

MEMORANDUM

To: Thomas Keogh
Reyburn and Bryant Ltd

From: Simon Cocker
Simon Cocker Landscape Architecture

Date: 31 January 2023

Subject: Energy Farms, 1618 Wellington Road, Marton – landscape executive summary

Ref #: 21158_03

Dear Thomas,

As requested, I provide below an executive summary of my landscape assessment for the above application.

Energy Farms Limited (EFL) is seeking consent to construct and operate an 80 MW solar farm consisting of approx. 230,000 bifacial panels that will produce approx. 181,000 MWh of energy per year.

The Site is identified as Lot 5 DP 10517 (1646 Wellington Road), and Lot 4 DP 10517 (1618 Wellington Road), (Henceforth referred to as 'The Site' – Refer to Figure 1 in Appendix 1). The proposed solar farm is for utility-scale renewable energy generation (198ha in area), which can be co-located adjacent to a substation for supply into the local electricity transmission network.

The solar panels will not be static - they will be able to rotate to maximise the solar resource. They will be attached to metallic racking systems arranged in rows. A small motor located at the end of each row will facilitate the rotation of the panels. The panels will have a maximum height of approximately 2.35m when in a horizontal position, which will increase to approximately 4.8m when fully tilted.

The panels will be connected to approximately 11 inverter stations located across the site via underground cabling. Each inverter will have an approximate area of 30m² (i.e. a forty foot container). The inverters will be connected to an on-site substation via underground cabling. The substation will consist of a range of typical electrical infrastructure and will serve as the interconnection point for the solar farm into the Transpower network.

A battery storage facility will also be established near the substation area. The facility will consist of up to seven Tesla megapack battery storage units located within an enclosed building, and will provide the ability to store electricity generated by the solar farm with a controlled and optimised release back into the grid.

The area below the panels is to be retained in grass. It is understood that an adaptive management is proposed to ensure that the grass is retained, noting that this is important for the management of stormwater.

There will be a fence around the portions of the site that accommodate infrastructure. My understanding is that the fence will be approx. 2.2m high.

The landscape mitigation strategy encompasses the following:

1. Maintenance of the majority of the pastured ridge flank and stream margin to the north within the north eastern corner of the Site. This portion of the ridge flank is visible from Wellington Road to the north and is therefore sensitive to change.
2. Allied to the above, planting is proposed within the north eastern corner, along the Wellington Road frontage. This will serve to screen views of the panels on this eastern edge when approaching from the north, and when passing to the east.
3. 3.0m wide planting strips / screens are proposed along the Kilkern, Read and Wellington Road frontages, and along a portion of the western boundary at its southern end. These plantings will screen views of the solar farm when travelling along these roads. The plantings shall comprise locally appropriate native species, which will either grow to a maximum height of 4m, or will be maintained to this height.
4. Plantings proposed within the Site at the Read Road / Wellington Road junction will comprise a row of specimen trees. This corner is a flowpath and the trees will ensure the passage of stormwater across this boundary.
5. More extensive areas of locally appropriate native species are proposed at the southern end of a watercourse where this meets Read Road, and on the southern side of the switchyard on the Wellington Road frontage.

Landscape description / existing environment

The Site and its context are characterised by a gently undulating landscape with a sense of spaciousness, exposure and expansive skies. The terrain displays a distinct north east – south west grain, this being the prevailing hydrological pattern where the watercourses flow from Taranaki, outwards to the coast. This has engendered a sequence of widely spaced low ridges, like ‘waves’ that separate each of the watercourses. Six watercourses traverse the property. Of these, three are ephemeral, and 3 are intermittent¹.

To the east of the catchment boundary, the terrain is textured by a series of low ridges, angled west north west – east south east. A ridge which runs close to the northern boundary of the Site, parallel to Hales Line serves to preclude views into the body of the Site from the north (on Wellington Road, and from the entire length of Hales Line), but the northern face of this ridge is exposed to views from this northern catchment. A number of residential properties are located along Hales Line, but these appear to be largely screened from the Site. Longer views from the wider landscape to the north and north west into the Site are possible.

¹ Beca. *Ecological Constraints Assessment*. 10 Feb 2022. Section 4.

The landform affords expansive views, particularly to the east, across the broad Rangitaiki valley, to the distant Ruahine Ranges. On a more local level, the rolling pastoral landform engenders an expansive experience with glimpsed long views contained by the low pastured ridges.

The landscape is punctuated by groups of trees and shelterbelts which are sometimes visible as skyline elements. Experienced from proximate locations, these groves, or shelterbelts create an enclosure and a sense of shelter which alters the scale of the landscape. In places, shelterbelts, or hedges have been planted along the road corridor and create a sense of enclosure. The property is currently under pasture and is used for dairy farming. The paddocks comprise of typical pasture species.

The majority of the older dwellings – often situated in elevated positions above the road – have sought to create enclosure and shelter with planting, whilst retaining an outlook, usually to the north, and / or across the valley to the east. Conversely, recent dwellings tend to be more exposed, whilst sometimes occupying similar elevated positions, but the evidence suggests that occupants seek to provide vegetative shelter from the prevailing winds relatively quickly.

The cadastral pattern to the north of State Highway 3 displays a regular and rectilinear pattern, with holdings generally between 20 – 200ha in area. To the south of the State Highway, where the underlying geology and topographical character is derived from dune processes, the cadastral pattern is less rectilinear and regular.

Within the vicinity of the Site, and within its visual catchment, swellings tend to be located close to road corridors, but scattered, although a finger of residential settlement extends to the south along Wellington Road almost as far as Whales Line Road from the Marton township.

Localised clusters of small residential or rural residential lots are evident and tend to be in the order of 2-3ha in area. This includes a cluster of 9 lots on the southern side of Kilkern Road (Lots 1-3 DP 77452, Lots 3 and 4 DP 76059, Lots 1 and 2 DP 554924, and Lot 1 DP 69154), and a cluster of dwellings on its northern side to the west of the Site (Lots 1 and 2 DP 75160, and Lots 1 and 2 DP 90299).

To the south and close to State Highway 3, a larger area of rural residential development is accessed from the northern side of McHardie Road. As described above, the majority of dwellings within these lots have established shelter plantings around the buildings, but seek to retain a north eastern outlook

The Site is not affected by any Outstanding Natural Landscape or Outstanding Natural Feature overlays, but a number of forest remnants are identified as Significant Natural Areas.

It is understood that no sites of archaeological or cultural value are situated within the subject Site.

The Site is partially visually contained by landform to the west and south, with the patterning of subtle north west – south east ridges offering containment from these quadrants. The ridge which is aligned along the north eastern boundary of the Site precludes views from Whales Line Road, but does facilitate longer views of elevated ridge tops within the Site from the north and north east.

Views to the northern edge of the Site – being the north facing flank of the aforementioned ridge – are possible from Wellington Road for a distance of some Dwellings located on this ridge, and accessed from Whales Line Road to the north west of the Site also offer views to the south east into and across the Site and are typically separated by a distance of between 500 – 2,500m.

Views to the Site from Pukepapa Road, to the west, are not possible, nor are views from the western end of Kilkern Road (refer to photo 13). As is illustrated by photos 14, 15 and 16, the Site is visible from the middle section, and the eastern end of Kilkern Road, and from dwellings accessed from Kilkern Road. This includes the clusters of rural residential properties located to the north and south of the road in its mid-section.

From the south east, the Site is visible from the western end of Read Road, from McHardie Road (at its north eastern end), and from properties accessed from this north eastern end of McHardie Road (refer to photos 17 and 18).

The southern portion of the Site is visible from the balance of Read Road where it borders the Site, north east to its junction with Wellington Road (refer to photos 19, 20, 21 and 22). Views are also possible from Wellington Road to the south east, when travelling north toward Marton, and from properties accessed from this road refer to photo 23).

Wellington Road, between its junctions with Read Road and Whales Line Road offers direct views into the Site, and longer views from the Rangitikei valley are possible from the south east.

In summary, the Site and its valley floor setting has been previously and significantly modified with respect to its vegetation cover and hydrology and the proposal will result very limited changes in its biotic and abiotic attributes. The change in the perceptual attributes will be of greater substance whilst the anticipated change in the associative attributes will be very small.

Overall it is the opinion of the author that the potential adverse landscape effects will be low.

With respect to visual amenity effects, the level of effects on individuals is – for the majority of individuals – assessed as being low (less than minor). For users of Wellington Road, the level of effect is assessed as being low to moderate (minor) during the construction phase and in the short term, diminishing to very low in the longer term (refer to Attachment 1).

It is assessed that occupants of a number of dwellings on Kilkern Road will experience a range of potential adverse effect that is minor or more than minor. In some cases, the level of potential adverse effect is likely to remain more than minor over the longer term.

Yours sincerely,



Simon Cocker



ATTACHMENT 1 – Potential adverse visual amenity effects

Address	Legal desc.	Comment	Distance	Const.	Short term	Long term
Users of Users of Wellington Road						
		Travelers on Wellington Road heading south have the potential to gain long views to the Site over a distance of some 1km as the road crests a rise, then descends to the junction with Whales Line. Direct and immediate views into and west across the Site where the road adjoins its eastern boundary. When approaching from the south, the Site is glimpsed along the axis of the road for a distance of some 300m.	1km – 20m	Low to moderate	Low to moderate	Very low
Occupants of dwellings on Wellington Road to the north of the Site						
1387 Wellington Road	Lot 1 DP 389569	Dwelling principally oriented to the north but screened with vegetation from the west, north and south	1.4km	Very low	Very low	Very low
1407A Wellington Road	Lot 2 DP 389569	Single storey dwelling oriented to north but with an outlook across the landscape to the south. Views to Site partially blocked by vegetation	1.2km	Very low	Very low	Very low
1407B Wellington Road	Lot 3 DP 389569	Single storey dwelling oriented to north but with an outlook across the landscape to the south. Views to Site partially blocked by vegetation.	1.1km	Very low	Very low	Very low
1410 Wellington Road	Lot 2 DP 79204	Dwelling amongst cluster of accessory and service buildings. Views to Site blocked.	1.3km	Nil	Nil	Nil
-	Lot 3 DP 574139	Undeveloped lot with long views to south and site.	1.3km	Very low	Very low	Very low
-	Lot 2 DP 574139	Undeveloped lot with long views to south and site.	1.3km	Very low	Very low	Very low
-	Lot 1 DP 574139	Undeveloped lot with long views to south and site.	1.3km	Very low	Very low	Very low
1447 Wellington Road	Lot 1 DP 371680	Dwelling enclosed by vegetation with restricted outlook to north and outlook to . Outdoor living on north east side of building	800m	Nil	Nil	Nil
1453 Wellington Road	Lot 2 DP 371680	Dwelling oriented to east and north east, but with restricted views over the rural landscape to the south. Views to south west and west blocked by vegetation (hedge).	800m	Nil	Nil	Nil
1448 Wellington Road	Lot 1 DP 58124	Dwelling situated on low ridge set back from the west side of Wellington Road, and to the north of the Site. Main outlook to north west, with outdoor living area on north eastern end of building. Views over the rural landscape to south	900m	Low	Low	Low
1547 Wellington Road	Lot 3 DP 405518	Dwelling located to east of road near junction with Whales Line. Set within established garden and bordered by lawns to west and north, but views to west, south west and south screened by vegetation.	88m	Very low	Very low	Very low
1618 Wellington Road	Lot 5 DP 10517, Lot 4 DP 10517	Dwelling within the Site		-	-	-
1646 Wellington Road	Lot 5 DP 10517, Lot 4 DP 10517	Dwelling within the Site		-	-	-
1751 Wellington Road	Part Lot 1 DP 10826	Single storey dwelling screened on its western and north western side by	820m (to south west)	Low	Low	Very low

		vegetation. Oriented to the east, the dwelling also offers views across Wellington Road and rural landscape to the south west				
1760 Wellington Road	Lot 2 DP 541765	Dwelling contained on its western, south western and southern sides by vegetation and buildings. No view to the Site	470m (closest point)	Nil	Nil	Nil
1786 Wellington Road	Lot 1 DP 78373	Two storey dwelling located close to, and slightly above Wellington Road on its northern side, but screened from the Site by vegetation.	900m	Nil	Nil	Nil
1817 Wellington Road	Lot 1 DP 77788	Single storey dwelling located close to, and slightly above Wellington Road, but screened from the Site by vegetation.	950m	Nil	Nil	Nil
1844 Wellington Road	Part Lot 1 DP 47605	Two storey dwelling located on crest of low ridge with expansive outlooks through all quadrants across the rural landscape	1km	Low	Low	Low
Users of Whales Line Road						
		Direct views into north eastern portion of Site when receptor is close to junction with Wellington Road. Balance of Site screened by low ridge. To the west of entrance to #45 (a distance of some 400m), the Site is screened by landform.	20m	Low	Very low	Nil
Occupants of dwellings on Whales Line Road						
45 Whales Line	Lot 1 DP 75075	Single storey dwelling, elevated slightly above the level of the road with views to the south across the Site	130m	Low	Low	Very low
95 Whales Line	Lot 2 DP 10517	Single storey dwelling elevated on the low ridge above the level of the road. Dwelling oriented to the north, and benefits from views across the rural landscape to the north. Views to the south blocked by sheds, tanks and vegetation	600m	Nil	Nil	Nil
157 Whales Line	Part Lot 1 DP 10517	Single storey dwelling elevated on the low ridge above the level of the road. Dwelling oriented to the north, but also with an outlook to the south and south east. Views from the dwelling are constrained by vegetation within the garden.	1.3m	Low	Low	Very low
201 Whales Line	Lot 1 DP 72636	Single storey dwelling elevated on the low ridge above the level of the road. Dwelling oriented to the west and north west, with outdoor living in the northern eastern corner. Views to the south east partially screened by vegetation and agricultural buildings.	1.7km	Very low	Very low	Nil
269 Whales Line	Part Lot 1 DP 42637	Single storey dwelling visually contained by vegetation within established garden.	2.3km	Nil	Nil	Nil
Users of Kilkern Road						
		Expansive views across rolling landscape within Site where the road is aligned along its boundary to south. Views from road when travelling east – continuous for a distance of 300m, and before that point, intermittently as the road crests and dips over a series of low ridges. In excess of 1km, landform screens much of the Site, although the Site is visible along the axis of the road	20m – 1.5km.	Low	Moderate to low	Very low
Occupants of dwellings on Kilkern Road						
204 Kilkern Road	Lot 3 DP 554924, Part Lot 1 DP 14016, Lot 2 DP 541769	Single storey dwelling elevated above road and set within established gardens. Outdoor living located on north side of dwelling. Long views possible across the	470m	Low to moderate	Moderate	Low to moderate

		rural landscape to the north, east and north east.				
196 Kilkern Road	Lot 1 DP 69154	Single storey dwelling elevated above road and set within established gardens. Outdoor living located on north eastern side of dwelling. Long views possible across the rural landscape to the north, east and north east	600m	Low to moderate	High	Moderate
180 Kilkern Road	Lot 2 DP 554924	Lot undeveloped. Long views possible from lot to the north and to the north east along stream valley toward Site	850m	Low to moderate	High	moderate
178 Kilkern Road	Lot 1 DP 554924	Lot contains a shed. Long views possible from lot to the north and to the north east along stream valley toward Site	850m	Low to moderate	Moderate	Low to moderate
156 Kilkern Road	Lot 4 DP 76059	Single storey dwelling elevated above road and set within established gardens. Outdoor living located on north eastern side of dwelling. Long views possible across the rural landscape to the north, east and north east, although views to north east and east filtered by trees and shrubs on eastern curtilage of dwelling.	1km	Low	Low to moderate	Very low
144 Kilkern Road	Lot 3 DP 76059	Single storey dwelling at similar level to Kilkern Road. Long views across the rural landscape to the north, but views to north east and east are screened by vegetation.	1km	Low	Low	Low
142 Kilkern Road	Lot 3 DP 77452	Dwelling set back from Kilkern Road to south of #132 and located on ridge crest. Long views across the rural landscape to north and north east possible and east possible	1.1km	Low	Low to moderate	Low
132 Kilkern Road	Lot 2 DP 77452	Single storey dwelling elevated slightly above Kilkern Road and set within established garden. Long views across the rural landscape to north and north east possible and east possible..	1.2km	Low	Low	Low
122 Kilkern Road	Lot 1 DP 77452	Single storey dwelling elevated slightly above Kilkern Road. Outdoor living on south western side of dwelling, but long views across the rural landscape to north and north east possible. Views to east blocked by vegetation on boundary with adjoining property.	1.3km	Low	Low	Low
119 Kilkern Road	Lot 1 DP 80890	No dwelling.	1.5km	Low	Low	Very low
117 Kilkern Road	Lot 2 DP 90299	No Dwelling	1.5km	Low	Low	Very low
101 Kilkern Road	Lot 1 DP 90299	Single storey dwelling oriented to the north, with vegetative screen on eastern side. No Views to Site	1.5km	Nil	Nil	Nil
77 Kilkern Road	Lot 2 DP 75160, Lot 3 DP 75160	Single storey dwelling set within established garden and oriented to north. Screened on eastern side by vegetation.	1.7km	Nil	Nil	Nil
Users of Read Road, and McHardie Road						
		Low number of users. Small 'sliver' of Site visible when traveling north west toward Site from a distance of some 800m. Landform screens Site as the user approaches the 90° 'dog-leg' in the road, then becoming visible again as the user approaches the junction with Kilkern Road.	800m - 300m. 20m	Very low	Low	Very low
Occupants of dwellings on McHardie Road						
291 McHardie Road	Lot 1 DP 63197	Single storey dwelling set within expansive lawned gardens and oriented to north and west. Long views across rural landscape to	500m	Low	Low	Very low

		Site. Small 'sliver' of Site visible due to screening by landform.				
275 McHardie Road	Lot 1 DP 399432	Single storey dwelling set within expansive lawned gardens and oriented to north and west. Long views across rural landscape to Site. Lot boundaries to road and access (north west) planted with leylandii shelterbelt, but glimpse views to Site possible through gap. Small 'sliver' of Site visible due to screening by landform.	700m	Very low	Very low	Nil
262 McHardie Road	Lot 1 DP 404292	Single storey dwelling set within expansive lawned gardens and oriented to north and west. Long views across rural landscape to Site. Small 'sliver' of Site visible due to screening by landform.	650m	Low	Low	Very low
242 McHardie Road	Lot 1 DP 450739	Single storey dwelling set within expansive lawned gardens and oriented to north and west. Long views across rural landscape to Site. Small 'sliver' of Site visible due to screening by landform.	900m	Very low	Very low	Nil

Table 1: Summary of potential visual amenity effects