broader landscape surrounding the site, including the more elevated natural landscapes to the west, north, and northwest provides the background context within which the site is interpreted. Key features that enhance the broader landscape character and amenity values include the Malvern Hills, Front Range, Puketeraki Range, Mount Oxford and Mount Thomas, McHughs Forest Park, and the Waimakariri, Hawkins

and Selwyn/Waikirikiri Rivers. These features are of ***high*** landscape value due to their contribution to local character and amenity.

Landscape values of the application site and immediate surrounding landscape range between ***low*** (where the landscape immediately to the west of the site has been highly modified by industrial development associated with the Fonterra Darfield and the Kimberley Substation, and the landscape further to the south has been highly modified by Darfield settlement), ***low-moderate*** (within the site and the rural landscape immediately to the north, east, west and south, where land clearance and drainage has modified the landscape).

When considered collectively, the overall landscape value of the site and its immediate surroundings is ***low-moderate.***

EXISTING NATURAL CHARACTER

Section 6(a) of the RMA requires, amongst other things, the preservation of the natural character of wetlands, lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.

The closest rivers to the site are the Waimakariri, Hawkins and Selwyn/ Waikirikiri Rivers. These are at a sufficient distance from the application site for their natural character values to remain unaffected. There are no lakes within proximity of the site. A natural character effects assessment of the proposal on these features has therefore not been undertaken.

The only water course within the site is the artificial water race bisecting the site, which is part of the wider Selwyn water race network, used for irrigation and stock water purposes. Because this feature does not meet the definition of a wetland, lake or river under the RMA, an assessment of effects on natural character is not required.

The Assessment of Ecological Effects Report[5] makes the following relevant site observations and conclusions:

> *Vegetation at the time of survey, within and immediately surrounding the site, was dominated by exotic species typical of the Canterbury Plains farmscape (Figure 2)[6].*
>
> *There were no natural watercourses or natural inland wetlands at the site. There is one artificial watercourse present that bisects the site (Figure 8) constructed as part of a 1,700km network of water races used for irrigation and stock water, managed by Selwyn District Council[7].*

[5] Darfield Agrivoltaic Facility Assessment of Ecological Effects. EcoLogical Solutions Environmental Consultants. June 2024.

[6] Page 1. IBID.

7 Page 12. IBID.

Figure 18: The water race bisecting the site, identified in the EcoLogical Solutions Assessment of Ecological Effects Report[8].

ASSESSMENT OF EFFECTS ON LANDSCAPE CHARACTER AND VISUAL AMENITY

Ratings

The rating system used is consistent with the recommended 7-point scale contained within *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines.*

Document	Effect Rating						
Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines	Very Low	Low	Low - Moderate	Moderate	Moderate -High	High	Very High
Act/Policy	Threshold						
RMA	Less than Minor		Minor	More than Minor		Significant	

Where the level of effect ranges between ratings on this scale, a split rating is provided (e.g., *Low-Moderate* to *Moderate*). A *Low* effect rating that is *less than minor* is identified as such.

LANDSCAPE EFFECTS

This section of the report considers the effects of the proposed development on the existing landscape attributes and characteristics identified within the existing landscape context and values section of this report.

Effects on Landscape Character

When effects on landscape character are considered collectively, the proposal will have a ***low*** (wider landscape) to ***low-moderate*** (local landscape) adverse effect on the key features and the overall characteristics of the landscape within and immediately surrounding the application site. The proposal will not affect existing landscape character outside the visual catchment within which it is contained. Because this is well below the minor effects threshold of the RMA, these effects are not discussed in this report.

The introduction of the proposed agrivoltaic development within the site will shift the balance from a predominantly rural landscape towards a landscape with a stronger emphasis on electrical generation,

[8] Page 13. Darfield Agrivoltaic Facility Assessment of Ecological Effects. EcoLogical Solutions Environmental Consultants. June 2024.

while still retaining its agricultural land use. With the establishment of the proposed agrivoltaic development, the site will become a hybrid landscape, which blends elements of agricultural land use with renewable energy infrastructure.

The location of the proposal at the urban fringe of Darfield and adjacent to the existing Fonterra Darfield site and the existing Kimberley substation (and associated pylons and transmission lines) will allow it to integrate successfully with the existing surrounding land use patterns and consolidate growth alongside an already established area, preserving the rural character of the wider rural landscape and serving to mitigate broader effects on rural character. While acknowledging that the character of the site will transform, it is important to note that this is not indicative of sprawl.

Within the context of the wider surrounding rural landscape and adjacent industrial area, the proposed development will not:

a) Affect existing topographical patterns within the site or its surroundings (to the extent that it would affect landscape character).
b) Affect wider rural land-use patterns.
c) Affect the characteristics of any outstanding landscape areas, amenity landscape areas or Significant Natural Areas experienced from within the landscape surrounding the application site (such as the Front Ranges and the Puketeraki Ranges).
d) Affect perceptions of wider rural character and amenity.

Earthworks associated with the construction of the solar farm are expected to occur over 12-18 months and will be restricted to the formation of the access tracks within the site and the earth grid beneath the substation, the adjacent hardstand area for the BESS units, and the hardstand areas for the inverters located throughout the development area.

Works in the first phase of the construction period (6 – 9 months) are expected to comprise the civil works (topsoil stripping and the backfilling to create the access tracks and hardstand areas for the BESS, substation, switchyard, and inverters), piling and fencing. Building construction (substation, switchyard, BESS etc) is expected to commence as soon as the earthworks are completed. The use of driven piles will minimise disturbance to the underlying landscape which will be maintained in pasture and grazed. During this period approximately 50 people and their equipment are expected to be working in different parts of the site. Over the next 4-5 months, the PV table tracker units will be mounted onto the driven piles and the individual PV modules installed. During this period up to 100 people are expected on site each day. The final 2-4 months of construction will comprise finishing works, commissioning, defect remediation works etc. During this period up to 80 people are expected to be present in different parts of the site.

Adverse effects on existing landscape character values during the initial construction of the proposed agrivoltaic development will likely range between ***low*** and ***low-moderate.*** These effects are typically temporary and are expected to subside once construction is completed and the site is restored to pasture and landscaped according to the proposed mitigation planting plan. Effects are more likely to be experienced close to the site, where the changes in the landscape are more prominent, reducing when experienced from further away, where the site will be experienced as part of the surrounding landscape (and less obvious).

With the establishment of mitigation planting along the southern, southwestern, and parts of the northern and eastern site boundaries, the existing rural character of the site will be maintained from most surrounding viewer locations. This planting will alter the character of the site (when observed from surrounding viewpoints) from open pastoral to a more highly compartmentalised rural character

(contained by mitigation planting). From a limited number of surrounding locations, the site will continue to be experienced as a rural or a hybrid agricultural - energy generation site.

Due to the development's relative scale within the surrounding rural environment, the proposed mitigation planting to retain the site's rural character and the limited viewpoints from which the full extent of the change will be visible, the adverse effects on existing landscape character and amenity values will be ***low*** when viewed in the wider rural landscape. However, the adverse effects on landscape character and visual amenity values will be slightly higher (***low-moderate***) when considered at the local scale (site and immediate surroundings).

Outstanding Natural Features and Landscapes, Significant Amenity Landscapes and Areas of High or Very High Natural Character.

The site is not located in or near any identified Outstanding Natural Landscapes ("ONL"), Significant Natural Areas ("SNA"), Visual Amenity Landscapes ("VAL") or Indigenous Biodiversity Management Overlays ("IBMO"). The closest Outstanding Natural Landscapes (ONL) are the Front Range (OSDP and POSDP), Puketeraki Range (WDP) approximately 22km to the northwest of the site, the Malvern Hills, approximately 14km to the west and northwest of the site, and the Waimakariri River (POSDP), approximately 3.5km to the northeast of the site. The closest VAL is the Malvern Hills (OSDP and POSDP). The closest SNAs are located approximately 18km to the east of the site, near West Melton.

These features will not be physically affected by the proposed agrivoltaic development. Effects on the amenity values associated with views towards these features are discussed in the following section.

EFFECTS ON VISUAL AMENITY

Section 7c of the Resource Management Act (RMA) requires the maintenance and enhancement of amenity values.

The *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines*[9] states:

> *Visual matters are integral to landscape rather than a separate category or factor. Physical, associative, and perceptual dimensions are each experienced visually (as well as through other senses).*[10]

The visual effects of the proposed development have been assessed from seven viewer groups (each group representative of similar views/ viewing angle) comprised of twenty-nine representative view locations surrounding the site and rated using a standardised rating system (appended to this report as appendix two).

While the proposed agrivoltaic development will be visible from all identified view locations, the effects will vary depending on the context in which they are seen, and the screening that is provided by several factors including topography, vegetation, existing buildings, and distance. Due to a combination of existing vegetation within and surrounding the site, intervening topography, and the development within Fonterra Darfield, to the west and Darfield urban environment to the south, there are relatively few locations surrounding the site, where direct views of the agrivoltaic development site can be obtained.

A summary of the findings is presented below.

[9] The *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines* were adopted by the NZILA in May 2021, replacing the NZILA Best Practice Note: Landscape Assessment and Sustainable Management 10.1 (NZILA BPN 10.1).

[10] Para 4.30. Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines (Final)

Visual Catchment

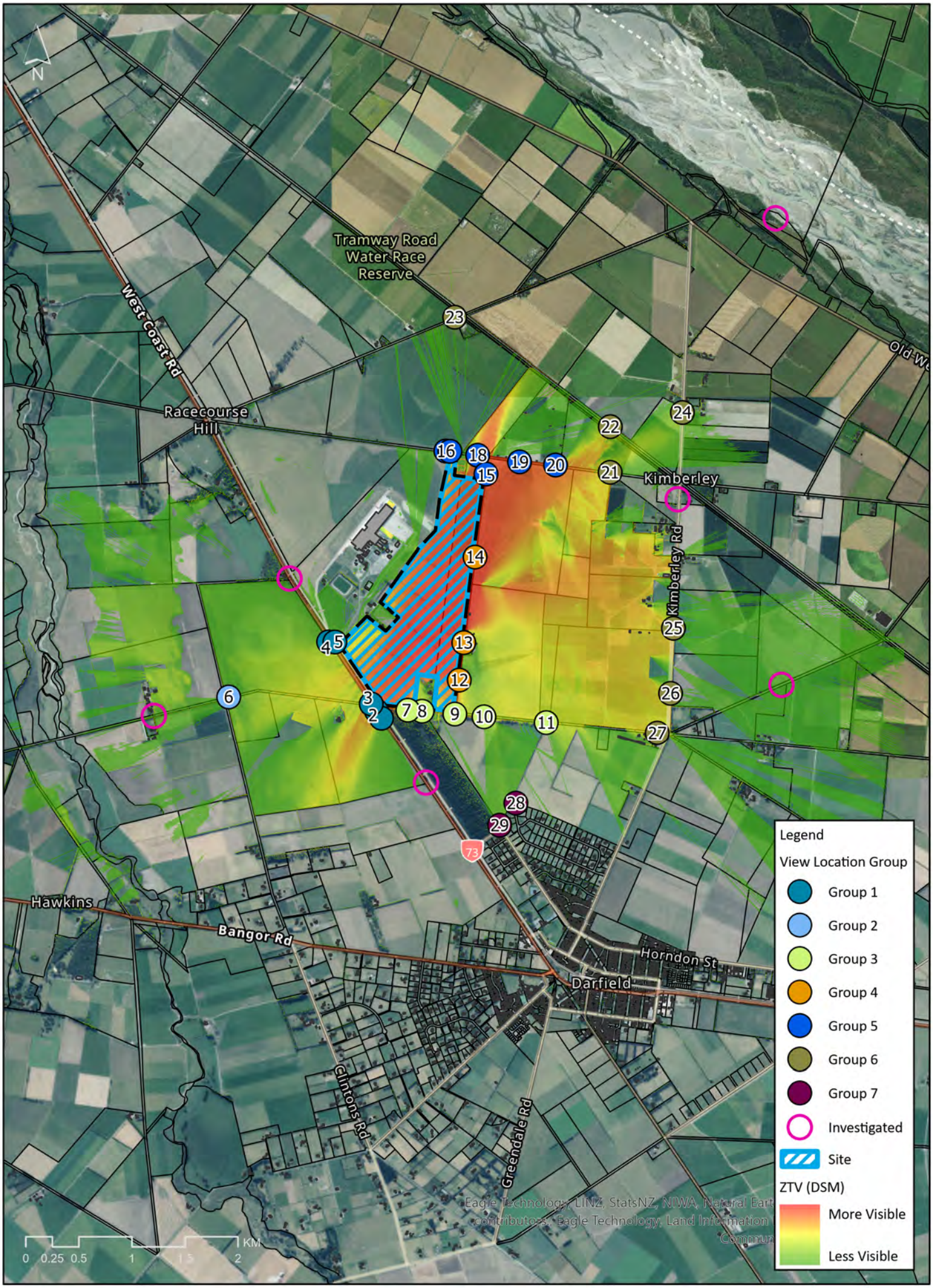
As part of the initial investigation into the potential visibility of the proposed development, a zone of theoretical visibility (ZTV) analysis was carried out. The ZTV analysis used a digital surface model (DSM) derived from lidar elevation data to identify locations in the surrounding landscape from where the development would be potentially visible. Existing features such as buildings, shelter belts and large areas of vegetation that will screen the proposed development from view are included in the DSM.

A ZTV map has been produced, to identify the visual catchment within which the proposal would be potentially visible (at its maximum height).

Key findings from the ZTV analysis and site investigation are:

a. The proposed development is potentially visible from a limited area to the north, northeast, east, southeast, south, and southwest.
b. Views of the proposal from the west, and northwest will be largely screened from view by the existing shelter belt along the western site boundary, the Fonterra Darfield buildings, planting and earth bunding, and the rural planting patterns to the northwest and west.
c. Views of the proposed development from further to the south (Darfield) will be largely screened by McHughs Forest Park, the mature roadside planting along Homebush Road and extensive shelter belt planting within the surrounding rural landscape.
d. Field verification confirmed that the large buildings, in combination with earth bunds and planting within the Fonterra Darfield site, as well as the extensive rural shelter planting and woodlots within the rural landscape, will significantly restrict views of the proposed development from the surrounding public (and private) locations to the northwest and west of the site.
e. Field verification also confirmed that the McHughs Forest Park and extensive existing roadside vegetation and vegetation in the rural landscape to the southwest of the site (shelter belts, hedges, curtilage planting and specimen trees) will significantly restrict views of the proposed agrivoltaic development from surrounding public (and private) locations further south of Homebush Road.
f. The nearest publicly accessible viewing opportunities are afforded from SH73 and the Midland Rail Line (to the southwest), Homebush Road (to the south), Loes Road (to the east) and Auchenflower Road (to the north) located immediately adjacent to the site.
g. The nearest dwellings are located within the application site (1352 Homebush Road) and immediately adjacent to and surrounded on three sides by the application site (1/3792 West Coast Road). The next closest dwellings are located within the Fonterra Darfield site (accessed off SH73), approximately 50m – 500m to the west/ northwest of the site and along Loes Road, approximately 50m to the east of the site. Intervening curtilage planting and rural shelter belt vegetation restricts views of the site from each of these dwellings, except for where views are available along the driveways, and where planting is less dense.
h. Views from the dwellings further away from the site (along Kimberley Road, Auchenflower Road, Bleak House Road, Homebush Road, Landsborough Drive, Horndon Street and SH73) are restricted by extensive rural planting patterns (shelter belts and mature specimen trees), curtilage planting, roadside planting, woodlots, and plantation forest planting (McHughs Forest Park).
i. Site inspection identified that the clearest views of the site would be from the roads (and rail) located immediately alongside the application site (the Midland Rail Line, SH73, Homebush Road, Loes Road and Auchenflower Road), with views from the nearest private locations (residences) largely screened by curtilage and shelter belt planting.

The following ZTV analysis map shows the general visibility of the proposed development.



Zone of Theoretical Visibility (DSM)

Darfield Solar & Energy Storage

Scale 1:45,000 at A4 | July 2024 | Map No-01 | R0

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LANDSCAPE ARCHITECTS

View Locations and Viewing Audience

Several potential view locations were investigated as part of the assessment, with twenty-nine selected as being representative of the range and types of views available to the public.

The potential viewing audience was identified to likely comprise:

a. Group 1: Residents along West Coast Road/ SH73 and members of the public (motorists, cyclists, etc) using West Coast Road/ SH73, drivers and passengers using the Midland Rail Line (TranzAlpine passenger train), and workers at the Fonterra Darfield Dairy Processing Factory and Kimberley Substation;
b. Group 2: Residents and members of the public (motorists, pedestrians, cyclists, etc) along Homebush Road (west) and Clintons Road;
c. Group 3: Residents and members of the public along Homebush Road (east), members of the public walking and cycling within McHughs Forest Park and future residents within the large lot residential zone to the south of Homebush Road;
d. Group 4: Residents, farm workers and members of the public along Loes Road;
e. Group 5: Residents, and members of the public along Auchenflower Road and workers accessing the emergency Fonterra Darfield Dairy Processing Factory entrance;
f. Group 6: Residents and members of the public along Auchenflower Road, Tramway Road, Bleak House Road, Kimberley Road, and Homebush Road;
g. Group 7: Residents and members of the public along Landsborough Road, and Horndon Street, including members of the public walking and cycling within McHughs Forest Park (accessed off Horndon Street);

Several potential view locations were investigated but not included in this assessment for the following reasons:

a. While visible, the effect of the proposed agrivoltaic development on landscape character, natural character and/or visual amenity would be well below the minor threshold of the RMA) (i.e., have no or negligible effect); and
b. The potential view location was like another view location.

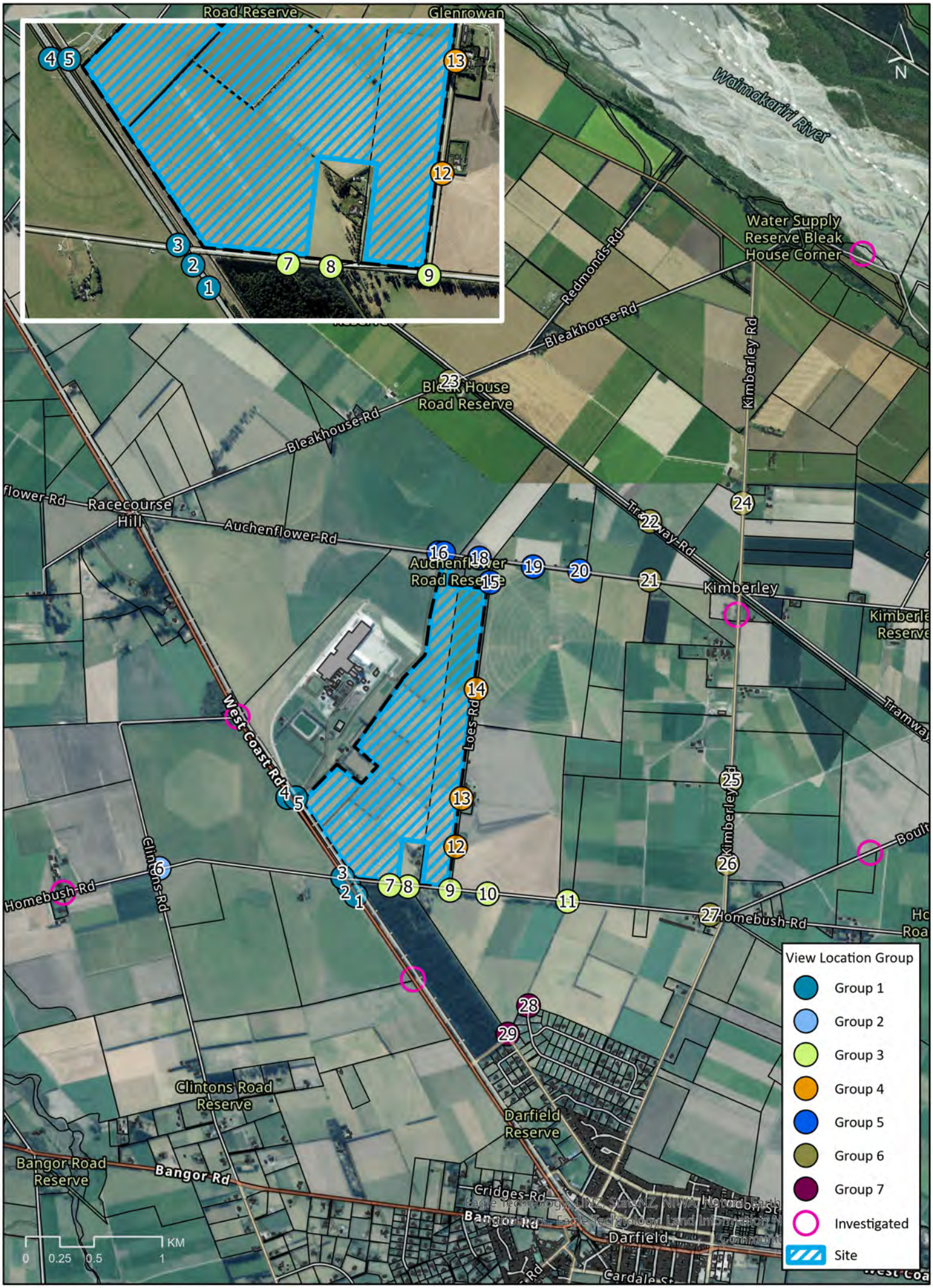
Potential view locations from the walkways and reserve alongside the Waimakariri River, to the northeast of the site were investigated, however, it was found that due to distance away (3.5km) and topographic (associated with the river trench and adjacent river terraces) and vegetative screening (vegetation within the river margins and rural planting patterns), the proposed development would be completely screened from view from the riverbed and adjacent reserve and walkways.

Similarly, while potentially visible from parts of the Hawkins River margins, site investigation found that distance away (approximately 2.8km) and extensive intervening shelter belt planting within the surrounding rural landscape would greatly restrict views of the proposal from the Hawkins River and margins.

Potential view locations were investigated from further west along Homebush Road, further east along Boultons Road, and further northwest and southeast along SH73. However, the proposed agrivoltaic development would be difficult to discern from these locations due to extensive shelter belt planting (Homebush Road west and Boultons Road), plantation forest (McHughs Forest), woodlot, rural shelter belt and curtilage planting, and the Fonterra dairy factory, earth bunds, and planting (SH73). The Kimberley Cemetery was investigated as a potential viewer location; however, it was found that views of the proposal from the cemetery would be completely screened by the planting surrounding the cemetery (shelter belt/ hedgerow and amenity planting).

During the site investigation, it was observed that the height of several of the Fonterra dairy factory buildings would allow for broad views across the site. However, due to restricted access, the effects from

within the Fonterra site have not been considered. All selected and investigated view locations are identified on the view location map below. Photographs from each VL identified and assessed and photomontages from VL 3, VL 5, VL 12 and VL 13 (prepared following NZILA best practice document 10.2) are included in Appendix six.



View Location Map

Darfield Solar & Energy Storage

Scale 1:35,000 at A4 | July 2024 | Map No-02 | R1

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Visual Absorption Capability

One of the main factors that will influence a development's visual effect is the visual absorption capability of the surrounding landscape. This is the ability of the landscape to integrate a development or feature into its existing visual character without significant change.

Each view location has been rated in terms of its visual absorption capability (VAC). Factors considered in determining the site's VAC rating include:

a. The degree to which the development is visible.
b. Visual and physical links with other similar elements or activities in the landscape (e.g. other industrial buildings).
c. The level of modification to the surrounding landscape (short and long term).
d. Appropriateness of scale.
e. Distance.
f. Backdrop; and (in some instances);
g. Atmospheric conditions.

Notable views of the site are generally restricted to within 2km of the site. Views of the proposed agrivoltaic development from locations more than this distance diminish to the point that they are generally less frequent due to intervening topography, vegetation, or buildings.

The site's ability to absorb the proposed development ranges from *Poor* to *Very Good.*

The *Very Good* ratings occur from locations that are generally some distance from the site (beyond 1km), or where the development will be screened by vegetation or buildings and backdropped by topography, vegetation, and/or screened by or seen within the context of the existing Fonterra dairy factory.

Neutral to *Good* ratings occur from locations where the development will be partially screened by vegetation, buildings, and backdropped by vegetation and topography and seen within the immediate context of the existing dairy factory.

The *Poor* ratings occur from locations where direct views are available, with little screening provided by intervening topography, vegetation, or existing buildings (within 200m of the site).

The definitions for the ratings and the visual absorption ratings for all view locations are attached in appendix three of this report.

Common Effects

The proposed agrivoltaic development will change the existing rural character experienced from within the surrounding landscape in the following ways:

a. Introduction of New Structures: The site will feature new elements (not currently experienced) to the landscape such as the PV tables, BESS units, substation and associated buildings (observable from viewer groups 3, 4 and 5, and most visible from VL 14). These structures will introduce an agrivoltaic/power generation character to the landscape, contrasting with the traditional open pasture and farming views.

b. Visibility of Infrastructure: From distant rural (viewer groups 2 and 6) and peri-urban locations (viewer group 7), the proposed agrivoltaic development will appear low-lying and blend with the rural backdrop. However, the foremost PV tables, access track, and fencing will be visible from nearby roads (SH73, Homebush Road, Loes Road, and Auchenflower Road) and the Midland Railway Line (viewer groups 1, 3, 4, and 5). The BESS, substation, and associated buildings will only be visible in the distance between mid-morning and mid-afternoon when the PV tables are at a low tilt. The BESS and substation will be more prominent from the central stretch of Loes Road (VL 14), partially visible above the PV tables throughout the day. This combination of visible and obscured elements will create a varied visual experience for viewers.

c. Light and Atmospheric Conditions: As the PV tables rotate to track the sun, their tilt and the viewer's angle will cause the panels to display various colours and tones, reflecting the sky, vegetation, and surrounding landscape.

d. Glint and Glare: Glint and glare may be experienced from some sections of the roads immediately surrounding the site.[11]

e. Dual-Purpose Land Use: The development will introduce dual-purpose land use by combining farming with sustainable power generation. This coexistence of solar panels with pasture and grazing sheep will reflect a modern, multifunctional approach to rural land use.

f. Obstruction of Views: The development will partially obstruct views of the open pasture and the base of nearby hills and mountains, particularly when the PV tables are at a high tilt angle. This will reduce the sense of open space and alter the visual flow of the landscape.

g. Contextual Integration: Despite the new structures, the development will be viewed against the backdrop of existing industrial buildings, such as the Fonterra Dairy Factory. This context will help integrate the new elements into the landscape, although it will still introduce a more industrial feel to the rural setting.

h. Retention of Key Views: The upper portions of the Malvern Hills, Big Ben and Torlesse (Front Ranges), Wilson Hill, Puketeraki Ranges, Mount Oxford and Mount Thomas skyline will remain visible, preserving important aspects of the visual amenity associated with the skyline ridge and big sky.

i. Temporary and Short-Term Effects: During construction, the key activities observable within the site will include the removal of the internal shelter belts, the construction of the perimeter fence and gravel track around the perimeter of the site, the erection of the PV trackers and mounting of panels and the construction of the BESS and substation components.

[11] Refer to the Glint and Glare Assessment Memorandum for more detail.

Construction of the proposal will occur transitionally across the site over 12-18 months. Effects will be limited to localised small pockets of construction within the site at any one time. Temporary construction effects will be more noticeable when they occur within proximity, directly alongside the surrounding roads, however (as discussed in the mitigation section of this report) it is recommended that the perimeter PV tables will be established before the remaining components of the proposed agrivoltaic development, enabling the partial screening of the construction occurring within the interior of the site. This will minimise the timeframe of temporary construction effects observed within the site from any one location. Potential temporary effects include higher levels of activity associated with the construction and increased traffic volumes than is normally experienced across the entirety of a rural site. Additionally, artificial lighting used for extended work hours could impact the existing rural nighttime light levels and natural ambience. There may also be increased traffic from construction vehicles throughout the construction period.

The temporary effects experienced during the construction of the proposed agrivoltaic development are less likely to affect transitory observers and more likely to affect permanent residents and workers. This is because transient viewers travelling through the landscape will experience the construction of the proposed development fleetingly, within the context of the wider surrounding landscape, while permanent residents are more likely to observe construction changes within the site as they occur.

Short-term effects will occur between when the proposed mitigation planting is first established and when it reaches a height of 2m and the gaps between plants close to create a visually impervious screen (after approximately 4- 6 years). During this time, views into the site will slowly decrease, as the mitigation planting grows and the gaps between the canopy foliage close, reducing short-term adverse effects.

j. Mitigation Planting: While the mitigation planting will alter the spatial characteristics of the site and restrict the ability to look across the wider open rural landscape, it will help maintain rural character by screening the proposed agrivoltaic development while retaining views of the mountains beyond, above the planting. Mitigation is not proposed along the less populated sections of the surrounding road, from where the site will be experienced as a hybrid agricultural-energy generation site.

Group One (View Locations One – Five): State Highway 73 and the Railway Line

View Locations (VL) 1 - 5 are representative of the first views for motorists travelling along SH73 and for drivers and passengers on the train (TranzAlpine passenger train). VL 5 is also representative of the views experienced by residents, workers and visitors to the dairy factory site.

Existing Visual Amenity

Views from these locations are characterised by flat, low-lying terrain, typical of the Canterbury Plains landscape, featuring open pasture, cropping, shelter belts, hedgerows, specimen tree clusters, woodlots, McHughs Forest Park, scattered rural dwellings, barns, post and wire fencing, transmission lines, the SH73 and Midland Rail infrastructure and the Darfield dairy factory buildings.

McHughs Forest Park separates and restricts views of the site from the south, while the buildings, earth bunding, and planting around the Fonterra site and adjacent rural areas limit views towards the site from the north. The Malvern Hills, Front Range (Big Ben and Torlesse Ranges), Wilson Hill, Puketeraki Range, and Mount Oxford form the distant backdrop of the plains landscape to the west, northwest, and north, experienced from SH73 and the Midland Railway Line.

Existing visual amenity values are derived from the more expansive views across the open pastoral landscape to the mountains beyond and the more intimate views of the foreground contained by the shelter belt and specimen trees in the immediate surrounding landscape.

The views from the State Highway and rail corridor are both transient and transitional due to the site's location relative to the dairy factory and Darfield.

Public Views

From VL 1 – VL 5 the foremost PV tables, perimeter access track and fencing components of the proposed agrivoltaic development will be visible. The PV tables and other components further back within the site will be screened from view by the PV tables in the foreground. The proposed substation and the BESS units will not be visible from this location.

As motorists and train drivers/passengers' approach from the southeast (Darfield), mature trees in McHughs Forest Park will mostly obscure views of the proposed development. The site becomes more visible between VL 3 and VL 5, where the agrivoltaic development will appear more prominent due to its proximity to the highway.

Similarly, from the northwestern approach (heading towards Darfield), rural and roadside planting (shelter belts, hedgerows and specimen trees), and the buildings, earth bunding and planting within the Fonterra site will greatly restrict views of the proposal, with VL4 and VL 5 representing the first available clear vistas.

From VL 4 and VL 5, the proposed PV development will be backdropped by the McHughs Forest Park, and other planting within the surrounding rural landscape (to the south, southeast and east of the site). From VL 1 – VL 3, the planting and buildings within the Fonterra Darfield site (to the northwest), planting within the surrounding rural landscape (to the east) and the distant skyline of Wilson Hill, Mount Oxford, Mount Thomas and Puketeraki Range (to the north) will backdrop the proposed development.

From mid-morning until mid-afternoon (when the tracking tables are either horizontal or at a low tilt angle), the proposed PV tables will generally be seen against the backdrop of the above-mentioned features, which will help them to visually integrate into the surrounding landscape better than if when viewed against a sky backdrop. During the early morning and late afternoon, when the PV tables are at a higher tilt angle or maximum tilt, they may appear to protrude above these features, drawing attention to the proposal and increasing its visual prominence within the landscape.

The construction of the agrivoltaic development will result in a change in the characteristics of the landscape experienced from along the transportation corridor, introducing a new element which is not currently experienced into the view. The existing views across the open pasture dissected by shelter planting within this part of the site will give way to a hybrid landscape, which blends elements of agricultural land use with renewable energy infrastructure. The proposed development's presence will be characterized by the coexistence of solar panels with retained pasture and grazing sheep. It can be described as a "rural-agricultural energy landscape" or an "agrivoltaic landscape", reflecting the dual purpose of the land for both farming and sustainable power generation. This new character type will embody a synergy between traditional rural practices and environmentally conscious technologies.

The proposed PV development will be experienced within the context of the industrial development associated with the adjacent Fonterra Dairy Factory, the transportation corridor associated with the road and rail network and a visually complex rural mosaic landscape. While the Kimberley Substation provides existing energy context for the proposal, it is screened from view, with only the associated pylons and transmission lines indicating its presence.

Because the SH73 motorists are at a similar elevation to the proposed development site, and due to its relative orientation and location, most of the development will be hidden from view, obscured by the PV tables closer to the observer. From the train, more of the proposed development will be potentially visible, due to the elevated viewing height (approximately 3m – 3.5m above ground level) and proximity to the site (approximately 8m to the site boundary).

For motorists, these views will be fleeting, observed at an oblique angle and from high-speed along a relatively short stretch of the road. For train drivers and passengers, the proposal is likely to be observed more directly, for slightly longer periods due to the slower speed, proximity, elevation, and viewing angle, allowing slightly broader views across the proposal to be observed.

There are no train stops or dedicated pull-over areas along SH73 alongside the site, meaning these viewer locations are assessed as transitory, with the viewing audience likely to be less sensitive to any change in the characteristics of the site. The movement of the panels will generally not be obvious unless the transient viewer happens to experience the panels returning to their resting position (0 degrees) after sunset or start position before sunrise.

Private Views

Views for workers and visitors to the Fonterra Darfield site, and residents accessing the dwellings within it (including 1/3792 West Coast Road) will be largely screened by the earth bunds, the shelter belt along the western boundary, and extensive curtilage planting.

From the dwelling located in the property that protrudes into the application site (1/3792 West Coast Road), the extensive shelter belt and curtilage planting which surrounds this property will be retained and will largely screen the proposal from view. While the property was not visited for verification purposes, the potential exists for views of the proposed development to be afforded above/through gaps in the vegetation surrounding this dwelling resulting in an adverse effect on visual amenity values.

Glare

The glint and glare analysis found that glare is expected to be experienced along SH73, at its intersection with Homebush Road. Glare may also be potentially experienced at the intersection of SH73 and the Fonterra Darfield site access road.

While glint and glare from the proposed PV panels was not found to be an issue from a driver safety perspective from along the remainder of SH73, or form the Midland Railway Line, there is potential for glare experienced at a wider (180-degree) FoV to draw attention to the site from this stretch ofSH73 and the Midland Railway. This is likely to have a small adverse effect on visual amenity when looking over the site.

The glint and glare analysis also identified the potential for glint and glare between 6.30 am and 8 am August and mid-September at 1/3792 West Coast Road, which may adversely affect the quality of the outlook from this dwelling/ property.

Mitigation

Mitigation planting and/or PV tracking management is required along the southwestern site boundaries (adjacent to SH73 & Midland Railway Line and Fonterra Darfield) to mitigate the effects of glint and glare on the intersections of Homebush Road and the Fonterra access road with SH73 (for traffic safety reasons). This mitigation planting will screen views of the proposed development from these viewer locations and will also screen potential glint and glare (experienced at a wider 180-degree FoV).

Additional mitigation planting may be required from the dwelling/ property at 1/3792 West Coast Road to increase the existing levels of screening around this property (refer to the mitigation section of this report) to screen potential views of the proposal and associated glint and glare.

Permanent Effect Ratings

From VL1 and VL2 the unmitigated short-term adverse effect of the proposed development on landscape character and visual amenity will be ***very low*** to ***low*** (*less than minor*). From VL 3, VL 4 and VL 5, the adverse effect of the proposal will be ***low*** (*less than minor*) for motorists travelling along SH73 and ***low*** (*minor*) for train drivers and passengers. These adverse effects are expected to be short-term, with adverse effects reducing to ***very low*** to ***low*** (*less than minor*) from these viewer locations once the proposed mitigation planting has become established (approximately 4-6 years).

For Fonterra workers and residents within the Fonterra Darfield site (adjacent to VL 5), unmitigated adverse effects of the proposed development on existing visual amenity values will likely range between ***very low*** and ***low*** (*less than minor*) due to the extensive intervening vegetation between the Fonterra site and the application site. These adverse effects will be further reduced with the establishment of the mitigation planting proposed along part of the western site boundary (required to mitigate glint and glare). Adverse effects from the dwelling/ property at 1/3792 West Coast Road will also decrease with the implementation of additional mitigation planting (if required).

Temporary effects

The temporary adverse effects experienced during construction from VL 1 – VL 5 will likely range between ***low*** to ***low-moderate*** for public viewers and ***low*** to ***moderate*** for the residents at 1/3792 West Coast Road.

Group Two (View Location Six): Homebush and Clintons Roads

VL 6 represents views of the proposed agrivoltaic development for motorists and residents on Homebush Road and Clintons Roads, to the west of the site and SH73.

Existing Visual Amenity

The existing view from VL 6 is characterised by a flat to gently rolling open rural pastoral landscape, with a gentle upward roll of the topography towards the northeast, obscuring the state highway and the base of the site from view.

The mature eucalyptus shelter belt along the SH73 boundary, along with the shelter belts, mature specimen trees, amenity and curtilage planting, and earth bunding within the Fonterra Darfield dairy factory site, and the mature vegetation of McHughs Forest Park, create a backdrop that limits views of the site and the wider rural landscape. Additionally, the dairy factory buildings, transmission lines from the Kimberley Substation, large pivot irrigators, barns, and post-and-wire fencing contribute to the rural landscape's character as seen from VL 6. Existing visual amenity values are derived from the wide-open plain landscape, dissected by rural planting patterns.

Public Views

From VL 6 the gentle roll of the landform between this viewer location and the site will screen the base of the proposed agrivoltaics development from view, with only the upper portion of the proposed PV tables likely be visible when these are at a higher tilt angle or maximum tilt. This will be visible as motorists head east along Homebush Road from the intersection with Clintons Road and SH73. Extensive existing shelter belt planting along Clintons Road will completely screen the proposal from view from this road, except for a limited stretch near the intersection with Homebush Road, where the proposed development may be visible through a gap in the shelter belt vegetation.

The curtilage and shelter belt planting surrounding the two residential properties immediately adjacent to/ within the site (1/3792 West Coast Road and 1352 Homebush Road) and within the surrounding rural landscape will partially backdrop the proposal from this viewer location, aiding in integrating it with its surrounds. The removal of the internal shelter belt vegetation within the site will mean that the remainder of the proposed PV development will be seen against the skyline when at higher angles of tilt, drawing attention to its rectilinear form. At lower tilt angles, the PV tables will be less prominent, and due to distance, the darker tone of the PV tables will assist them to blend in with the dark, linear shelter belts within the site and surrounding rural landscape, which span a similar length and are of a similar height to the proposed PV panels. Where seen within the context of the pivot irrigators in the foreground, the panels will appear subservient to the more dominant structure due to their low profile within the landscape. From VL 6, the proposal will be difficult to discern.

From the road, the effects will be transitory, with viewers experiencing the agrivoltaic development within the context of the wider rural landscape. While views for motorists heading east will be directly towards the site (due to the angle of the view), views will be relatively short.

As motorists near the intersection with SH73, and slow down, the agrivoltaic development will become more prominent, forming the backdrop to the view at the intersection. Cyclists and pedestrians will experience the proposed development similarly, but for a longer duration.

Private Views

Potential views from private viewer locations along Homebush Road (west of SH73) and Clintons Road are limited by extensive mature intervening shelter belt and curtilage planting. Views of the proposal PV development may be possible from 1433 Homebush Road (to the east of VL 6), however, the proposal will likely be largely screened from view by the shelter and curtilage planting surrounding this dwelling.

Glare

The glint and glare analysis found that glare is expected to be experienced from a section of Homebush Road and Clintons Road adjacent to the intersection of these roads with SH73. This glint and glare has the potential to cause road safety issues.

Glare will also be potentially experienced from the dwelling/property at 1433 Homebush Road between 7:00 am and 8:00 am from mid-August to early September, potentially affecting the quality of the views to the northeast. However, the existing curtilage planting around the house will likely screen a large proportion or the site from view, preventing glare from affecting existing visual amenity values.

Mitigation

The mitigation planting along the southwestern site boundaries (adjacent to SH73 & Midland Railway Line and Fonterra Darfield), required to address the effects of glint and glare on the adjacent road network will mitigate any effects of the proposal from this location. This mitigation planting will also further screen the proposed development (and associated glint and glare) from view from the dwelling/property at 1433 Homebush Road.

Permanent Effect Ratings

Unmitigated adverse effects of the proposal on existing rural character and visual amenity values for public viewers from VL 6 will be ***very low***. Once established (4-6 years), the proposed mitigation planting (required to mitigate glare) will screen the proposed development from view from this location, resulting in ***no effect.***

Adverse effects on existing rural character and visual amenity values from 1433 Homebush Road will likely range between ***very low*** and ***low*** (*less than minor*). With the establishment of the mitigation planting, adverse effects will likely be reduced to ***very low***.

Temporary effects

The temporary adverse effects during construction will likely be ***low*** for public viewers and range between ***low*** to ***low-moderate*** for the residents of 1433 Homebush Road (to the east of VL 6)).

Group Three (View Locations Seven – Eleven): Homebush Road

View Locations seven - eleven (VL 7 – VL 11) represent the views that can be experienced by residents and road users along Homebush Road, including motorists, walkers or cyclists and people visiting the McHughs Forest Park recreation reserve. VL 7 and VL 8 represent the view from the reserve carpark and forest walkways. VL 9 – VL 11 represent the sequence of views towards the site from the road and are also representative of the type of view that might be experienced from the adjacent undeveloped land in the large lot residential zone to the southeast.

The dwelling located opposite VL 8, at 1352 Homebush Road belongs to the owner of the application site and therefore the effects of the proposal on this dwelling have not been assessed.

Existing Visual Amenity

From these locations, the application site is to the north to northwest, with views characterised by the flat, low-lying topography of the alluvial plains in the foreground, backdropped by the Malvern Hills, Big Ben Range, and the Torlesse Range to the northwest, and Wilson Hill, Mount Oxford, Mount Thomas and the Puketeraki Range to the north. From each of these viewer locations, the foothills and skyline associated with these topographic features are partially obscured by rural planting patterns within and surrounding the site, and the Fonterra dairy factory.

The landscape features that characterise the site and surrounding rural landscape include open pasture and cropping, dissected by shelter belts and curtilage planting (within the site and surrounding its associated dwelling), mature eucalyptus roadside planting along Homebush Road, the conifer plantation forest (McHughs Forest Park) immediately opposite the site, pylons, transmission lines and post and wire fencing. The drying towers and cool store, stacks and silos within the dairy factory can be seen above the skyline ridge of the ranges beyond, forming a major focal attraction within the views from Homebush Road.

A gravel carpark and forest park signage indicate the entrance to McHughs Forest Park public reserve, opposite the site, while more intensive roading and rail infrastructure (including signs and crossing markers) is seen west of VL 7, towards the rail crossing and intersection of Homebush Road with SH73. The 16m high 33kV pole and associated transmission lines that run along the northern side of Homebush Road, provide existing energy infrastructure context along this extent of Homebush Road.

The relationship between the tall mountain backdrop to the north and northwest and the flat low-lying rural landscape in the foreground enhances the existing landscape character values and contributes significantly to the existing visual amenity from these locations. The 33kV line and the size and visual massing associated with the dairy factory, juxtaposed against the open plain landscape, affect the surrounding rural character and amenity value.

Public Views

The absence of planting along the southern and eastern boundaries of the site will allow clear views of the proposed solar PV tables, gravel perimeter track and perimeter fence from these viewer locations. However, due to the relative elevation of the viewer (being at a similar elevation to the site), most of the

development will be hidden behind the PV tables in the foreground, with opportunities to view the PV tables further into the site limited to along the rows between the PV tables.

Due to the distance away (1.4km), most of the proposed BESS and substation development will be screened by the PV tables in the foreground. However, the upper parts of the BESS container units and some of the taller substation components may be visible above the PV tables, particularly when they are at the lower tilt angle between mid-morning to mid-afternoon.

As motorists, pedestrians and cyclists approach the site from east (VL 11) to west (VL 7), the relative visual prominence of the development will increase with proximity. From between VL 11 and VL 10, the PV tables will sit relatively low in the landscape, backdropped by planting, and partially screened by the curtilage planting around the residences at 32 and 68 Loes Road. This will help the development to integrate to a greater extent with its surroundings. The proposal will be visually subservient to the more prominent and dramatic backdrop of the mountains beyond, which will remain the focal point from these viewer locations. However, as viewers near the site (VL 7 - VL 9), views across the surrounding rural landscape will become less available and the closest PV tables will appear more prominent, obscuring the view beyond. This will reduce the rural outlook and adversely affect associated existing visual amenity values. While the site directly opposite VL 8 will remain in pasture, with views of the PV tables beyond blocked by the existing planting around the house, the agrivoltaic development will still be visible to the east and west.

Due to the perpendicular alignment of the PV table rows relative to the southern site boundary, deeper views into the site between each row will be visible from VL 7.

The inverters at the ends of some of the PV table rows may be glimpsed from these viewer locations. Due to proximity, the PV table will be able to be observed in relative detail, changing the characteristics of the site from an open pastoral landscape to one that includes a significant solar generation component. While the existing pasture and sheep grazing within the site will continue to be visible and will help to visually tie the development with its more rural surroundings, the PV tables will be visually dominant within the site. Pedestrians and cyclists entering and exiting McHughs Forest Park and/or utilising the reserve car park on Homebush Road will experience the change in landscape character more intimately than other road users due to the nature of their interaction with the site. For viewers exiting the reserve along the walkway, the proposed development will be revealed suddenly and will be the dominant visual element within the view.

The proposed PV tables will be viewed within the context of the Fonterra dairy factory against a backdrop of rural shelter and curtilage planting, and below the skyline ridge, formed by the mountains beyond the site. This will aid their integration into the wider rural landscape and help reduce the effect on landscape character and visual amenity from these locations.

The relative visual prominence and the extent to which the PV tables screen views of the landscape backdrop beyond the site and obscure the foothills of the distant Malvern Hills, Torlesse Range, Wilson Hill, Mount Oxford, Mount Thomas and Puketeraki Range to the north and northwest will change throughout the day as the tilt angle of the panel's changes (as they track the sun). When the PV tables are at a higher angle of tilt, the solar PV development will be more prominent due to an increase in apparent height (2.5m – 3.1m) and visual overlap. At maximum tilt, views of the pastoral landscape beneath the panels will be reduced (with only a 0.3m to 0.9m gap remaining). During the middle of the day, when the PV tables will be closer to horizontal, less panel surface and more pasture will be visible (1.4m between the panels and the ground), and views of the mountains beyond will be more attainable.

Except from locations immediately adjacent to the site, views of the mountain peaks and skyline ridge, will remain relatively unchanged from these locations. However, the proposal will limit views across the

pastoral landscape from these locations and existing visual amenity values associated with the views of the combination of the flat plains, mountain and big sky backdrop will be reduced.

The effect on landscape character experienced by motorists, pedestrians and cyclists from VL 7 – VL 11 will be transitory, and experienced within the context of the other urban, industrial, and agricultural features encountered in the wider landscape. Views for motorists will be experienced at higher speeds and therefore for shorter duration.

Future Development within the Large Lot Residential Zone

While there are currently no houses near VL 9 – VL 11, development is expected to occur within the Large Lot Residential (LLR) Zone to the southeast of the site (along the southern side of Homebush Road), under the provisions of the operative and partially operative Selwyn District Plans.

This land is in the same ownership as the application site and development is not expected within the foreseeable future. It is expected that by the time development occurs within this area, the mitigation within the site will be fully established and that the subdivision design within the zone will respond appropriately.

The effect of the proposed development on future development in this area is likely to be similar to that experience from along Homebush Road, but at a slightly greater distance and will slightly elevate effect levels due to the more permanent nature of the viewing audience and the sensitivity of the rural landscape to the proposed changes.

Glare

From Homebush Road, glint and glare may be experienced along Homebush Road in the morning and late afternoon between May and September, causing road safety issues (refer to the Glint and Glare Assessment Memorandum for more detail). During these times, attention may be drawn to the site with glare affecting the views across the landscape to the mountain backdrop. These effects will be relatively fleeting as observers move through the landscape.

Mitigation

Because of the potential road safety issues associated with glare effects along Homebush Road, and the potential for visual distraction upon exiting McHughs Forest, glare mitigation planting and/or tracking management is required along the southern site boundary, the SH73 boundary and part of the eastern site boundary. Screening and/or tracking management along the southern site boundary is also required to mitigate the effects of glint and glare for pedestrians and cyclists exiting the McHughs Forest Park walkway (VL 7).

While not required to mitigate the effects on landscape character, the glare mitigation planting will screen the proposed agrivoltaic development from Homebush Road, mitigating any low-level effects on landscape character.

While this proposed planting will create a more contained and compartmentalised landscape along this section of Homebush Road, it will reduce the adverse effects of the proposed agrivoltaic development on the existing rural outlook, aiding in preserving existing visual amenity values associated with the mountain range and big sky landscape. Once the mitigation planting has become established (4-6 years), only the top of the PV panels will likely be visible when the tables are at maximum tilt and the mitigation planting is at minimum height (the planting will be maintained between 2-3m high).

Permanent Effect Ratings

In the short-term, views into the site will slowly decrease as the mitigation planting establishes, during this time filtered views through the foliage will be available until full closure is achieved at 4-6 years.

Unmitigated, the short-term adverse effects on existing rural character and visual amenity values will be ***very low*** for public viewers from VL 10 and VL 11 (*less than minor*). From VL 7, VL 8, and VL 9, the short-term adverse effect of the proposal will be ***low*** (*minor*) for public viewers travelling along Homebush Road. The short-term adverse effect of the proposal will be ***low-moderate*** for pedestrians and cyclists exiting the McHughs Forest Park walkway at VL 7. At limited times (when glint and glare is experienced) effect levels may increase slightly to ***moderate***. The short-term adverse effects (while mitigation planting establishes) experienced by public viewers from VL 7 – VL 9 will reduce to between ***very low*** and ***low*** *(less than minor)* once the proposed mitigation planting has become established (4-6 years).

The proposed planting required to mitigate glint and glare effects along Homebush Road will screen the proposed development from view from within the LLR Zone while retaining vistas of the mountains beyond. The adverse effect on future development within the LLR is therefore likely to range between ***very low*** and ***low*** (less than minor) with the establishment of the mitigation planting.

Temporary effects

The temporary adverse effects during construction will likely range between ***low*** to ***low-moderate*** for public viewers. As identified above, there will be no temporary effects for the future LLR residents (as development within the undeveloped part of the LLR zone (VL 9 – VL 11, to the southeast of the site) will not precede that construction of the proposed agrivoltaics development).

Group Four (View Locations Twelve – Fourteen): Loes Road

View Locations twelve - fourteen (VL 12 – VL 14) are representative of views experienced by residents, visitors, and farm workers (motorists, pedestrians, and cyclists etc), along Loes Road.

Existing Visual Amenity

From Loes Road, views across the site are more open than from along Homebush Road and Auchenflower Road, due to the limited existing shelter and curtilage planting within the eastern and northern part of the site, meaning that more of the site can be seen. This is especially noticeable from the northern half of Loes Road (north of VL 13), where the open paddocks allow more expansive views over the landscape. A cluster of mature eucalyptus trees near VL 13 partially obstructs views across the central part of the site from this location.

The view is predominantly rural from these locations, with limited views of the northern suburbs of Darfield (to the south). The Fonterra dairy factory provides an industrial context to the immediate landscape beyond the site, and due to its large size and protrusion above the skyline beyond, is seen as a prominent focal feature within these views.

Similar to the views from Homebush Road to the south, the application site is nestled against the shelter belt and curtilage planting along the western boundary of the site and the landscape beyond. McHughs Forest Park backdrops the site to the southwest.

The wider surrounding rural landscape, seen in the middle distance from these viewer locations, is characterised by its flat topography which rises gently to the west. The juxtaposition of the flat plains, against the immense distant hills and mountain ranges, which form a near-continuous, spectacular mountain backdrop to the site, provide the focus of these vistas, drawing attention to the skyline and 'Big Sky', and enhancing visual amenity values from these locations. The mature trees within the McHughs

Forest Park, backdropping the southern part of the site also contribute to visual amenity values, particularly from the southern extent of Loes Road (VL 12 and VL 13).

Effects on Public Views

The proposed development will introduce various components including PV tables, a perimeter gravel access track, fencing, a BESS, and a substation. Due to the similar elevation of the viewer and the site, only the foremost PV tables, the access track, and fencing will be visible from Loes Road. This view will showcase solar panels coexisting with retained pasture and grazing sheep, highlighting a dual-purpose land use for farming and sustainable power generation.

From the southern and northern ends of Loes Road (VL 12, VL 13, and VL 15), the BESS, substation, and most PV tables will be largely obscured by the foremost rows of PV tables due to distance. However, like the views from Homebush Road, the upper parts of the BESS and substation may be visible above the PV tables when these are at a low tilt angle from mid-morning to mid-afternoon. From central Loes Road (VL 14), the BESS units, substation, and switchyard will be more prominent due to their closer proximity (approximately 250m from VL 14). These components will likely be visible above the PV tables throughout the day, especially when the PV tables are at a low-angle tilt during the middle of the day.

The BESS units, resembling large shipping containers with exterior venting fans and ventilation, will be arranged in parallel rows. This area will appear more built-up and industrial compared to the photovoltaic panels. The BESS and substation will be more noticeable during the middle of the day, impacting the landscape character and visual amenity more significantly from VL 14 than from other locations along Loes Road. However, this development will be backdropped by the large, industrial buildings of the Fonterra Dairy Factory and Kimberley substation infrastructure, which already reduce visual amenity values from these locations.

The agrivoltaic development will be visible along the full length of Loes Road, restricting views of open pasture and cropping, and reducing the open spatial characteristics of the site. Some views of the pasture beneath the PV tables will remain, with greater visibility when the PV tables are at a low tilt angle during midday. When the PV tables are at maximum tilt (in the morning and late afternoon), views of the pasture and sheep will be limited to the perimeter of the development, making the solar PV development more prominent. Although the proposal will reduce the open spatial characteristics of the site, it will be seen within the context of the wider rural landscape to the east, southeast, and northeast. The rural characteristics of the view will not be lost, but the ratio of open space will be reduced.

The proposal will intrude into existing views of the hills and mountains, obstructing views of their bases when the PV tables are at maximum tilt. The pale backdrop of the hills compared to the darker rural planting patterns will increase the visual prominence of the PV tables. When the PV tables are horizontal or at a low tilt, views of the mountains will remain relatively unchanged, with the PV structures backdropped by surrounding rural landscape planting.

The juxtaposition of the plains, mountains, and big sky will be disrupted by the proposed development, obstructing views of the open pasture. However, the upper portions and main spine of the Big Ben, Torlesse, Puketeraki Ranges, and Mount Oxford skyline will remain visible, retaining the visual amenity of the skyline ridge and big sky.

Views for motorists along Loes Road will be fleeting and observed at an oblique angle within the wider rural landscape, backdropped by the Fonterra Darfield Dairy Factory buildings. Loes Road is not a through road and is mainly used by residents, visitors, and farm workers, limiting the viewing audience. At the

intersection of Loes Road and Homebush Road, the agrivoltaic development will become slightly more prominent as motorists slow down, but any adverse effects will still be brief.

Views of the proposal will be more noticeable for pedestrians and cyclists, who will observe the development at a slower pace and potentially closer proximity. From adjacent to the site, the proposal will obscure more of the mountain backdrop. However, these views are likely limited to residents and farm workers, making them transitory and experienced within the context of the wider rural landscape. Viewer sensitivity to such changes is lower than for a permanent residence with a similar view.

Effects on 32 and 68 Loes Road

VL 12 and VL 13 are also representative of views from Loes Road, adjacent to the dwellings located at numbers 32 and 68. Observation from the road and a review of aerial photography identified that each dwelling is surrounded by mature curtilage planting, including dense shelter belts, hedgerows, specimen trees, and shrubs, creating a sense of enclosure and restricting views from within the properties across the wider rural landscape. The immediate visual amenity experienced from around each dwelling is likely to be derived from enclosed garden views. A review of the aerial photography shows that the dwellings and outdoor living areas appear to be oriented north (away from the site) at 32 Loes Road, and west (towards the site) at 68 Loes Road. While it is possible that glimpsed views of the proposal from the main outdoor living area may be attainable from 68 Loes Road, these would likely be very limited by the extensive existing curtilage planting between the dwelling and the site. The increased buffer distance and screening between the nearest PV tables and the dwelling, due to the retention of the eucalyptus trees along the eastern boundary of the site, will help reduce the visual prominence of the development from 68 Loes Road.

While it is expected that the proposed agrivoltaic development will be difficult to see from these dwellings and their respective enclosed gardens, it will be visible from along Loes Road, (adjacent to the properties), meaning that it will be viewed directly as these owners and occupiers leave their properties, as well as from other parts of the surrounding farm. While this experience will be temporary and transitory, it will likely occur far more frequently than for the occasional visitor or road user.

From the driveways, implement shed entranceway and open paddocks of these properties, where views of the site are afforded, the change in landscape character experienced will be similar to that experienced from the road (as described above). Like from the road, the proposed solar PV tables will obscure views of the open pastoral land within the application site and the foothills of the ranges to the west. This will adversely affect the rural characteristics and associated visual amenity values of the view, shifting the balance from a predominance of natural elements to a predominance of energy infrastructure development within the view.

From the yards to the north of No. 68 (shearing shed/implement shed and yards) and the balance of the farm (belonging to 32 Loes Road), farm workers are more likely to observe the proposed development for longer periods due to the lack of screening.

Viewer sensitivity is likely to be greater for the permanent residents/farm workers than for visitors to the area, travelling along Loes Road. This is because permanent residents are more likely to identify with and value the various factors that contribute to landscape character in a different way than visitors to the area because of their familiarity with it. Because they derive landscape and visual amenity from the surrounding rural landscape, changes to that landscape are likely to be more noticeable.

Glare

While glint and glare are not expected to cause traffic safety issues along Loes Road, there is potential for it to affect viewers looking towards the site. These effects will be relatively fleeting as pedestrians and cyclists move through the landscape.

Without screening (i.e. if the existing curtilage planting around the properties was to be removed), glare may also be experienced at the dwellings and living areas around 32 and 68 Loes Road for a few minutes per day at certain times of the year[12].

The extensive intervening curtilage planting around these dwellings and outdoor living areas will help screen the adverse effects of glare. Glare mitigation planting is required immediately opposite the dwellings and farm facilities at 32 and 68 Loes Road to protect residents and farm workers using the driveways, paddocks, yards, and sheds. This will also reduce glare effects on these dwellings and their associated outdoor living areas.

Mitigation

Screening along part of the eastern site boundary is required to mitigate the effects of glint and glare on road users and the effects of the proposal on landscape character and amenity for residents at 32 and 68 Loes Road.

The more extensive screening required for road safety glare mitigation will also mitigate the effects of the proposal on landscape character and visual amenity. While the existing more open characteristics of the site will be lost, the use of a vegetative screening along the southern section of the eastern site boundary (adjacent to 32 and 68 Loes Road) will ensure that a more natural rural outlook is maintained from the adjacent dwellings, and associated driveways, paddocks, yards and sheds. Once the mitigation planting has reached a height of 2m and canopy closure occurs, only the top of the PV panels will be visible when the tables are at maximum tilt. Views over the top of the screen planting, of the hills and mountain ranges to the north and west will still be attainable.

The mitigation planting will be established immediately following the construction of the perimeter fence and is likely to take between 3-4 years to substantially screen the site (i.e. there will still be some gaps between and through the mitigation planting). During this time filtered views through the foliage will be available until full closure is achieved at 4-6 years. This is a short-term effect (as opposed to a temporary effect).

Along Loes Road, the screen planting will be maintained closer to 2m high to ensure views of the surrounding mountains are maintained, while mitigating the effects of glint and glare (for traffic safety purposes and for the residents at 32 and 68 Loes Road).

Permanent Effect Ratings

Short-term adverse effects will occur as the mitigation planting is established. During this time, views into the site will slowly decrease, as the mitigation planting grows and the gaps between the canopy foliage close, reducing overall effect ratings.

Unmitigated, the proposed development will have a ***low*** (*minor*) adverse effect on existing landscape character and amenity values (including visual) for public viewers from along Loes Road. With mitigation planting in place, effect levels will reduce to between ***very low*** and ***low*** at the southern end of the road (VL

[12] Refer *Glint and Gare Analysis Memorandum* (25 June) MGLA.

12 and VL 13). While the effect levels will remain unchanged at its northern end, they are likely to be experienced by fewer people.

Due to the existing screening around each dwelling, the effects of the proposed development from 32 and 68 Loes Road (VL 12 and VL 13) are likely to range between ***very low*** and ***low***[13] from within the outdoor living areas around each dwelling. Short-term effect levels will be initially greater (ranging between ***low*** *and* ***low-moderate*** *(minor))* from the entrances into the properties, adjacent roadway and paddocks, and from the yards to the north of No. 68 and the balance of the farms (ranging between ***low*** and ***moderate*** *(minor to more than minor*)), reducing to between ***very low*** and ***low*** *(less than minor)* once the proposed mitigation planting has become established.

Temporary Effects

The temporary adverse effects during construction will likely range between ***low*** to ***low-moderate*** (VL 12 – VL 14) for public viewers and ***low*** to ***moderate*** for the residents at 32 and 68 Loes Road (VL 12 and VL 13).

Group Five (View Locations Fifteen – Twenty): Auchenflower and Loes Roads

View Locations 15 - 20 represent views from rural locations for road users along Loes Road (VL 15) and Auchenflower Road (VL 16 – VL 20). VL 16 is also representative of Fonterra workers entering the Emergency Only entrance at Auchenflower Road, to the north of the application site.

Existing Visual Amenity

From these locations, the view is predominantly rural, with the industrial context of the Fonterra Darfield factory prominent within views to the southwest. Roadside shelter belt and hedge row vegetation highly compartmentalise the views along Auchenflower Road (particularly to the west of the site), limiting views across the wider surrounding plains landscape. This planting frames views of the Front Ranges for road users heading west along Auchenflower Road, drawing attention to the skyline and providing the focus of these vistas (drawing attention away from views of the site).

From the western approach towards the site along Auchenflower Road (between VL 20 and VL 18 and from VL 15), views are characterised by the open rural mixed pastoral and cropland landscape, contained by distant rural shelter and curtilage planting to the south and southwest and the mature trees within McHughs Forest Park, to the south of the site. From the eastern approach (VL 16 and VL 17), views of the site are more highly compartmentalised by shelter belt planting and the pine woodlot to the north of the site.

From the northern end of Loes Road (VL 15) views towards the site are characterised by the open rural landscape, backdropped by rural shelter and curtilage planting, McHughs Forest Park and the industrial Fonterra Dairy Factory (prominent within the view). From this location the site is also partially backdropped by the Malvern Hills and Big Ben Range, enhancing existing visual amenity values of this vista.

Existing visual amenity values from these viewer locations are derived from views across the open rural landscape to the McHughs Forest Park (to the south) and framed views of the Front Ranges, to the west (away from the site).

Public Views

Like from Homebush and Loes Roads, due to the relative viewer elevation, only the foremost PV tables, perimeter access track and perimeter fencing are likely to be visible from Auchenflower Road, with distant

[13] Note: If existing intervening vegetation between the dwellings at 32 and 68 Loes Road and the site was cleared, adverse effects on landscape and visual amenity would increase to ***moderate-high.***

views of the BESS and substation components of the development only likely to be visible from VL 15 and VL 17 - VL 20, above the PV tables when these are at a low tilt angle/ horizontal.

As motorists (and cyclists/pedestrians etc) approach the site from the west (VL 16 and VL 17), the existing shelter belt alongside Auchenflower Road will screen views of the proposed PV tables until the Fonterra emergency entrance (VL 16), from which the proposal will become briefly visible before being obscured again by the pine woodlot (beyond VL 17). Views of the proposed PV tables from within proximity (along the northern site boundary) will therefore be limited to brief, fleeting glimpses (between VL 16 and VL 18).

As motorists approach from the east along Auchenflower Road (VL 19 - VL 21), clear views will be attainable due to the lack of intervening vegetation along this section of the road. However, the distance away and the low-lying profile of the proposal, seen against the dark band of shelter belt and McHughs Forest Park vegetation, will make it difficult to discern from these locations. Pivot irrigators and the Fonterra Darfield buildings will provide context for the proposal. The proposed agrivoltaic development, observed at an oblique angle, will be subservient to the broader landscape, and the Front Mountain Range (seen directly ahead) will remain the focus of the view.

As motorists near the site at the northern end of Loes Road (VL 15), a greater extent of the development will be visible as both the northern and eastern site boundaries will be visible, within proximity. The proposal will become more prominent within the view, reducing the open spatial characteristics of the site and views across the site will shift from predominantly rural to predominantly hybrid rural-agricultural energy landscape. From this location, the PV tables will protrude above parts of the rural planting along the skyline, drawing attention to the geometric nature of the proposal. However, like from VL 14, the immediate backdrop of the Fonterra Darfield dairy factory from this viewer location will provide context for the proposal, reducing adverse effects on visual amenity values.

Loes Road is mainly used by residents, visitors, and farm workers, limiting the viewing audience and views will be brief due to the speed of travel. As motorists slow to turn into Loes Road from Auchenflower Road, the proposal will be observed more directly for slightly longer periods, however, it will be set back approximately 200m from this intersection, and the view will be similar to that experienced from VL 18. From VL 18, the distance away from the proposed agrivoltaic development will allow the proposal to sit lower within the landscape than from VL 15, reducing its visual prominence within the landscape.

It should be noted that while clearer views across the site will be attained from the eastern half of Auchenflower Road (VL 15, and VL 18 – VL 20) traffic along Auchenflower Road is expected to be infrequent, with this part of the road being un-gravelled and un-formed, serving only one residence. From the well-formed western half of Auchenflower Road, traffic is likely to be limited to emergency Fonterra workers accessing the emergency entrance, where views of the site are highly contained by existing intervening vegetation.

Due to the orientation of Auchenflower Road, the associated direction of travel, and the limited use of Auchenflower Road as a through road, views representative of motorists/cyclists/walkers, are only likely to draw attention for a brief period, for a limited viewing audience. The effects will be transitory, with viewers experiencing views of the proposed development within the context of the wider rural landscape.

Private Views

From the nearest residence along Auchenflower Road (adjacent to VL 20), views of the proposed development will be highly screened by extensive shelter belts and curtilage planting. Adverse effects resulting from the proposed development are not expected at this residence.

Glare

Glint and glare will only be experienced from a relatively short section of Auchenflower Road, potentially causing a traffic safety issue and drawing attention to the site.

Mitigation

Screen planting and/or PV table tracking management is required along a short section of the northern site boundary (adjacent to VL 16 and VL 17) to mitigate the effect of glint and glare on Auchenflower Road for traffic safety reasons (refer to the mitigation strategy section of this report).

This planting will also mitigate the effects of the proposal on landscape character and visual amenity, screening views of the proposed agrivoltaic development from VL 16 and VL 17. Although the planting will create a more highly contained character (views across the site contained by mitigation planting), the rural character will be retained.

Mitigation planting is not proposed along the less populated sections of the surrounding road (VL 15 and VL 18 – 20), from where the site will be experienced as a hybrid agricultural-energy generation site.

Permanent Effect Ratings

The adverse effects on existing rural character and visual amenity values will be ***very low*** from VL 16, and VL 18 – VL 21, ***low*** (*less than minor*) from VL 17 ***low*** (minor) from VL 15.

Adverse effects will be short-term from VL 16 and VL 17 until the mitigation planting becomes established (4-6 years), at which point adverse effects associated with the proposed development will further reduce to range between ***no effect*** and ***very low*** adverse effect (less than minor).

Temporary Effects

The temporary adverse effects during construction will likely range between ***low*** and ***low-moderate*** for public viewers.

Group Six (View Locations Twenty-One – Twenty-Seven): Auchenflower Road, Tramway Road, Kimberley Road and Homebush Road

View Locations (VL) 21 - 27 represent more distant rural locations, for residents and road users along Auchenflower, Tramway, Bleak House, Kimberley, and Homebush Roads, to the north, northeast and east of the application site, respectively.

Existing Visual Amenity

From these locations, views will be predominantly rural, like those experienced from along Loes Road, Homebush Road and Auchenflower Road, but from a greater distance, with greater screening provided by intervening rural planting patterns and dwellings/ ancillary buildings (particularly from Kimberley). Existing visual amenity values are derived from framed views (between breaks in the rural vegetation) across the open pastoral plains landscape towards the dramatic, rugged peaks of the mountain ranges in the backdrop, which provide the focus of these vistas, drawing attention to the skyline.

Public Views

From these distant locations (approximately 1.2km – 2km) the individual components of the proposed development will not be easily discernible, and the proposal will appear low-lying, dark-toned and rectilinear within the landscape, not dissimilar in height or length to the shelter belts and hedgerows or long pivot-irrigator structures seen in the surrounding rural landscape. Views of the proposal will be restricted to relatively narrow viewshafts (due to extensive intervening vegetation and buildings) and will be seen within the context of broad views across the wider surrounding rural landscape. Its low profile and small scale (in comparison to the wider surrounding rural landscape and the backdrop of the Front Range

massif) means that it will represent a relatively small portion of the wider, visually complex landscape from these locations.

Private Views

Due to the distance away and extensive curtilage planting surrounding dwellings within this part of the rural landscape, adverse effects of the proposed agrivoltaic development on private viewers from view location group 6 (VL21 – VL27) have not been considered.

Glare

The glint and glare analysis found that glare will potentially be experienced along the eastern end of Homebush Road (VL 27), the western end of Boultons Road and from Kimberley Road (at its intersection with Homebush and Boultons Roads), potentially causing traffic safety issues.

Glint and glare are not predicted to affect the remainder of these outer rural road locations (VL 21 – VL 26).

Mitigation

The mitigation planting required to mitigate glare effects on road users along Homebush Road (along the southern and part of the eastern site boundary) will also mitigate glare effects on eastern Homebush Road (VL 27), Kimberley Road (at its intersection with Homebush and Boultons Roads), and Boultons Road.

Although mitigation planting is not required to mitigate the adverse effects on existing landscape character and visual amenity values from these viewer locations, the mitigation planting required to mitigate adverse glare effects on traffic safety will partially screen the proposal from view from VL 21 – VL 27.

Permanent Effect Ratings

Unmitigated, short-term adverse effects on existing rural character and visual amenity values from VL21 – VL27 will be ***very low***. With the establishment of the mitigation planting adverse effects from VL 21- VL 27 will reduce to between ***no effect*** and ***very low*** adverse effect.

Temporary Effects

The temporary adverse effects during construction will likely be ***very low.***

Group Seven (View Location Twenty-Eight and Twenty-Nine): Landsborough Drive and Horndon Street

View Locations Twenty-Eight to Twenty-Nine (VL 28 to VL 29) are representative of views for motorists and residents of Landsborough Drive and Horndon Street, within the large lot residential (LLR) zone to the southeast of the application site. View location 29 is also representative of views for cyclists and pedestrians using the eastern McHughs Forest Park walking track.

Existing Visual Amenity

From these locations, views are characterised by the urban large lot residential development, including dwellings, ancillary buildings and curtilage planting, the rural landscape (to the north) and McHughs Forest Park (to the north and west). The rural landscape comprises wide open pasture, dissected by post and wire fencing, rural shelter belts and mature roadside planting alongside Homebush Road. Views from Horndon Street are characterized by the mature conifer plantation forest of McHughs Forest Park, along with walkway entrances, signage, car park, and picnic facilities. The mature trees within McHughs Forest obstruct views northward (toward the site) from Horndon Street. Wilson Hill, Mount Oxford, Mount Thomas, and the Puketeraki Range form the distant backdrop to the north, enhancing visual amenity values from these viewer locations.

Public and Private Views

Like from viewer group six, due to distance away, the individual components of the proposed development will not be easily discernible, and the development will appear as a small-scale, dark, rectilinear form within the much wider, visually complex rural landscape. The extensive intervening planting between these locations and the application site will significantly limit views of the proposed development from VL 28 (private residents) and VL 29 (private residents and members of the public using McHughs Forest Park). Views of the proposal may be glimpsed through gaps in this vegetation; however, it will be difficult to discern and the proposed agrivoltaic development will be seen well below the skyline of the mountain backdrop, aiding in grounding and integrating it with its surroundings.

Like from the distant rural viewer locations, the proposal will appear subservient within the visual complexity of the wider surrounding landscape from VL 28 and VL 29. The focus of these vistas will more likely be drawn towards the open pastoral rural landscape within the fore to midground and the mountain ranges in the distant backdrop. Views from these locations will therefore remain predominantly rural, limiting adverse effects on visual amenity values derived from views across the rural landscape.

It should be noted that once the large lot residential (LLR) development has been constructed within the LLR zone to the north of these viewer locations, views of the proposed development will be further screened from view.

Glare

The glint and glare analysis did not identify any glint or glare within the developed part of the LLR zone (VL 28 and VL 29). However, potential glint and glare effects were found within the undeveloped part of the LLR zone, to the north within VL group 3 (VL 9 – VL 11).

Mitigation

Mitigation planting and/or tracking management proposed along the southern site boundary (to mitigate adverse effects of glare on Homebush Road for traffic safety reasons) will also screen glare from view from the LLR zone, reducing adverse effects on landscape character and visual amenity values form VL 28 and VL 29.

Permanent Effect Ratings

Unmitigated, the short-term adverse effects on existing rural character and visual amenity values from these locations will be ***very low*** *(less than minor)*. Once the proposed mitigation planting located along the southern site boundary has become established (approximately 4-6 years), the proposed development will be further screened from view, reducing adverse effects associated with the proposal from these viewer locations to between **no effect** and ***very low*** adverse effect.

Temporary Effects

The temporary adverse effects during construction will likely be ***very low***.

SUMMARY OF LANDSCAPE, NATURAL CHARACTER AND VISUAL EFFECTS

Overall, the proposed development will change the existing rural characteristics of the site to one which is more complex and multifunctional, blending traditional agricultural uses with renewable energy infrastructure. While it will reduce the open spatial characteristics and introduce more built elements, it will also reflect modern trends in sustainable land use, potentially adding a point of interest in the landscape.

Effects ratings are summarised in the following table:

SUMMARY OF LANDSCAPE EFFECT RATINGS (*adverse effect unless stated otherwise)*			
	Construction Effects *(Temporary Effect)**	***Development - Unmitigated*** *(Long term or Permanent Effect)*	***Development - Mitigated*** *(Long term or Permanent Effect)*
Landscape Effects			
Landscape character	***low-moderate*** to ***moderate***	***low-moderate*** *(site and immediate surrounds)* ***low*** *(wider landscape)*	***low-moderate*** *(site and immediate surrounds)* ***low*** *(wider landscape)*
Visual Amenity Effects			
Group 1 *VL 1 – VL 5 public and private* *SH73 and Midland Rail*	***Low to low-moderate*** *– public* ***low*** to ***moderate*** - private residents and workers (Fonterra Darfield site)	***very low*** *to* ***low*** *(less than minor) – public (VL 1 & VL 2)* ***low*** *(less than minor) – public SH73 (VL3, VL 4 & VL 5)* ***low*** *(minor) – public Midland Rail Train drivers and passengers (VL3, VL 4 & VL 5)* ***very low*** to ***low*** (*less than minor*) – private residents and workers (Fonterra Darfield site)	***very low*** to ***low*** (*less than minor*) – public and private
Group 2 *VL6 – public and private* *Homebush Road (west)*	***low*** *– public* ***low to low-moderate*** *– private (1433 Homebush Road)*	***very low*** *(less than minor) – public* ***very low*** to ***low*** *(less than minor) - private*	***no effect*** *(less than minor) – public and private* ***very low*** *(less than minor) - private*
Group 3 *VL7 – VL 11 public* *Homebush Road (east)*	***low to low-moderate*** – public	***very low*** *(less than minor – public (VL 10 and VL 11)* ***low*** *(minor) public (VL 7 – VL 9)* ***low-moderate*** to ***moderate**** *(more than minor) – public, pedestrians and cyclists exiting McHughs Forest (VL 7)* ** Moderate ratings will only occur for limited times during the day, when glint and glare is experienced*	***very low*** *to* ***low*** *(less than minor) - public* ***very low*** to ***low*** *- (less than minor) - Future LLR (VL 9 – VL 27)*
Group 4 *VL 12 – VL 14 public and private* *Loes Road*	***low to low-moderate*** *- public* ***low to moderate**** *– private (32 and 68 Loes Road)* **moderate effects will occur adjacent to permanent dwellings for*	***low*** *(minor) - public* ***very low*** *to* ***moderate*** *(less than minor to more than minor) - private (32 and 68 Loes Road)*	***Low*** *(less than minor) - public (VL 14)* ***very low*** *to* ***low*** *(less than minor) - public (VL 12 and VL 13) and private (32 and 68 Loes Road)*

	a short duration during construction.		
Group 5 *VL 15 -VL 20 public and private* *Auchenflower Road*	***low to low-moderate*** *– public*	***very low*** *(less than minor) – public (VL 16 and VL 18 – VL 21)* ***low*** *(less than minor) – public (VL 17)* ***low*** *(minor) – public (VL 15)* ***no effect*** *– private*	***very low*** *(less than minor) – public (VL 18 – VL 21)* ***no effect*** *to* ***very low*** *– (less than minor) - public (VL 16 and VL 17)* ***low –*** *(minor) – public (VL 15)*
Group 6 *VL21 – VL 27 - public and private* *Auchenflower Road, Tramway Road, Kimberley Road, Homebush Road*	***very low***	***very low*** *(less than minor) – public and private*	***No effect*** *to* ***very low*** *– (less than minor) - public and private*
Group 7 *VL28 and VL 29 - public and private* *Landsborough Drive and Horndon Street*	***very low***	***very low*** *(less than minor) – public and private*	***No effect*** *to* ***very low*** *– (less than minor) - public and private*
Overall Landscape Character Effects (including visual)		***LOW-MODERATE***	***VERY LOW to LOW***

RECOMMENDED MITIGATION

Where the temporary or permanent public effects of the proposed development on landscape character (including visual amenity) range between ***no effect*** and ***low-moderate***, mitigation is not considered necessary as these ratings are at or below the minor threshold of the RMA. Where the permanent effect levels are ***moderate (or more)***, mitigation is required to alleviate the effects of the proposed development on existing rural character (including visual amenity values) from surrounding public locations. As identified in the visual effects section of this report, glint and glare mitigation is required to reduce the permanent effects of the proposal for the public (pedestrians and cyclists) exiting McHughs Forest Park (VL 7).

Where private views (for residents) were found to range between ***no effect*** and ***low*** (*less than minor*) adverse effect on landscape character (including visual amenity), as a result of the temporary or permanent private effects associated with the proposed development, mitigation is not considered necessary as these ratings are less than the minor threshold of the RMA. Where the permanent effect levels are ***low*** (*minor*), ***or more***, mitigation is required to alleviate the effects of the proposed development on existing rural character (including visual amenity values) from surrounding private locations.

As identified in the landscape and visual effects section of this report, mitigation is required to reduce the effects of the proposal on landscape character and amenity values (including visual) for the residents of Loes Road (No. 32 and 68 Loes Road (VL 12 and VL 13)), Mitigation may also be required for the dwelling on the Fonterra property that protrudes into the site (1/3792 West Coast Road).

Glint and glare mitigation is required to reduce the traffic safety effects of glint and glare on road users along SH73, the Midland Railway line, Homebush Road and Auchenflower Road.

The following mitigation measures are recommended to reduce the adverse effects of the proposed development on landscape and visual amenity values and to mitigate the effects of glare on road users (for traffic safety reasons):

a. Retention of the existing shelter belt planting (within the site) along the western boundary (between the site and the Fonterra Darfield site), retention of all shelter belt and curtilage planting around the existing dwelling within the site and retention of the cluster of eucalyptus trees opposite 68 Loes Road.
b. 10m setback of the proposal and implementation of erosion and sediment control plans and proposed new culvert design, to avoid and/ or mitigate adverse effects of earthworks on the water race (potential indigenous fish habitat) within the site.
c. It is recommended that the temporary effects of the proposal on landscape character (during the construction period) will be mitigated through the staged progression of construction, with the PV tables along the perimeter of the site (alongside SH73, Homebush Road, Loes Road and Auchenflower Road) being constructed first. This will ensure that the construction of the remaining PV tables and other components within the interior of the site will be screened/ partially screened from view.
d. The implementation of mitigation screen planting (recommended mixed native species border), to be maintained between 2-3m high, along parts of the eastern site boundary, and the southern site boundary, to screen the proposed agrivoltaics development (and associated glint and glare) from view from the properties adjacent to VL 12 and VL 13 (32 and 68 Loes Road), the McHughs Forest Park walkway entrance (VL 7), and the nearest part of the LLR zone (adjacent to VL 9).
e. The implementation of screen planting (recommended mixed native species border), to be maintained between 2-3m high, along the southwestern, southern and parts of the eastern and northern site boundaries (adjacent to SH73 & Midland Railway Line and Fonterra Darfield, Homebush Road, Loes Road, and Auchenflower Road), to screen the glint and glare resulting from the proposed agrivoltaic development from view from SH73, the Midland Railway Line, Homebush Road and Auchenflower Road.
f. From the property at 1/3792 West Coast Road (within the Fonterra Darfield site), if views of the proposed development are afforded above/ through gaps in the existing planting, resulting in adverse effects on visual amenity values, additional mitigation planting will be established to screen views of the proposal from this property.
g. The mitigation planting should be established as soon as possible.

This proposed mitigation has been identified in the Mitigation Plan (Appendix 5). A double row of mixed native species is recommended in all locations identified as mitigation panting on the Mitigation Plan. A plant species suitability table is attached to this report (Appendix 5), providing a list of other suitable plant species options.

The recommended mitigation planting will be compliant with the Electricity (Hazards from Trees) Regulations 2003, which require 4m clearance between the conductors of the 66kV lines running along Homebush Road and the planting beneath. No horizontal offset is required. A copy of the *Electrical (Hazards from Trees) Regulations 2003: Schedule Growth limits zones* is contained in Appendix five. A diagram showing the distance from tree requirements is included in Appendix Five of this report.

RELEVANT STATUTORY AND NON-STATUTORY PROVISIONS

Planning documents that have been taken into consideration include the Resource Management Act (RMA), the Canterbury Land and Water Regional Plan, The Canterbury Regional Policy Statement (CRPS), the Operative Selwyn District Plan (OSDP), and the Partially Operative Selwyn District Plan (Appeals Version) (POSDP).

Only the key issues contained within the relevant planning framework, relating to landscape, visual and amenity matters have been considered.

Resource Management Act 1991

The proposal must meet the requirements of the Resource Management Act (RMA), and it is therefore important that the assessment of visual, landscape and amenity effects address the requirements of Part 2, of the Act. The key sections relevant to this application are s6(a), s6(b), s7(c) and s7(f).

Concerning s6(a), the proposed agrivoltaic development will not affect the existing natural character values of the Waimakariri River (to the east of the site) the Hawkins River (to the west of the site) or the Selwyn/ Waikirikiri River (to the southwest of the site).

Concerning s 6(b), the application site does not contain and is not adjacent to any identified Outstanding Features or Landscapes (ONFL). The closest ONLs to the site are the Waimakariri River to the east (identified in the Partially Operative Selwyn District Plan (POSDP)), the Malvern Hills to the west and northwest (identified in both the Operative Selwyn District Plan and the POSDP), the Front Ranges to the northwest (identified in both the Operative Selwyn District Plan and the POSDP), and the Puketeraki Range and Oxford Foothills ONL (identified in the Waimakariri District Plan).

As discussed in the landscape character section of this report, the proposal will not affect these ONLs due to physical separation. The proposal is also visually separated from the Waimakariri River (not located within the same visual catchment).

The proposed development will be seen against the backdrop of the Malvern Hills, Front Range, Puketeraki Range and Oxford Foothills ONL in the distance from a small number of surrounding viewer locations and will partially obscure views to the base of these ONLs. It will not affect the values and attributes identified as contributing to the identification of these ONL however, which include the high visibility of these features from the plains, and the sharp crested peaks and smooth flat-topped ridge crests of the skyline ridge, which will remain visible above the proposed mitigation planting from surrounding viewer locations.

Concerning Section 7(c) and 7 (f) views towards the Malvern Hills Visual Amenity Landscape (VAL) and ONL, and the Front Range and Puketeraki Range ONLs will be partially obscured by the proposal from a small number of surrounding viewer locations. With the mitigation planting in place, the adverse effects of the proposed agrivoltaic development on the existing visual amenity values will range from ***very low*** to ***low*** from surrounding viewer locations.

Canterbury Land and Water Regional Plan

Regarding Section 11, Selwyn - Te Waihora, Section 11.8, Table 11(n), the proposed development site does not contain any Cultural Landscape/ Values Management Areas. The nearest Cultural Landscape/ Values Management is the Selwyn/Waikirikiri River, approximately 2.5km to the west of the site. Due to visual and physical separation, the proposed development will not adversely affect the Selwyn/Waikirikiri River.

11.10 identifies that there are no high naturalness waterbodies within the Selwyn - Te Waihora catchment.

Canterbury Regional Policy Statement

Concerning *Chapter 12: Landscape*, Objective 12.2.1, 12.2.2 and Policies 12.3.1, the application site does not contain any outstanding natural features and landscapes (ONFL), natural character areas, or amenity landscapes. The nearest ONLs are located 3.5km to the east (Waimakariri River), 14km to the west and northwest (Malvern Hills), 27km northwest (Front Range), and 23km north. The nearest visual amenity landscape (VAL) is located 17km west of the site (Malvern Hills). The nearest significant natural area (SNA) is located 18km east of the site, while the nearest indigenous biodiversity management overlays are located 3.5km to the east (Waimakariri River) and 4.5km to the west (Malvern Hills). The proposal will avoid physical adverse effects on these nearest outstanding landscapes, and visual amenity landscapes due to visual and physical separation.

Operative Selwyn District Plan

The proposed agrivoltaic development is located within the Rural Outer Plains Zone under the Operative Selwyn District Plan (OSDP). The OSDP has a suite of objectives and policies which pertain to landscape, natural character, and amenity (both directly and indirectly). These are included in the Objectives and Policies of the Rural Volume of the Plan: Part B, Section B1 – Natural Resources, B2 – Physical Resources, B3.4 Quality of the Environment, Part C – Rules and Definitions, C3 – Rural Rules – Buildings, C5 - Rural Rules – Utilities.

> ***RURAL VOLUME***
>
> ***Water***
>
> ***Objectives***
>
> ***Objective B1.3.3***
> ***Protect and enhance the amenity values along waterbodies.***

The site does not contain any significant areas of indigenous vegetation, natural wetlands or riparian areas that influence its landscape character. The water race within the site is not a lake, river or wetland and therefore the effects of the development on its natural character values do not need to be assessed.

The site is also physically and visually separated from nearby waterbodies (Hawkins River, approximately 2.5km to the west and the Waimakariri River, approximately 3.5km to the east).

> ***RURAL VOLUME***
>
> ***OUTSTANDING NATURAL FEATURES AND LANDSCAPES – OBJECTIVES***
>
> ***Objective B1.4.1***
>
> ***The Outstanding Natural Features and Landscapes of the District are recognised and protected from inappropriate use and development while still enabling people to provide for their economic and social well-being.***

The proposed development site is not located within any identified Outstanding Natural Landscape (ONL). It will be physically and visually separated from the nearest ONLs (Malvern Hills area) by at least 14km and will therefore not have any adverse effects on these ONLs. The Waimakariri River has not been identified as an ONL within the ODP but has been identified as an ONL in the POSDP.

While the Front Range ONL will be seen backdropping the proposed development in the distance from some surrounding viewer locations, it does not break the skyline of this OL, and views to the Range will be maintained above the proposed mitigation planting from surrounding viewer locations.

RURAL VOLUME

B2.2 UTILITIES — ISSUES

- *…*

- *Adverse effects of utilities on the landscape and amenity values of the rural area.*

UTILITIES — OBJECTIVES

Objective B2.2.1
Utilities are recognised as essential tools for people's economic and social well-being, and to mitigate effects of other activities, on the environment.

Objective B2.2.2
The provision of utilities where any adverse effects on the environment and on people's health, safety and wellbeing is managed having regard to the scale, appearance, location and operational requirements of utilities.

UTILITIES — POLICIES AND METHODS

Policy B2.2.5(a)
Avoid siting utility structures or buildings on hilltops in the margins of lakes or rivers or in areas identified as outstanding natural features and landscapes, sites with special cultural values (Silent File Areas, Wāhi Taonga Sites and Management Areas or Mahinga Kai Sites) or Heritage Sites in the Plan, unless operational necessity makes this impractical.

Policy B2.2.6
Require utility structures to be made of low reflective materials.

Policy B2.2.7
Encourage the co-siting of utilities, where practical.

UTILITIES — ANTICIPATED ENVIRONMENTAL RESULTS

The following environmental results should occur from implementing Section B2.2:
• Activities have the standards of utilities they need to mitigate their effects on the environment, prior to the activity being established.
• Utilities are less visually prominent in the future, particularly along ridge tops and waterbodies, and in other areas with high landscape values.
• More utilities are finished in low reflective materials and co-located.

Regarding *Objective B2.2.2* and *Policy B2.2.5(a)* above, the location of the proposed agrivoltaic development is appropriate within the surrounding environment due to its position immediately adjacent to the Kimberley Substation (co-siting of utilities), and Darfield Dairy factory, on the urban fringe of Darfield urban settlement, avoiding visually prominent locations and valued landscape features such as the margins of lakes, rivers or ONLs. The proposal will consolidate an existing node of development, ensuring wider rural landscape patterns are retained.

The existing rural character of the site will be maintained from most surrounding viewer locations due to the proposed mitigation planting along the southern, southwestern, and partial northern and eastern site boundaries. While this planting will alter the character of views from open pastoral to a more highly compartmentalised character (contained by mitigation planting), the site will continue to be experienced as a rural or a hybrid agricultural-energy generation site (from a limited number of surrounding locations).

The location of the proposal adjacent to the Kimberley substation and Fonterra Dairy Factory will aid in the mitigation of adverse effects associated with the proposed development as the large scale of the substation and dairy factory provide context for the development.

RURAL VOLUME

B3.4 QUALITY OF THE ENVIRONMENT — ISSUES

- ***Activities which affect the character of the rural area or which make it a less pleasant place to live or work in.***

- ***"Reverse Sensitivity" from activities with incompatible affects locating too close to each other.***

QUALITY OF THE ENVIRONMENT — OBJECTIVES

Objective B3.4.2

A variety of activities are provided for in the rural area, while maintaining rural character and avoiding reverse sensitivity effects.

QUALITY OF THE ENVIRONMENT — POLICIES AND METHODS

RURAL CHARACTER

Policy B3.4.3

Avoid, remedy or mitigate significant adverse effects of activities on the amenity values of the rural area.

Policy B3.4.4

Ensure that any adverse effects arising from "rural based" industrial activities in the Rural (Inner Plains) Zone of a size and scale beyond what is permitted by the District Plan and "other" types of industrial activities in all Rural zones are avoided, remedied or mitigated to the extent that the adverse effects are no more than minor.

Policy B3.4.6

Maintain low levels of building density in the Rural zone and the predominance of vegetation cover.

The proposed agrivoltaic development is located within the Rural Outer Plains Zone under the OSDP.

Regarding B3.4.2, and B3.4.3, although the proposed agrivoltaic development will reduce the open spatial characteristics within the application site, it will allow for continued grazing within the site and will not change the character of the wider surrounding rural landscape. Its position, immediately adjacent to the existing Kimberley Substation and Darfield Dairy Factory will aid in integrating it with the wider surrounding landscape, consolidating the existing node of development at the urban fringe of Darfield, avoiding sporadic development within the rural landscape and reducing reverse sensitivity effects (as per B3.4).

The proposal will be seen as an extension of the existing electricity activities currently occurring immediately to the west of the site within the Kimberley substation and will therefore not introduce a new type of development within the vicinity.

Regarding B3.4.4 and B3.4.6, due to the flat topography of the site and surrounding landscape, the visual bulk, scale, and density of the proposed agrivoltaic development will not be appreciated from surrounding viewer locations (with only the nearest PV tables visible from each viewer location).

As discussed in the visual effects section of this report, with the mitigation planting in place, the rural character of the site, when viewed from surrounding viewer locations will be maintained. This will maintain the attributes which contribute to the rural character identified within B3.4.3, B3.4.4 and B3.4.6.

While the character of views towards the site will change from an open rural landscape to a compartmentalised landscape character (contained by screen planting along the southern southwestern and part of the eastern and northern site boundaries), views of the site will remain rural. Regarding B3.4 and B3.4.2, the proposed agrivoltaic development will allow for the continuation of farming within the application site (sheep farming will occur within the area fenced off for the agrivoltaic development), ensuring continued productive working land use within the application site.

The dark tones of the proposed agrivoltaic development PV panels will allow it to appear visually recessive and unobtrusive when seen against the darker tones of the existing vegetation which backdrops the site from most surrounding viewer locations, aiding in integrating the proposal within the surrounding rural environment and, along with the proposed mitigation planting, maintaining the predominance of vegetation cover.

As discussed in the landscape character section of this report, the proposed development will have ***low*** adverse effects on existing landscape character values, when considered at the wider surrounding rural landscape scale. Adverse effects on existing landscape character and visual amenity values will be slightly higher (***low-moderate***) when the proposed development is considered at the local scale (site and its immediate surroundings).

Adverse effects of the proposal on visual amenity values will range from ***very low*** to ***low*** (with the mitigation planting in place) from surrounding viewer locations.

Policy B3.4.7

Avoid high rise buildings or highly reflective utility structures.

Considering B3.4.7, the proposal does not include any high-rise buildings and the proposed PV panels will have an anti-reflective coating, ensuring that policy B3.4.7 is met.

GLARE AND NIGHTGLOW

Policy B3.4.11

Avoid night lighting shining directly into houses, other than a house located on the same site as the activity, or from vehicles using roads in the District.

No lighting (except for emergency lighting around the BESS area and within the substation) is proposed. Any emergency lighting will be designed to meet the requirements of the plan and will therefore avoid night lighting shining directly into any surrounding neighbouring houses.

SHADING
Policy B3.4.17

Ensure buildings and trees do not excessively shade adjoining properties.

The proposed agrivoltaic development will be setback 10m from the perimeter of the site, ensuring distance between the proposal and the road boundary and maintenance of privacy and outlook for surrounding houses. The low height of the PV development will ensure shading on surrounding properties is avoided. The taller proposed buildings and structures (BESS and substation) are located within the middle part of the site, avoiding shading on surrounding properties.

Restricted Discretionary Activities — Height – Utility Structures

5.3.2
Any utility structure which does not comply with Rule 5.3.1.1 shall be a restricted discretionary activity.

5.3.3
Under Rule 5.3.2 the Council shall restrict the exercise of its discretion to consideration of:

5.3.3.1
Any adverse visual impacts or shading of neighbouring dwellings or living areas

5.3.3.2
Whether the facility (and its siting) is visually obtrusive having regard to the character of the surrounding environment.

As previously discussed, with regard to 2.3.3.1, the proposed development will not result in shading of neighbouring dwellings or living areas due to setbacks from the site boundaries and a maximum height of approximately 2.5m to 3.1m (at full tilt).

Regarding 5.3.3.2, with the proposed mitigation planting in place the proposal will not be viewed as visually intrusive within the wider surrounding environment.

Views From SH73 and Midland Railway

While the OSDP includes provisions to protect views of Outstanding Natural Landscapes, lakes and sites of significance to Māori from SH73 and the Midland Railway (3.3.3.1), these pertain to the High Country (views of the Upper Waimakariri Basin) only and do not apply to views of the ONLs from the stretch of SH73 and the Midland Railway immediately adjacent to the site (located within the Outer Plains landscape).

Partially Operative Selwyn District Plan (Appeals Version)

The proposed agrivoltaic development is located within the General Rural Zone (GRUZ) under the Partially Operative Selwyn District Plan (POSDP). The nearest Outstanding Natural Landscapes (ONLs) are the Waimakariri River, Malvern Hills, and the Front Ranges, to the east and west of the site, respectively. The Malvern Hills also have a Visual Amenity Landscape (VAL) and Indigenous Biodiversity Management Overlay, while the Waimakariri River also has an Indigenous Biodiversity Management Overlay. There are no Significant Natural Areas (SNA) near the site.

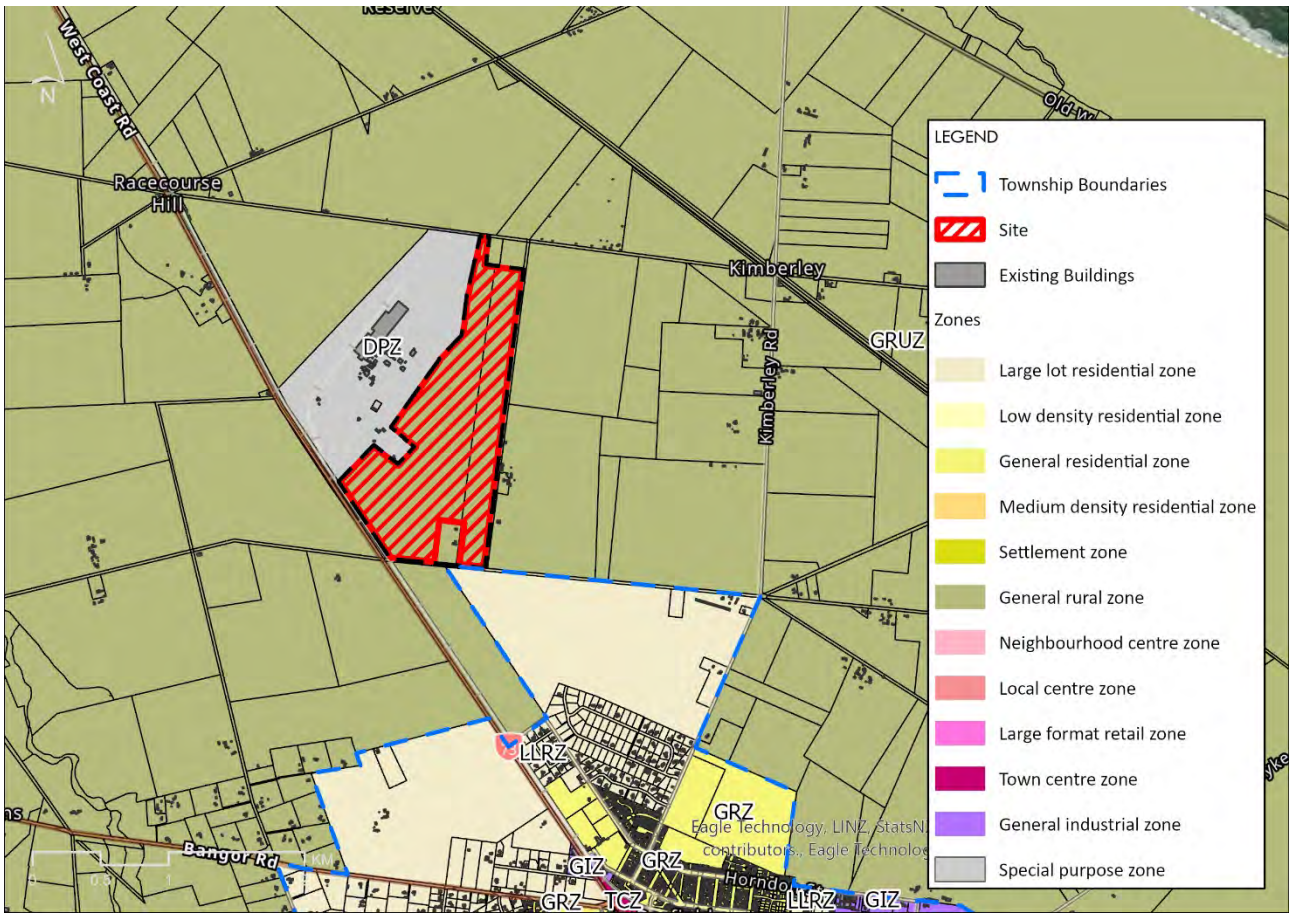


Figure 19: PDP Zones

The POSDP has a suite of objectives and policies which pertain to landscape, natural character and amenity (both directly and indirectly). These are included in the Objectives, Policies, Rules and Requirements of *IE – Energy and Infrastructure*, *ECO - Ecosystems and Indigenous Biodiversity, NATC – Natural Character, NFL – Natural Features and Landscapes and GRUZ - General Rural Zone.*

EI – Energy and Infrastructure

EI-Objectives and Policies

EI-Objectives

EI-O2
The functional and operational needs of important infrastructure are taken into account when managing any adverse effects of its location, design and operation on the physical and natural environment.

EI-O4
Optimise and increase renewable electricity generation outputs for national, regional, and local use while minimising adverse effects on the environment and sensitive activities.

EI-Policies

EI-P2
Minimise the adverse effects of important infrastructure, and renewable electricity generation on the physical and natural environment by:

1. *encouraging the co-location of structures and facilities where efficient and practicable.*
2. *locating, designing and operating development while minimising the effects on, the amenity values of the surrounding environment, public access and the health and safety of people.*
3. *…*

With regard to EI-O2, EI-O4 and EI-P2, the proposal will co-locate with the existing Kimberley Substation in a location already modified by the Darfield Dairy Factory, minimising the adverse effects of the proposal on the surrounding rural landscape.

Regarding EI-P2.4, there are no areas of significant indigenous vegetation or natural wetland areas within the site.

EI - Rules

EI-R31 *Other Renewable Electricity Generation and Renewable Electricity Generation Activities*

Activity Status: DIS
1.The establishment of a new, or expansion of existing renewable electricity generation, or an renewable electricity generation activity not provided for elsewhere.

EI – Requirements

EI-REQ11 Light

1. All activities shall comply with:
a. LIGHT-R1 Artificial outdoor lighting;
b. LIGHT-R2 Roads and public pedestrian accessways and cycleways; and
c. LIGHT-R4 Temporary activities.

EI-REQ13 Height in Relation to Boundary

1.All structures outside of the land transport corridor shall comply with the relevant height in relation to boundary requirements in Appendix 3.

EI-REQ14 Reflectivity

1. Any structure shall have a reflectivity value no greater than 37%, excluding telecommunication lines
2....

EI-REQ15 Height

1. Any minor utility structure shall not exceed a maximum height above ground level of 2m

19. Any structure shall not exceed a maximum height above ground level of 12m, excluding hose drying structures associated with emergency services facilities used by Fire and Emergency New Zealand.

Regarding EI-REQ14, the PV panels will have an anti-reflective coating. Regarding glint and glare, only relatively small sections of Homebush Road, SH73 and Auchenflower Roads were found to be potentially adversely affected by glare. Glint and glare mitigation for road users includes screen planting proposed along the southern, and southwestern site boundaries and a small extent of the northern and eastern site boundaries, to mitigate these adverse effects on visual amenity values.

With regard to EI-REQ11 (Light), no lighting (except for emergency lighting around the substation and BESS area) is proposed. The development is therefore compliant with the above artificial lighting requirements. Any emergency lighting will be designed to meet the requirements of the plan.

EI-Matters for Control or Discretion

EI-MAT2 Visual Amenity

1. *Visual amenity values of the streetscape or road.*
2. *Visual amenity values of the locality.*
3. *The outlook from adjoining properties.*

As discussed in the visual effects section of this report, the proposed mitigation planting will ensure that visual amenity values associated with rural vistas (while these will change from open vistas to contained vistas from some viewer locations) are retained from surrounding viewer locations. Views towards the Front Range ONL and the Malvern Hills VAL be maintained (seen above the proposed mitigation planting).

With the mitigation planting in place adverse effects on visual amenity values were found to range between ***very low*** and ***low*** (below the minor threshold of the RMA) from most surrounding viewer locations.

Natural Character

NATC-Overview

NATC-O1

The natural character of surface water bodies and their margins is preserved and enhanced where appropriate.

NATC-P1

Recognise the natural character qualities of surface water bodies and their margins described in NATC-SCHED4 - Natural Character Qualities of Surface Water Bodies and preserve and protect those qualities, and Ngāi Tahu cultural values, from inappropriate subdivision, use and development by:

1. *…*
2. *ensuring that the location, intensity, scale and form of subdivision, earthworks, buildings, structures, vegetation planting and signs on surface water bodies and/or their margins recognises and preserves the natural character of the surface water body;*
3. *minimising, to the extent practicable, indigenous vegetation clearance and modification (including earthworks, disturbance and structures) near surface water bodies and their margins;*
4. *enabling opportunities to restore and rehabilitate the natural character of surface water bodies and their margins and supporting initiatives for the regeneration of indigenous biodiversity values and cultural values.*
5. *prioritising enhancement or environmental mitigation where development, subdivision or changes in use occur which is proportional to the scale of the development and any adverse effects created.*
6. *acknowledging that important infrastructure can have a functional need or operational need to locate in the margins of surface water bodies, and if so, must:*
   a. *demonstrate through site, route or method selection, the minimisation of effects on natural character values; and*
   b. *integrate design measures and management methods to mitigate effects on natural character values*

except for important infrastructure managed under EI-P2 and land transport infrastructure managed under TRAN-P13.

Regarding NATC-P1, surface water bodies within and surrounding the site include the water race within the site, which is connected to the wider Selwyn water race network, and the Waimakariri, Hawkins and Selwyn/ Waikirikiri Rivers. The Waimakariri, Hawkins and Selwyn/ Waikirikiri Rivers are physically and visually separated from the proposed development site and the proposal will therefore not adversely affect the existing natural character values of these rivers.

The artificial water race within the site is not a natural surface water body and has been constructed as part of wider Selwyn the irrigation network.

NFL – Natural Features and Landscapes

NFL-Objectives

NFL-O1
The outstanding natural features and landscapes of Selwyn are protected from inappropriate subdivision, use, and development.

NFL-O2
The values of the visual amenity landscapes of Selwyn are maintained and, where possible, enhanced.

NFL-Policies

NFL-P1
Recognise the values of the identified outstanding natural features and landscapes described in NFL-SCHED1 and protect these values from adverse effects by:

- *b. avoiding subdivision, use and development that detracts from extensive open views, or detracts from or damages the distinctive landforms and landscape features;*
- *c. managing building density and form to ensure it remains at a low level and predominantly concentrated within building nodes, and maintains a predominance of vegetation cover and sense of low levels of human occupation;*
- *d. enabling activities that maintain the qualities of the landscape;*
- *e. avoiding buildings and structures that break the skyline;*
- *f. ensure buildings and structures are constructed from materials with low reflectance values, and are designed to minimise glare and the need for earthworks, and are mitigated by plantings to reduce their visual impact where appropriate;*
- *g. …*
- *h. avoiding buildings and structures (excluding ancillary structures and public amenity structures) in close proximity to the key visual corridors of State Highway 73 and the Midland railway line;*

The site does not contain any Outstanding Natural Landscapes (ONL) or Visual Amenity Landscapes (VAL). The nearest ONLs are the Malvern Hills and Waimakariri River and the nearest VAL is the Malvern Hills. The site is physically and visually separated from the Waimakariri River ONL and regarding NFL-O1, will therefore maintain the values of this ONL.

As identified in the landscape and visual effects sections of this report, the Malvern Hills and Front Ranges (located approximately 14km west and northwest and 27km northwest of the proposed development site, respectively) will backdrop the site from a limited number of surrounding viewer locations.

With regard to NFL-P1 h. above, viewshafts to the Front Ranges have been identified as key visual corridors (within the Selwyn District Landscape Study) from SH73 and the Midland Railway line. However, like the provisions within the OSDP, these visual corridors apply to the high country Waimakariri Basin, while the application site is located within the Canterbury Plains landscape.

Due to the relative position of the site to the east of SH73 and the Midland Railway line, and the location of Front Ranges ONL to the northwest of SH73 and the Midland Railway, only a very small part of the proposed development would potentially be backdropped by the ranges. As assessed in the visual effects section of this report, the low profile of the proposed agrivoltaic development (seen against the existing shelter and curtilage planting within the Fonterra Darfield site and surrounding rural landscape), will ensure that the proposal will not obstruct views of the Front Ranges from SH73 or the Midland Railway line.

While the proposed development will be backdropped by the Malvern Hills and Front Ranges from a limited number of surrounding viewer locations (VL groups 1, 3 and 4), obstructing views to the base of these features when the PV tables are at higher tilt angle/ maximum tilt, due to its low profile (NFL-P1 c), it will not obstruct views of the upper ranges or protrude above the skyline ridge (as per NFL-P1 h). The proposal has been proposed adjacent to an existing node of development (between Darfield large lot residential (LLR) zone and the Dairy Processing Zone (Fonterra Darfield site)), as per NFL-P1 c.

Concerning NFL-P1 f, the proposed PV development will have an anti-reflective coating, designed to minimise glare. The proposed mitigation planting will screen adverse glint and glare effects on SH73, the Midland Railway line, Homebush Road, and a small section of Auchenflower Road. The proposed planting will also ensure the retention of a rural outlook while maintaining views (and associated visual amenity values) of the mountain ranges above the proposed planting from surrounding viewer locations.

GRUZ - General Rural Zone

Objectives

GRUZ-O1

Subdivision, use, and development in rural areas that:

1. *supports, maintains, or enhances the function and form, character, and amenity value of rural areas;*
2. *prioritises primary production, over other activities to recognise its importance to the economy and wellbeing of the district;*
3. *allows primary production, those activities that directly support primary production and have a functional or operational need to locate with the General Rural Zone and important infrastructure, to operate without being compromised by incompatible sensitive activities and reverse sensitivity effects;*
4. *retains a contrast in character to urban areas; and*
5. *protects highly productive land.*

Policies

GRUZ-P1 General

Maintain or enhance rural character and amenity values of rural areas by:

1. *retaining a low overall building density;*
2. *…*
3. *retaining a clear delineation and contrast between the district's rural areas and urban areas; and*
4. *…*

As discussed in the landscape and visual effects sections of this report, the character of the wider surrounding rural landscape will be maintained. While the proposed agrivoltaic development will alter the landscape character within the site (from rural to energy generation), the site will still be experienced as rural due to the extensive proposed mitigation planting, which will screen the development from view from most surrounding viewer locations.

Regarding GRUZ-P1.3, the proposal will introduce an energy generation component which will cover the majority of the site. However, due to the flat terrain within and surrounding the site and the proposed mitigation planting, there will be very limited opportunity to view the density and scale of the proposed agrivoltaic development from surrounding viewer locations.

The development is consistent with the requirements of Policy GRUZ-O1.1, as the proposal will maintain rural character and amenity due to the retention of a predominance of vegetation within views of the site (mitigation planting will replace open pastoral landscape within views of the site from some surrounding viewer locations).

Regarding GRUZ-O1.4 and GRUZ-P1.6, a clear delineation will be retained between the rural landscape and the urban areas within the wider surrounding landscape as the site has been located immediately adjacent to the existing LLR zone and Dairy Processing zone, on the outskirts of Darfield. The location of the proposal will also avoid the fragmentation of rural land.

FINDINGS & CONCLUSIONS

The existing landscape in and around the application site and the various features and land uses within it, influence how the proposed agrivoltaic development will integrate with its surroundings and the effects it will have on existing landscape character (including rural character), natural character, landscape, and visual amenity values. Analysis of the proposal found that:

a. The landscape within and around the application site features a mix of urban (Darfield), industrial (Fonterra Darfield Dairy Factory), energy infrastructure (Kimberley substation and associated poles and transmission lines), arterial infrastructure (SH73 and the Midland Railway Line), and rural land uses. The rural landscape is typical of the flat, low-lying Canterbury Plains, with open pasture, cropping, shelter belts, hedgerows, clusters of specimen trees, woodlots, plantation forests, pylons, transmission lines, and post-and-wire fencing. The site is backdropped by the Malvern Hills, Front Ranges, Wilson Hill, Puketeraki Ranges, Mount Oxford, and Mount Thomas to the west, northwest, and north. Overall, the landscape value of the site and its immediate surroundings is considered ***low-moderate***.

b. The site is not located within any identified protected landscape features. The closest Outstanding Landscapes (ONL) are the Malvern Hills, the Front Ranges, the Puketeraki Range and Oxford Foothills, and the Waimakariri River. The closest Visual Amenity Landscape (VAL) is the Malvern Hills. The closest SNAs are located approximately 18km east of the site along the Waimakariri River. The closest Indigenous Biodiversity Management Overlays are located within the Malvern Hills, to the west and northwest of the site. These ONLs, VAL, SNA and IBMOs will not be affected by the proposed expansion due to separation distance.

c. The site does not contain any natural wetlands, lakes or rivers (or their margins). The closest natural waterbodies to the site are the Waimakariri, Hawkins and Selwyn/ Waikirikiri Rivers. These rivers are visually and physically separated from the site and the proposal will therefore not adversely affect the existing natural character values of these rivers. The existing water race within the site (part of the wider Selwyn water race network) is artificial and does not contain any natural wetland areas or indigenous planting.

d. Within the context of the surrounding rural, energy development and industrial Fonterra Darfield Dairy Factory landscape, the proposed agrivoltaic development will have a ***low-moderate*** adverse effect on existing landscape character values at the local scale (site and its immediate surrounds). While there will be a change in the appearance of the existing site and its surroundings at the local level (changing from predominantly rural with industrial and energy generation elements to predominantly energy generation with underlying agricultural production), when considered at the wider rural landscape scale, the adverse effects of the proposal on existing landscape character and visual amenity values will be ***low***.

e. The landscape's ability to absorb the proposed development varies from ***poor*** to ***very good***. For most surrounding viewer locations, the visual absorption capability is ***neutral*** to ***very good*** because the agrivoltaic site is partially screened by intervening vegetation or buildings. It is backdropped by rural planting patterns, the mountains to the north and northwest, and seen within the context of the existing Fonterra dairy factory. ***Poor*** ratings occur from locations with direct views and little screening from topography, vegetation, or existing buildings within 200 meters of the site.

f. Temporary effects on existing landscape character and visual amenity values associated with the construction of the proposed agrivoltaic development will range between ***very low*** and ***moderate.*** The short-term (while the mitigation planting establishes) adverse effects associated with the proposal on visual amenity values will range between ***very low*** and ***moderate***. Once the mitigation planting has become established (4-6 years), the adverse effects of the proposed agrivoltaic

development on the existing visual amenity values will range from ***no effect*** to ***low*** from surrounding viewer locations.

g. Development within the adjacent Large Lot Residential zone (LLR) to the southeast is unlikely to occur prior to the construction of the proposed agrivoltaic development. It is expected that by the time development occurs within this area, the mitigation within the site will be fully established and that the subdivision design within the zone will respond appropriately.

h. The proposed solar development will not result in any long-term or permanent glare effects on dwellings surrounding the site or traffic travelling past the site. Potential glare along the relatively short stretches of SH73, Midland Railway line, Homebush Road, and Auchenflower Road will be mitigated through the proposed mitigation planting.[14]

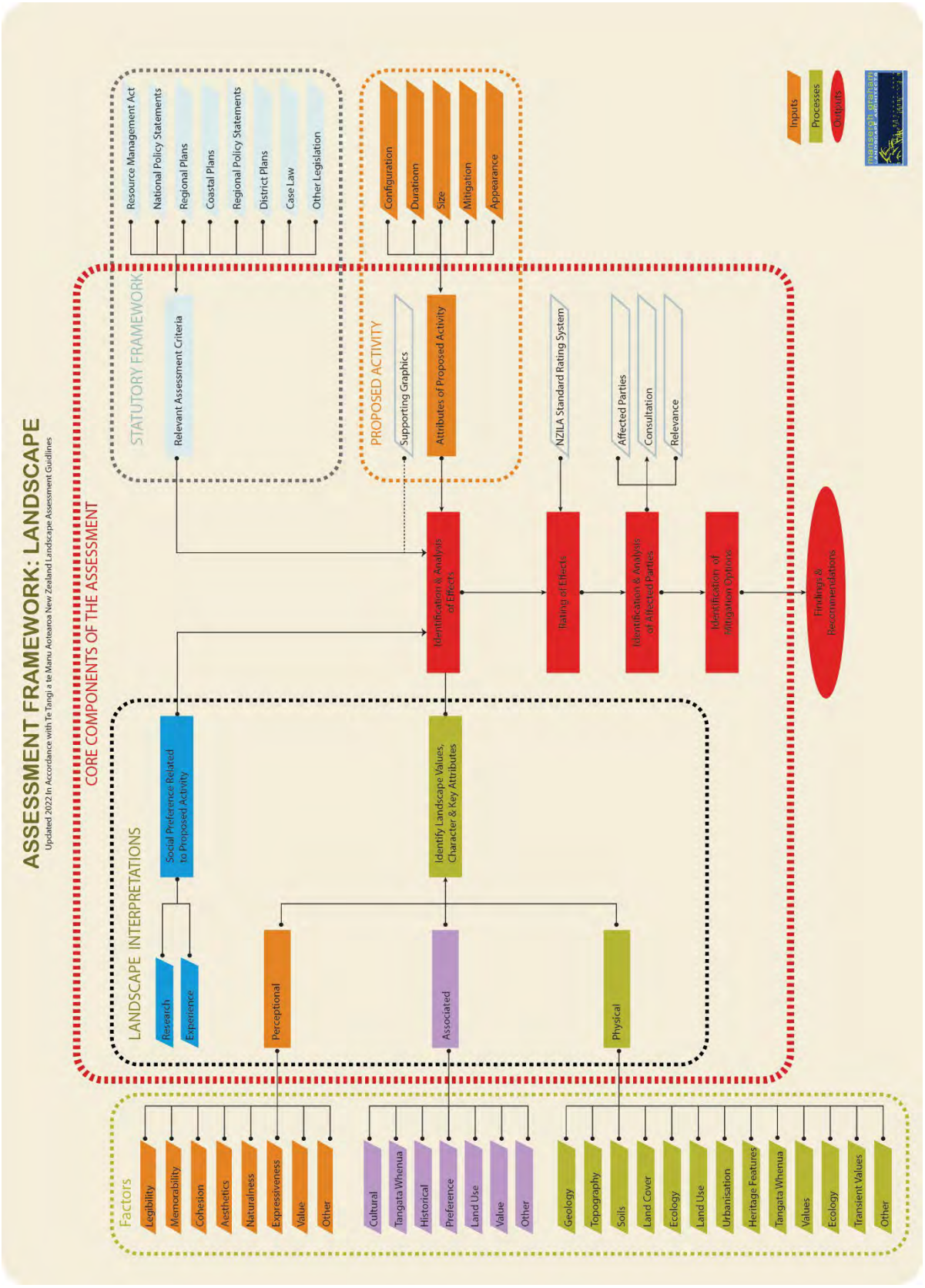
i. The proposed agrivoltaic development is consistent with the requirements of the relevant landscape, rural character, natural character and amenity provisions of the Operative Selwyn District Plan and the Partially Operative Selwyn District Plan.

With the implementation of the proposed mitigation measures and the establishment of the mitigation planting, the adverse effects of the proposed agrivoltaic development on the existing landscape, natural character and visual amenity values will be **at or below the *minor*** threshold of the RMA.

From a landscape perspective, the proposed development is consistent with the overall requirements and intent of the relevant landscape and amenity objectives and policies of the OSDP, POSDP, CRPS, CLWRP and sections 6(a), 6(b) and 7(c) of the RMA. There is therefore no reason that consent should not be granted subject to the implementation of the recommended mitigation (screen planting).

[14] Glare effect ratings are found in the *Glint and Glare Analysis Memorandum* (25 June 2024) prepared by MGLA.

APPENDIX ONE: METHODOLOGICAL FLOW CHART



APPENDIX TWO: LANDSCAPE AND VISUAL AMENITY EFFECT - RATING SYSTEM

The following standardised rating system has been developed by Mansergh Graham Landscape Architects Ltd and is consistent with the recommended rating system identified in the Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines.

LANDSCAPE AND VISUAL AMENITY EFFECT - RATING SYSTEM	
Effects Rating	**Use and Definition**
Very High	*Use* The development/activity would: a. Have a very high level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a very high level of effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* Very: adverb 1 in a high degree. 2 with superlative or own without qualification: the very best quality. High: adjective 1 extending above the normal level. 2 great in amount, value, size, or intensity. 3 great in rank or status. 4 morally or culturally superior.
High	*Use* The development/activity would: a. Have a high level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a high level of effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* High: adjective 1 extending above the normal level. 2 great in amount, value, size, or intensity. 3 great in rank or status. 4 morally or culturally superior.
Threshold under the RMA. Ratings above this threshold are "Significant". Ratings below this threshold are "More than Minor". Threshold under the NZCPS. Ratings above this threshold are "Significant".	
Moderate-High	*Use* The development/activity would: a. Have a moderate-high level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a moderate-high level of effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* Moderate: adjective 1 average in amount, intensity, or degree. High: adjective 1 extending above the normal level. 2 great in amount, value, size, or intensity. 3 great in rank or status. 4 morally or culturally superior.
Moderate	*Use* The development/activity would: a. Have a moderate level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a moderate level of effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* Moderate: adjective 1 average in amount, intensity, or degree.
Threshold under the RMA. Ratings at or above this threshold are "More than Minor". Ratings below this threshold are "Minor".	
Low-Moderate	*Use* The development/activity would: a. Have a low-moderate level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a low-moderate level of effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* Low: adjective 1 below average in amount, extent, or intensity. 2 lacking importance, prestige, or quality; inferior. Moderate: adjective 1 average in amount, intensity, or degree.
Low	*Use* The development/activity would: a. Have a low level of effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or *b.* Have a low level of effect on the perceived amenity derived from it.
Threshold[15] under the RMA. Ratings above this threshold are "Minor". Ratings at or below this threshold are "Less than Minor".	
Low (continued)	*Oxford English Dictionary Definition* Low: adjective 1 below average in amount, extent, or intensity. 2 lacking importance, prestige, or quality; inferior.
Very Low	*Use* The development/activity would: a. Have a very low effect on the character or key attributes of the receiving environment and/or the vista within which it is seen; and/or b. Have a very low effect on the perceived amenity derived from it. *Oxford English Dictionary Definition* Very: adverb 1 in a high degree. 2 with superlative or own without qualification: the very best quality. Low: adjective 1 below average in amount, extent, or intensity. 2 lacking importance, prestige, or quality; inferior.
Detectable Effect Threshold	
No Effect	The development/activity would have no detectable effect on the receiving environment.
Note: Ratings may be positive (e.g. high level of enhancement) or negative (e.g. high adverse effect).	

[15] Note: the threshold between less than minor and minor differs from the draft version but is consistent with the final (print) version of *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines.*

APPENDIX THREE: VISUAL ABSORPTION CAPABILITY RATINGS

The following standardised rating system has been developed by Mansergh Graham Landscape Architects Ltd and is consistent with the recommendations of *Te Tangi a te Manu - Aotearoa New Zealand Landscape Assessment Guidelines (Final Version).*

Visual Absorption Capability Definition Ratings	
VAC Rating	**Use**
Very Good	The proposed development/activity would be completely screened, almost completely screened, or completely absorbed by existing landscape features. Any views of the development would be either unidentifiable or at a great distance, and/or; The development/activity would not affect the existing character of the surrounding landscape or view in which it is seen, and/or; The development/activity would introduce a visual element into the landscape or view which may be viewed very frequently or continuously in that or similar landscape types.
Good	The proposed development/activity would be mostly screened or visually absorbed by existing landscape features, but still be identifiable. The development/activity may act as a tertiary focal attraction within the landscape or view in which it is seen, and/or; The development/activity would not affect the existing character of the surrounding landscape or view in which it is seen, and/or; The development/activity may introduce a visual element into the landscape or view which may be viewed frequently in that or similar landscape types.
Neutral	The proposed development/activity would neither be screened nor become a visual intrusion or focal attraction within the landscape or view in which it is seen. The proposed development/activity may act as a minor focal attraction from some locations, and/or; The development/activity would alter the existing character of the surrounding landscape or view in which it is seen, and/or; The development/activity would introduce a visual element into the landscape or view which may be viewed occasionally in that or similar landscape types.
Poor	The proposed development/activity would be clearly visible but would not act as a primary focal attraction, and/or; It would be expected that the proposed development/activity would alter the existing character of the surrounding landscape or view in which it is seen, and/or; The development/activity may introduce a new visual element into the landscape or view. The development/activity may be viewed infrequently in that or similar landscape types.
Very Poor	The proposed development/activity will be highly visible and may act as a primary focal attraction or feature. It would also be expected that the proposed development/activity will significantly alter the existing character of the surrounding landscape or view in which it is seen, and/or; The development/activity will introduce a new visual element into the landscape or view, which will be significantly different in appearance, or scale from the landscape elements surrounding it, and/or; The development/activity would be found very rarely in that or similar landscape types.