

6. Layout Design Iteration



Baseline Photography: Viewpoint 30: Dunoon

6. Layout Design Iteration

The design of the Proposed Development has undergone four principal layout iterations:

- **Scoping Layout - Layout A, 19 turbines with a maximum height to blade tip of 200 m (Figure 9);**
- **Layout B - ten turbine layout, with a maximum height of 250 m to blade tip, informed by a detailed landscape appraisal and early results of onsite surveys and consultant inputs (Figure 10);**
- **Layout C - ten turbine refined layout with a maximum height of 250 m, reflecting further baseline environmental surveys and including site access, internal access, and a preliminary design of ancillary infrastructure (Figure 11); and**
- **Application Layout - Layout D, ten turbines with a maximum height of 250 m and a detailed design of ancillary infrastructure and access route (Figure 12).**

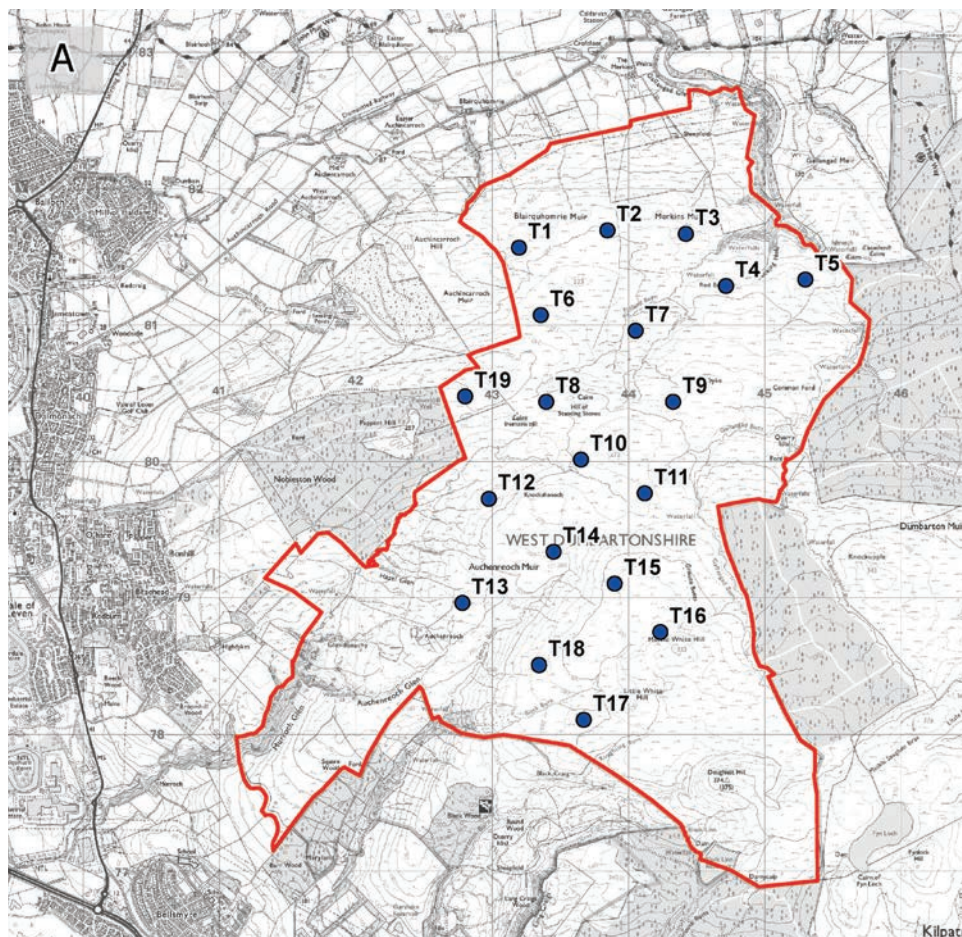


Figure 9: Scoping Layout (Layout A)

Scoping Layout - Layout A

(19 turbines, maximum height to blade tip of 200 m)

This Scoping Layout design was developed prior to the completion of detailed site surveys and was based on information available at the time,

including baseline environmental data recorded in the Merkins Wind Farm Environmental Statement and collected from desktop studies. In addition, technical constraints were considered, such as turbine separation distances of approximately 6 and 4 rotor diameters in downwind and cross wind directions respectively (based on a 162 m rotor) and the anticipated wind variation over the Site with topography. The Scoping Layout had 19 turbines with a maximum blade tip height of 200 m. These turbines were distributed across the Site and represented the maximum number of turbines that could be fitted onto the Site within the parameters of onsite constraints such as watercourses and steep slopes.

When the appearance of the Scoping Layout was reviewed, it became apparent that the distribution of turbines across the Site was leading to a development that extended widely across the landform of the Kilpatrick Hills and therefore across many views, with notable variations in the ground levels of the turbine bases. The arrangement of turbines also led to eye-catching clustering and overlapping of turbines in some views, with gaps appearing between groups of turbines.

As a result, a layout review was carried out with the chief objective of improving the appearance and fit of the Proposed Development in the landscape and visual context. This recommended the following actions:

- **removal of turbines from the northern part of the Site;**
 - to reduce the extent of the wind farm across almost all views, including those from key sensitive routes, settlements and residential properties as well as LLTNP and the Loch Lomond NSA;
 - to increase the distance of the wind farm from residential properties that lie to the north of the Site;
 - to increase the distance of the wind farm from LLTNP, Loch Lomond NSA, West Highland Way, John Muir Way and National Cycle Route 7;
 - to remove turbines from the part of the Site that has the lowest landform elevation;
- **removal of turbines from the southern part of the Site;**
 - to remove the most prominent turbines (the southern part of the Site is the most elevated area);
 - to reduce the extent of the wind farm across a number of views, including those from key sensitive routes, settlements and residential properties as well as LLTNP and the Loch Lomond NSA;
 - to increase the distance of the wind farm from a number of important locations, including Overtoun House, Dumbarton Rock and settlements that lie to the south of the Firth of Clyde;
- **rationalisation of turbines in the central part of the Site;**
 - to reduce the clustering and overlapping of turbines;
 - to increase the distance of turbines from sensitive locations around the Site;
 - to create a compact, balanced and cohesive array of turbines; and
 - to ensure relatively uniform ground levels of the turbine bases.

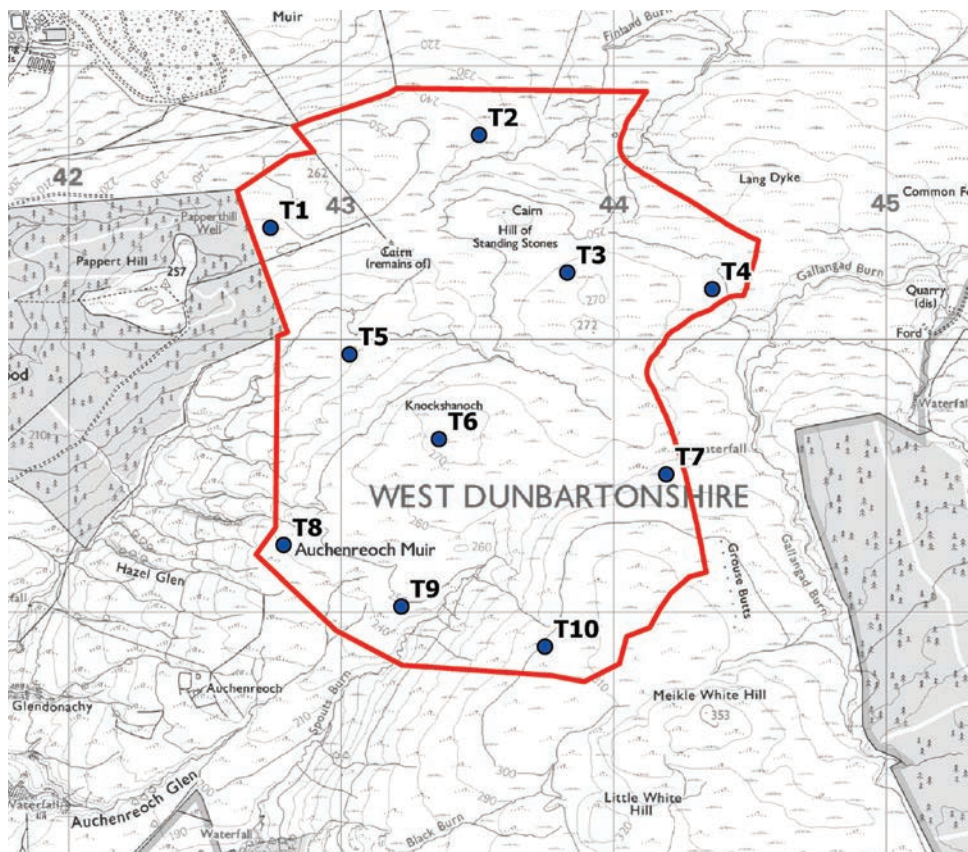


Figure 10: Layout B

Layout B

(ten turbines, maximum height to blade tip of 250 m)

Implementation of the landscape and visual actions described above in relation to the Scoping Layout led to the design of Layout B. Landscape and visual factors were a key driver of Layout B, with all other parameters also taken into consideration, and this layout represented the main landscape and visual iteration in the full design process.

Layout B comprised ten turbines that are located on the central part of the Site, with the northern and southern turbines being removed. The reduction in turbine numbers from 19 to ten allowed turbines to be located at a greater distance from residential properties and other sensitive receptors, including LLTNP and Loch Lomond NSA. The reduction in turbine numbers also reduced the overlapping and clustering of turbines, ensuring the production of a more balanced and cohesive layout that responded to the site landform.

This layout had an increased blade tip height of 250 m, which was considered appropriate in landscape and visual terms as the landform of the site is considered to have the ability to accommodate turbines of this scale, and due to the benefits arising from the reduction in turbine numbers described above.

The location and sensitivity of all identified environmental receptors were mapped in this iteration, and appropriate buffers around them were agreed between the technical specialists and project engineers. The following design principles and buffers were applied during this design iteration:

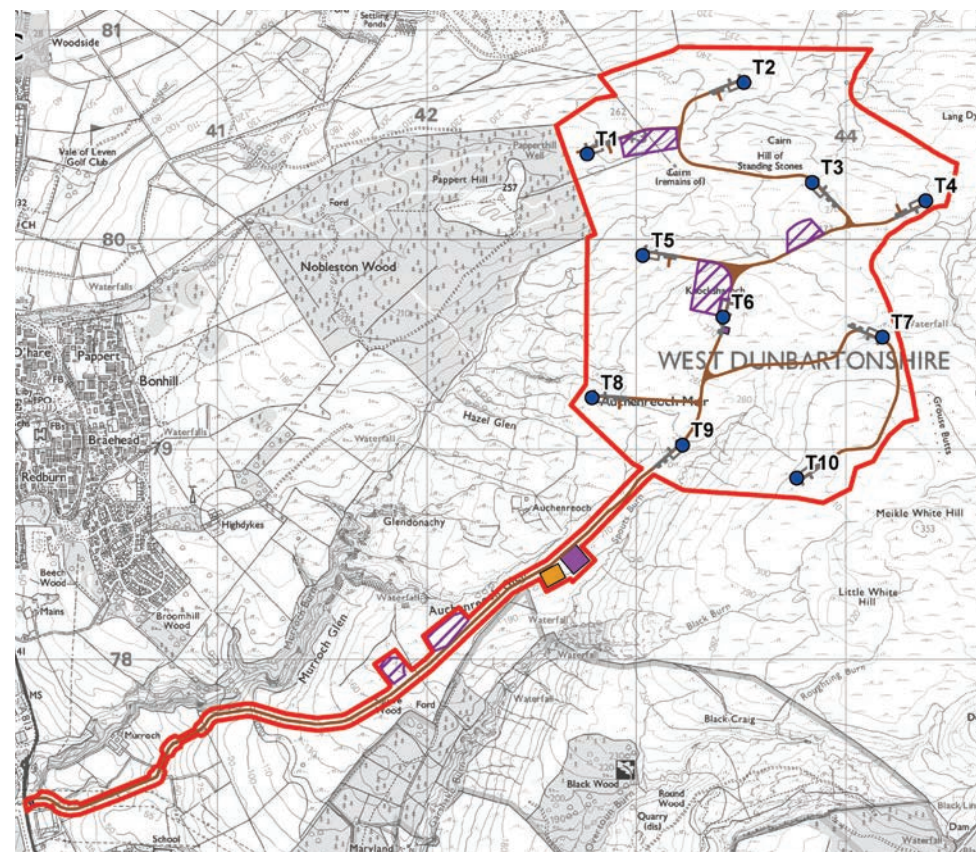


Figure 11: Layout C

- 50 m buffer from watercourses;
- turbine separation distances of approximately 6 and 4 rotor diameters in downwind and cross wind directions respectively (based on a 162 m rotor diameter);
- 30 m buffer from designated heritage assets of medium importance and 10 m buffer from non-designated heritage assets;
- avoidance of areas of deep peat (>1 m depth);
- avoidance of development on slopes greater than 15% gradient;
- avoidance of the most sensitive habitats and protected species; and
- 75 m buffer from Dumbarton Muir Site of Special Scientific Interest (SSSI).

Layout C

(ten turbines, maximum height to blade tip of 250 m)

The iteration of Layout C was chiefly concerned with micro-siting turbines and the design of site infrastructure. Landscape and visual issues were considered throughout, with layouts being tested against the viewpoints, and particularly the design viewpoints, to ensure that effects were not increased by the minor movement of turbines. The key design principles for the access track network were included as far as practicable, and infrastructure was designed to minimise new watercourse crossings.

Further survey work comprising an engineering walkover, detailed peat depth survey and a site visit to identify any woodland within and close to the Site was carried out as part of this iteration.

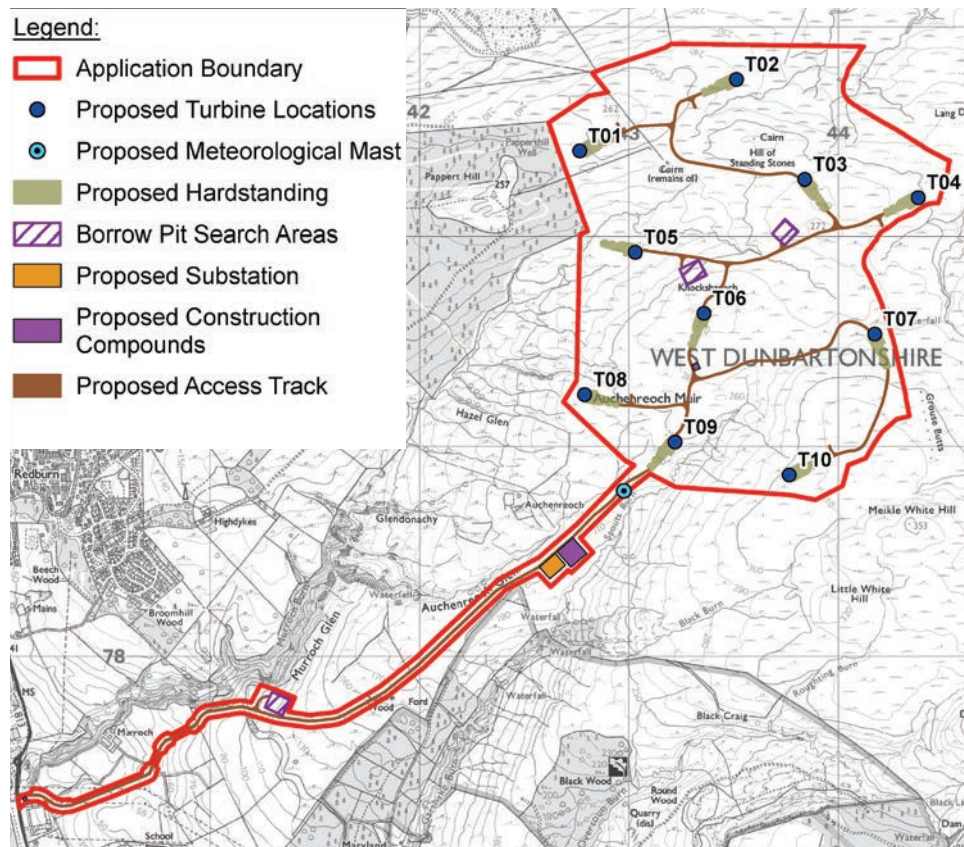


Figure 12: Application Layout (Layout D)

Layout D

(ten turbines, maximum height to blade tip of 250 m)

Layout D represents the final stage of design iteration, resulting in the Application Layout, which included finalisation of turbine locations and siting and design of ancillary infrastructure. Landscape and visual issues were considered, with the layout being tested against the LVIA viewpoints, and particularly the design viewpoints, to ensure that effects mitigated in Layout B were not undermined by the movement of turbines.

Further survey work at this stage comprised a further peat depth survey and an archaeological desk based review followed by a walkover survey. Additionally, desk-based assessments comprising a theoretical visibility mapping exercise for the proposed lit turbines to review the potential impacts and a review of Layout D by the construction design and management (CDM) principal designer and lead engineer were conducted. The Phase 2 Peat Survey further covered the turbine layout and ancillary infrastructure for deep peat, and confirmed that all turbines and ancillary infrastructure were placed outwith pockets of deep peat.

A second design workshop was held to review Layout D and to identify locations for additional ancillary infrastructure, including the substation and battery storage compound, mobilisation compounds, and potential borrow pit locations.

Site Infrastructure

In addition to the turbines, the key component parts of the Proposed Development include the following, as shown on Figure 12:

- site entrance and access track up to 9.2 km in length, accessing the Site from a new junction on the A813;
- a network of onsite access tracks and up to four associated watercourse crossings;
- sub-station/control building with parking and welfare facilities;
- energy storage equipment with a capacity up to 20 MW;
- crane hardstanding at each turbine location;
- transformers and underground cables to connect the turbines to the onsite substation;
- telecommunications equipment;
- three temporary construction compounds and laydown area; and
- three borrow pit search areas, to provide suitable rock for access tracks, turbine bases and hardstandings.

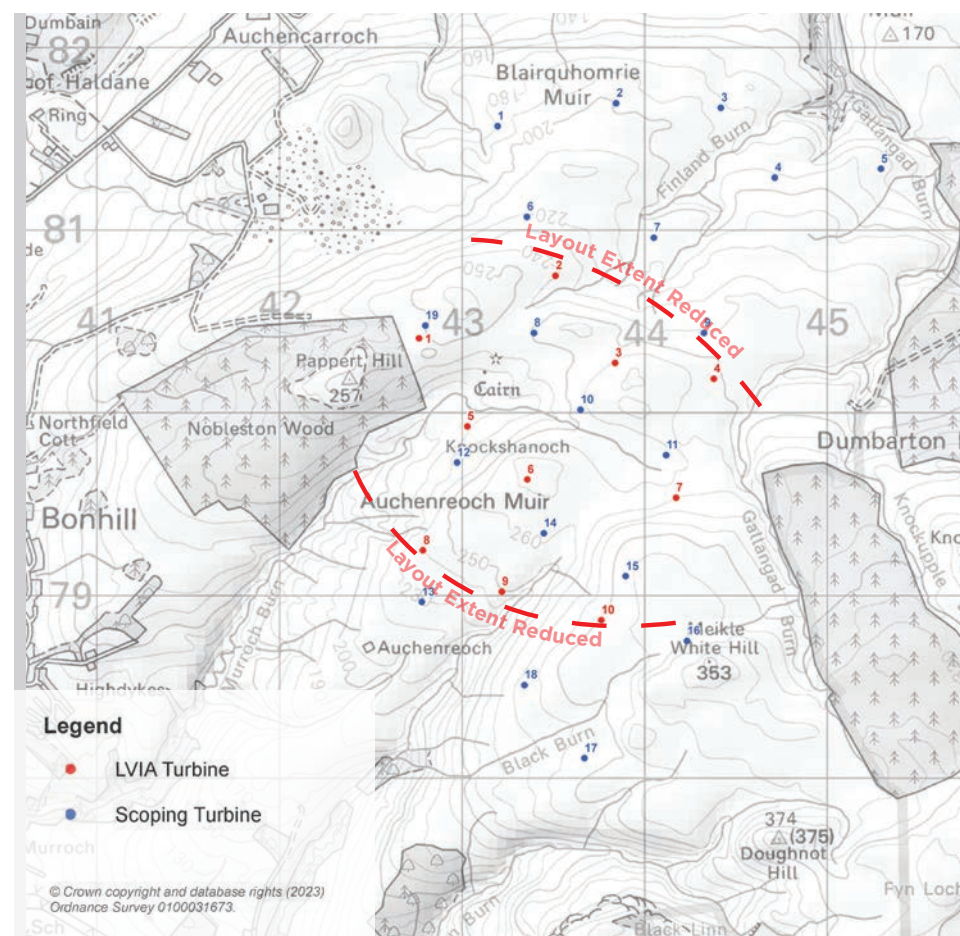


Figure 13: Layout Extent

7. Design Response





Baseline Photography: View from the west (Viewpoint 6, The Whangie) showing the large-scale, simple landform and landscape patterns of the Site

7. Design Response

The Application Layout responds to the various environmental and technical constraints and considerations. The landscape and visual considerations have been given a high priority in the process, and the Application Layout of the Proposed Development is considered to respond effectively and positively to the characteristics and qualities of the landscape and visual resource.

The Application Layout is described in the following sections in relation to the landscape and visual design considerations. A comparison is also drawn between the Scoping Layout and the Application Layout in order to demonstrate how the design considerations have been implemented and illustrations are provided so that the improvements made through the design iteration process can be seen.

The Site

It is important that the Proposed Development achieves a good fit with the Site in terms of the scale, elevation, and complexity of the landform, and the patterns of the landscape such as watercourses, field boundaries, and woodland. The following factors ensure that the Application Layout is successfully accommodated on the Site:

- The Proposed Development has a **compact footprint**, with turbines evenly spaced in arrays across the Site.
- The Site is characterised by **large-scale, simple landform** with no distinctive or prominent features. This prevents the occurrence of scale comparisons between the turbines and landform and avoids detracting from any important on-site features.
- The **topography and landscape patterns** on the Site are also **large-scale and simple**, with no complex patterns of woodland or field boundaries, for example.
- There is **limited variation in landform elevation** across the Site, ensuring that the turbine grouping appears cohesive and even.
- **Uniform moorland ground cover** across the Site also leads to a sense of cohesion.
- The **avoidance of steep slopes** in turbine placement prevents the perception of instability that can arise from ‘perched’ turbines.
- The **avoidance of local high points** prevents the prominence of specific turbines on the Site.
- The Proposed Development is **enclosed by rising landform** at its northern and southern ends, which provides containment to the Site.

The layout iteration from the Scoping Layout to the Application Layout has been highly beneficial in the mitigation of effects on the Site, for the following reasons.

- Reduction in the **area of landscape** affected by the Final Application Layout, so that the physical effects on ground cover and habitat are considerably lessened (see Figure 2).
- Reduction in the **variation in turbine base elevations**; in the Scoping Layout the base elevations ranged from 182 m to 316 m, a variation of 134 m, whereas in the Final Application Layout, the base elevations range from 220 m to 304 m, a variation of 84 m.
- Reduction in the **encroachment of turbines beyond containing landform** by the removal of the northern and southern turbines from the Scoping Layout, where turbines extended beyond logical ridgelines. This was particularly apparent to the north, where turbines ‘straggled’ down the slope of Blairquhomrie Muir.

The Interior Plateau of the Kilpatrick Hills

The Kilpatrick Hills is a large-scale upland landscape with simple landform and landscape patterns. The hills form an elevated plateau that is punctuated by several more distinctive hill landforms (most notably Duncolm) and drops steeply to the south, west and east, with a gentler slope to the north. The location of the Site within the core of the hills is of great importance in the layout design process, and the following factors are key considerations in the acceptability of the Application Layout.

- The Proposed Development is located within the **relatively uniform interior plateau** of the Rugged Moorland Hills LCT rather than the transitional edges. This avoids the perception of encroachment and ‘blurring’ of distinctiveness that can arise where turbines are located in transitional landscapes or close to boundaries between LCTs.
- The large scale, simple and unenclosed landscape of the plateau **avoids the eye-catching scale comparisons** that could arise if turbines were seen in direct association with the more complex landscape that characterises other parts of the Kilpatrick Hills.
- The Proposed Development is designed to **avoid the distinctive landforms** that characterise parts of the Kilpatrick Hills; for example, it is set well back from the eye-catching Lang Craigs, which define the southern and south-western edges of the hills, and has notable separation from the distinctive forms of Duncolm and Auchincarroch Hill.
- The **simple nature of the skyline** of this part of the Kilpatrick Hills is reflected in the layout and appearance of the Proposed Development, ensuring that the turbines have a simple visual relationship with the landform.

The layout iteration from the Scoping Layout to the Application Layout has been highly beneficial in the mitigation of effects on the Kilpatrick Hills for the following reasons.

- The Scoping Layout was not contained within the interior plateau but extended considerably **closer to the northern and north-eastern edges** of the Rugged Moorland Hills, leading to **detrimental encroachment into adjoining lower-lying and more complex landscapes**.
- The Scoping Layout was positioned **considerably closer to notable features** of the Kilpatrick Hills, including Auchincarroch Hill, Doughnot Hill and Meikle White Hill, detrimentally diminishing the importance of these focal points in the landscape.
- There is a **considerable reduction in the area of the Kilpatrick Hills that will be directly, physically affected by the Proposed Development** due to the much smaller area occupied by the Application Layout.

The location of the Proposed Development in the interior plateau is important in relation to views and visual amenity as well as landscape character, and this is illustrated subsequently in this report.

Loch Lomond and the Trossachs National Park and Loch Lomond National Scenic Area

The effects of the Proposed Development on LLTNP and the Loch Lomond NSA have been a key consideration throughout the design process, in terms of effects on the Special Landscape Qualities (SLQs) of the designated areas as defined by NatureScot, as well as effects on views from the designated areas. The following factors ensure that the Application Layout can be accommodated into the landscape without detrimentally affecting the overall integrity of LLTNP or the Loch Lomond NSA.

The Proposed Development lies outwith LLTNP and the NSA and will have no direct effects on the physical qualities of the designated areas.

- The LVIA has indicated that **the effects of the Proposed Development on SLQs would be overwhelmingly not significant**, with significant effects on just two SLQs. Of the relevant 30 SLQs, the Proposed Development will have a negligible effect on 17, a low effect on ten and a medium-low effect on three, which represents a very limited effect.
- The ZTV indicates that **theoretical visibility of the Proposed Development from LLTNP and the NSA is restricted to limited parts**, with the majority of both areas, and especially the large area of LLTNP, having no visibility of the Proposed Development.
- The Proposed Development would be seen in the **least remarkable and eye-catching part of the setting to Loch Lomond**, where landform is seen as relatively uniform, large-scale and simple. This ensures that **the dramatic scenery that surrounds other aspects of the loch would remain unaffected**.

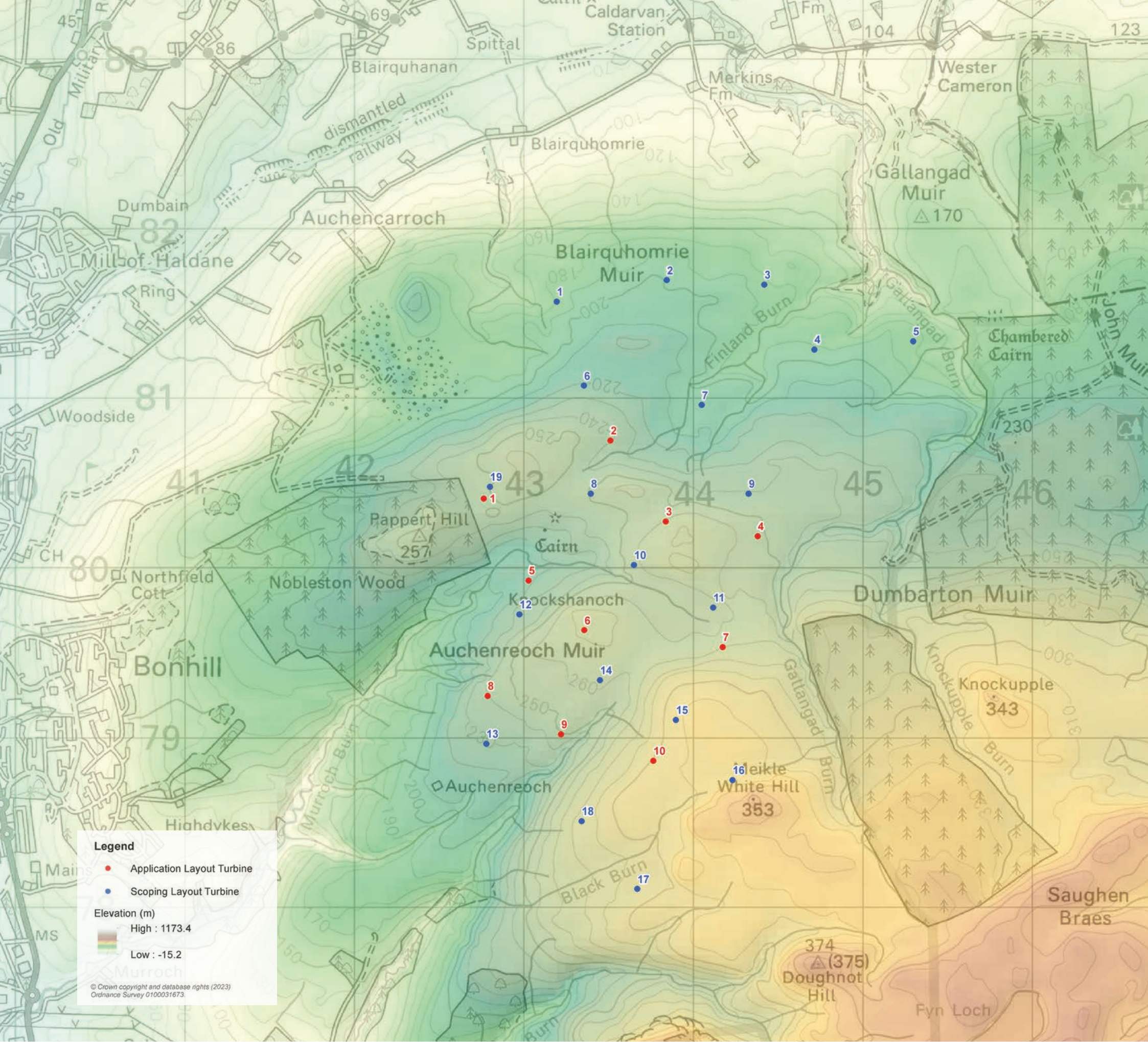


Figure 14: Site Landform

- The Loch Lomond NSA and the Loch Lomond area of LLTNP is an enclosed loch-based landscape, inherently contained and focussed on the waterbody and its close, enclosing, surroundings. While external influences are relevant to the characterisation of the landscape, **the introverted nature of the designated areas ensures that they would retain integrity despite the addition of the external feature of the Proposed Development, which is peripheral to the key focus of the landscape.**
- The Proposed Development has been designed to have a **balanced, logical and cohesive appearance** when seen from key viewpoints within LLTNP and the Loch Lomond NSA (e.g. Balmaha, Ben Lomond and Conic Hill).

The layout iteration from the Scoping Layout to the Application Layout has been highly beneficial in relation to effects on LLTNP and the Loch Lomond NSA.

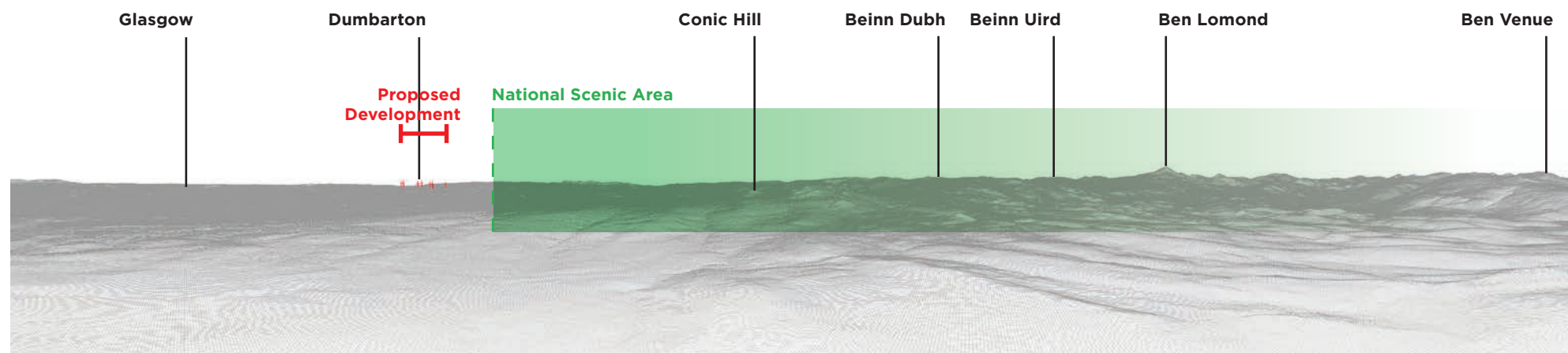
- The **distance between the nearest turbine and LLTNP has almost doubled**, increasing from 1 km in the Scoping Layout to 1.9 km in the Final Application Layout.
- The **distance between the nearest turbine and Loch Lomond NSA has also increased** from 3.3 km in the Scoping Layout to 3.7 km in the Final Application Layout.
- The removal of northern turbines and location of the Final Application Layout within the interior plateau of the hills **avoids the encroachment towards LLTNP** that was apparent with the Scoping Layout.
- Removal and rationalisation of turbines has resulted in a **greatly improved appearance of the Proposed Development when seen from key locations** in LLTNP and the Loch Lomond NSA.

An Unremarkable Aspect of the View

The landscape setting around much of Loch Lomond is spectacular, eye-catching and dramatic, as reflected in the designation of the Loch Lomond NSA and LLTNP. Views from the loch and the areas around it, including low-level views as well as elevated hilltop views, almost always include a diverse and highly attractive combination of mountains, glens, water, islands and woodland. These elements of the views generally lie within LLTNP, which covers a vast area of landscape, including several hill ranges and a number of other lochs as well as the area around Loch Lomond itself.

In this context, the relatively low-lying, simple and large-scale landform of the Kilpatrick Hills, which lie outwith LLTNP and the Loch Lomond NSA, is unremarkable and does not form an eye-catching focal point in views. In this respect, the location of the Site within the Kilpatrick Hills is of key importance as it means that the Proposed Development will not be seen in the direct context of the spectacular setting to the loch. This allows the dramatic landscapes of LLTNP to remain as focal points in views, unaffected by the Proposed Development, and also ensures that the Proposed Development will be seen in a landscape setting that is of suitably large and simple scale, and with a relatively uniform skyline.

This is illustrated in Figures 16 to 20 on the following pages, which show how the Proposed Development relates to the wider outlook from key viewpoints, and where it will lie in relation to the 'focus of the view' – the most eye-catching and scenic parts of views.

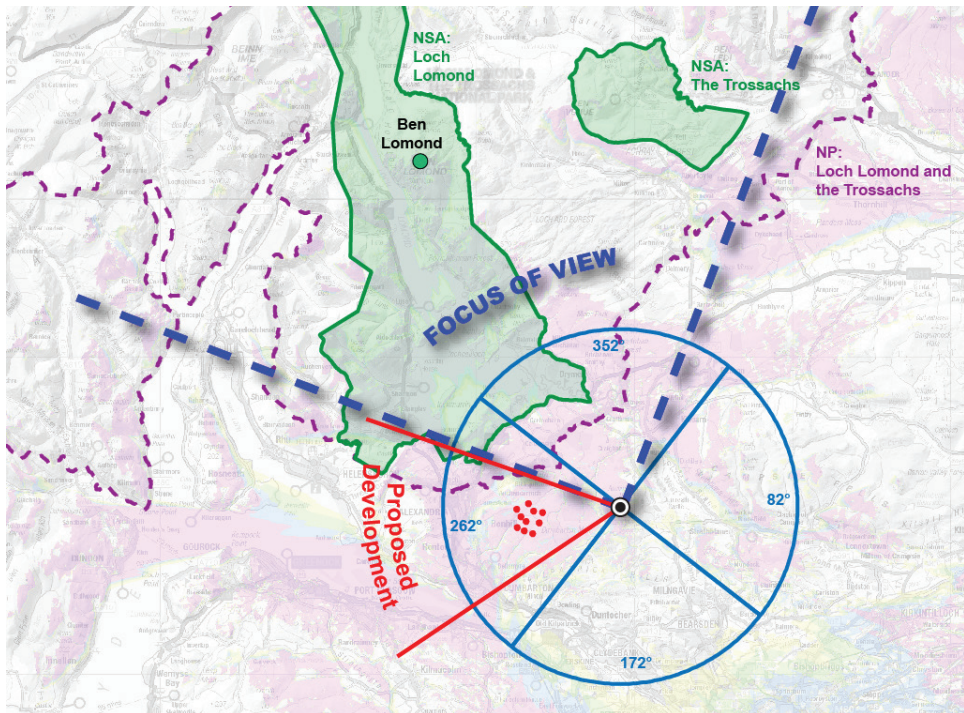


Indicative Oblique Wireline View looking south-west

Figure 15: Indicative Oblique Wireline



Baseline Photomontage: View from Balmaha (Viewpoint 17) showing the balanced, logical and cohesive appearance of the Proposed Development



LOCATION

NTS



PHOTOMONTAGE: **Proposed Development**

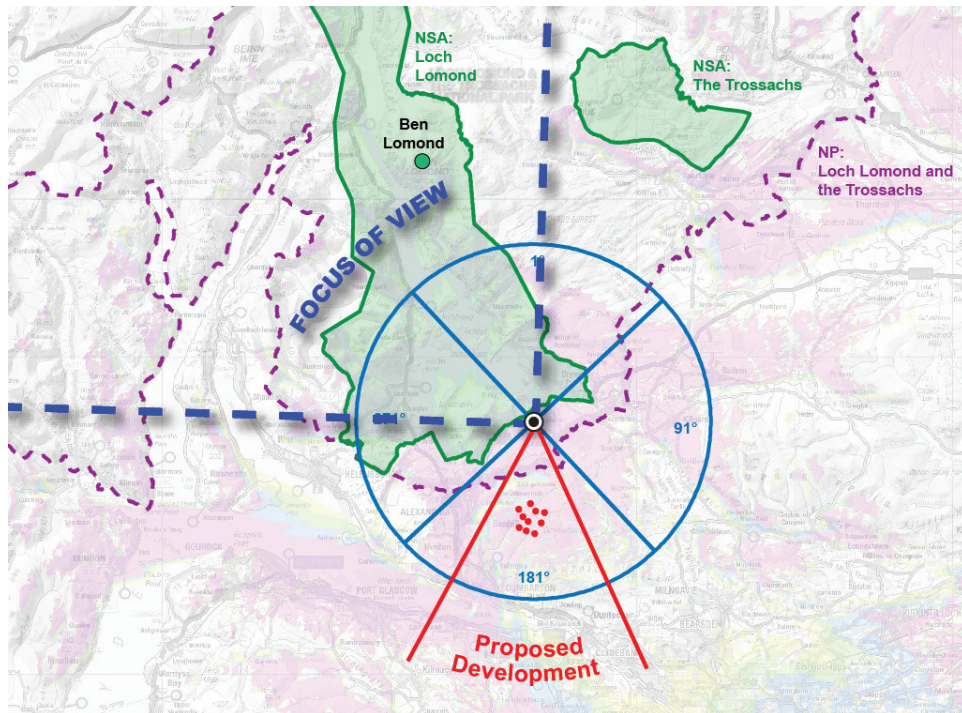
53.5° (planar projection)



BASELINE PHOTOGRAPHY: **Focus of view**

90° (cylindrical projection)

Figure 16: View Focus: VP6 The Whangie



LOCATION

NTS



PHOTOMONTAGE: **Proposed Development**

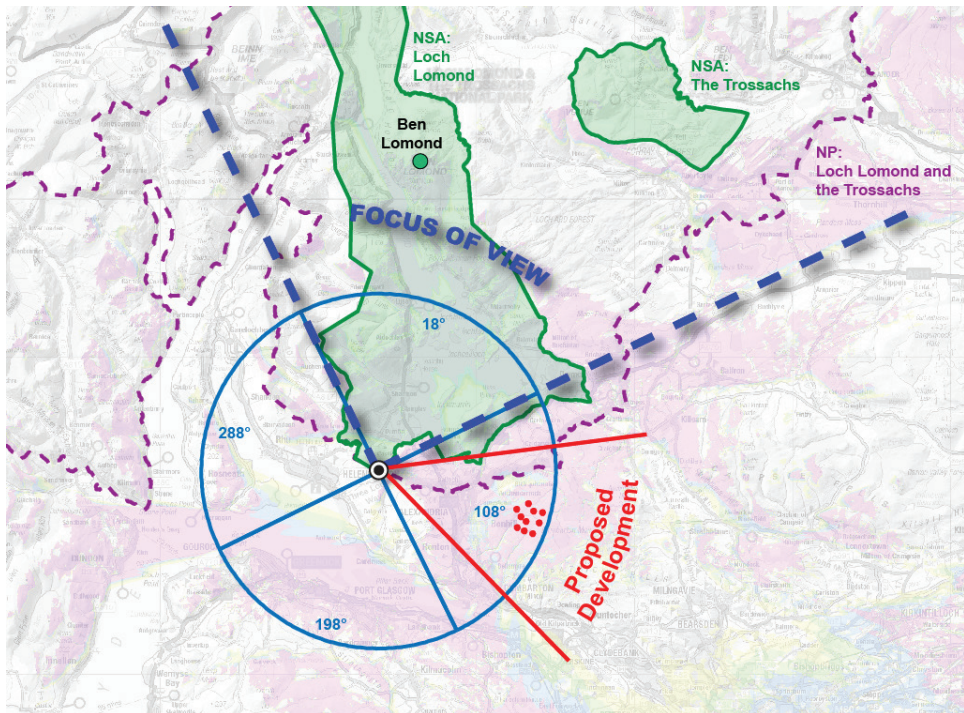
53.5° (planar projection)



BASELINE PHOTOGRAPHY: **Focus of view**

90° (cylindrical projection)

Figure 17: View Focus: VP7 Duncryne Hill



LOCATION

NTS



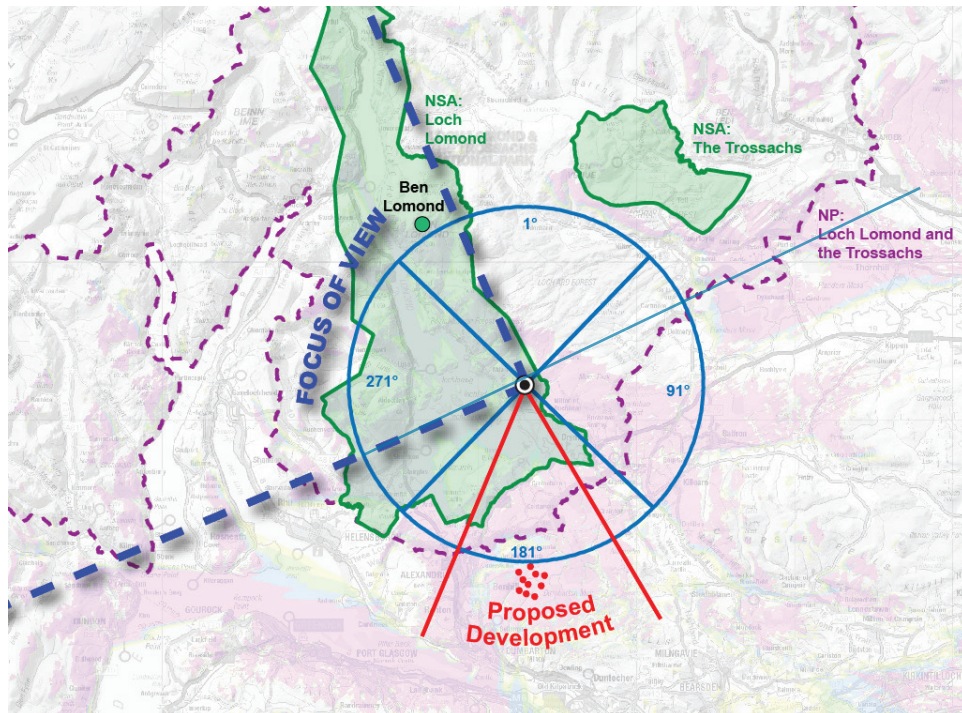
PHOTOMONTAGE: **Proposed Development**

53.5° (planar projection)



BASELINE PHOTOGRAPHY: **Focus of view**

90° (cylindrical projection)



LOCATION

NTS



PHOTOMONTAGE: **Proposed Development**

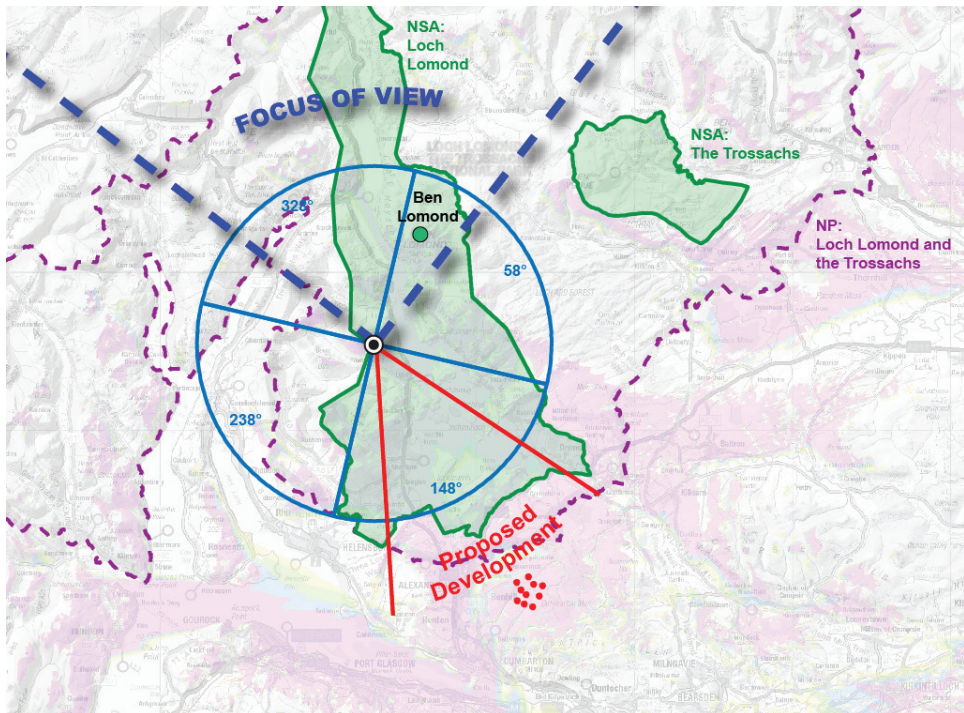
53.5° (planar projection)



BASELINE PHOTOGRAPHY: **Focus of view**

90° (cylindrical projection)

Figure 19: View Focus: VP19 Conic Hill



LOCATION

NTS



PHOTOMONTAGE: **Proposed Development**

53.5° (planar projection)



BASELINE PHOTOGRAPHY: **Focus of view**

90° (cylindrical projection)

Figure 20: View Focus: VP26 Beinn Dubh

Screening by Woodland Fringes

Loch Lomond is characterised by woodland of various types, including extensive areas of naturalised woodland around the loch shores and islands as well as on the lower slopes of the enclosing landform around the loch. One of the SLQs of LLTNP and the Loch Lomond NSA is *'Banks of broadleaved woodland'*, which is described as follows:

"Broadleaved woodlands clothe most of Loch Lomond's banks, growing alongside the open water and on the lower and middle hill slopes up to about 500m. The upper tree-line is often clearly visible along the loch's length, accentuating the loch's linearity. Woods on the upper slopes can be stunted and more scattered, giving an appearance of trees hanging on to less accessible rock outcrops and gullies.

The substantial woodlands around the shores and on the islands create a distinct sense of place and a luxuriant sense of growth, fertility and shelter in comparison with the high, rugged mountain tops and rough, uneven, steep and often deeply fissured hill slopes.

Frequently, woodlands or groups of trees fill the promontories jutting out into the water, emphasising the sinuous loch shore, and contributing to low-lying watery views receding into the distance. Woodlands structure the landscape further by framing near and distant views to opposite shores and high mountain tops. Such views and images are widely appreciated and popularly used on postcards and in literature..."

In many places, this woodland screens and filters visibility from the loch shores and islands, so that longer outwards views are intermittent and not easily accessible. For example, Viewpoint 11, Inchcailloch, illustrates the higher type of visibility towards the Site that could be found on this accessible island but is still heavily screened by woodland. Views to the north from Inchcailloch are more open as they show the spectacular outlook across the northern part of the loch, but views to the south, towards the Site, are very intermittent and limited.

Viewpoint 12, Endrick Viewpoint, provides another example of woodland screening on the loch shores, while Viewpoint 23, Luss Campsite, shows how woodland on the islands can screen views from further north on the loch.



PHOTOMONTAGE: Viewpoint 11 Inchcailloch

53.5° (planar projection)



PHOTOMONTAGE: Viewpoint 12 Endrick

53.5° (planar projection)

Viewpoint 24, Salloch, is a rare example of a clear view from the loch shore. A number of possible viewpoint locations were investigated prior to the location of this photograph, all of which were discarded due to lack of or limited visibility as a result of woodland screening. The final viewpoint location is not on a recognised path, picnic site or campsite, but is accessed by a small, informal route off the WHW, which is itself heavily screened by woodland.

Sensitive Views

There are a number of potential visual receptors in the study area, of which the most sensitive have been considered in the design process. These include:

- long distance walking/recreational routes (e.g. the West Highland Way, the John Muir Way, waterborne routes on Loch Lomond, and National Cycle Route 7);
- settlements (e.g. the closer proximity settlements of Dumbarton and Vale of Leven, settlements to the south of the Clyde such as Langbank and Port Glasgow, and smaller settlements around Loch Lomond such as Balmaha, Drymen, Gartocharn and Luss);
- walking destinations (e.g. Conic Hill, Ben Lomond, Doughnot Hill, Dumgoyne Hill, Duncryne Hill, The Whangie, the Kilpatrick Hills and the Luss Hills); and
- visitor attractions (e.g. Balmaha, Dumbarton Rock, Finlaystone Estate, Luss, and the waterbody of Loch Lomond and its islands).

Settlements and routes that lie within 10 km of the Site are shown on Figure 5, which also shows the Scoping Layout and Application Layout. This illustrates that:

- separation distance between the turbines and the John Muir Way/NCR7 has increased considerably in the Application layout;
- separation distance between the turbines and settlements of Dumbarton, Croftamie and Gartocharn has increased considerably in the Application layout; and
- separation distance between the turbines and other routes (including the WHW and West Highland Line Railway) and other settlements has also increased in the Application layout.

The design iteration has also made a considerable difference to the appearance of the Proposed Development at a number of key sensitive viewpoints. Examples of this are shown in the illustrations on the following pages. These illustrations include baseline photographs, wirelines and photomontages from the eleven design viewpoints, which are considered to be of particular importance in the design process. These are:

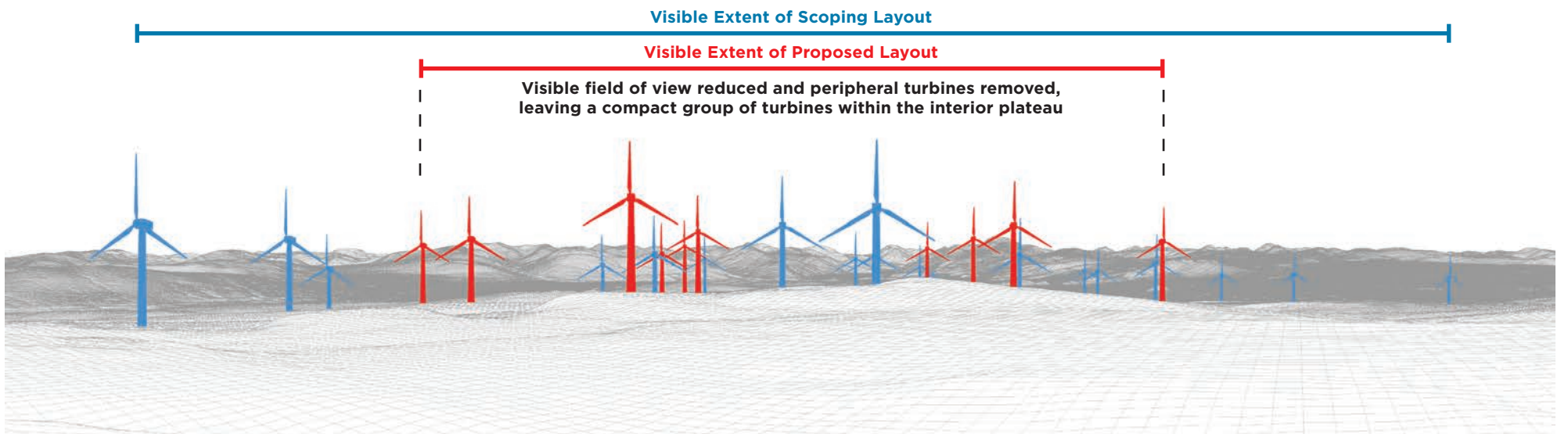
- Viewpoint 1 Doughnot Hill
- Viewpoint 2 Minor road (John Muir Way/NCR 7) north of site
- Viewpoint 6 The Whangie
- Viewpoint 7 Duncryne Hill
- Viewpoint 8 Dumbarton Rock
- Viewpoint 9 Cameron House seaplane jetty
- Viewpoint 16 Dumgoyne Hill
- Viewpoint 17 Balmaha
- Viewpoint 19 Conic Hill
- Viewpoint 23 Luss Campsite
- Viewpoint 29 Ben Lomond

The wireline illustrations show the Scoping Layout of the Proposed Development as well as the Application Layout in order that the benefits of the design process can be clearly seen.



BASELINE PHOTOGRAPHY

90° (cylindrical projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

90° (cylindrical projection)



PHOTOMONTAGE: Proposed Layout

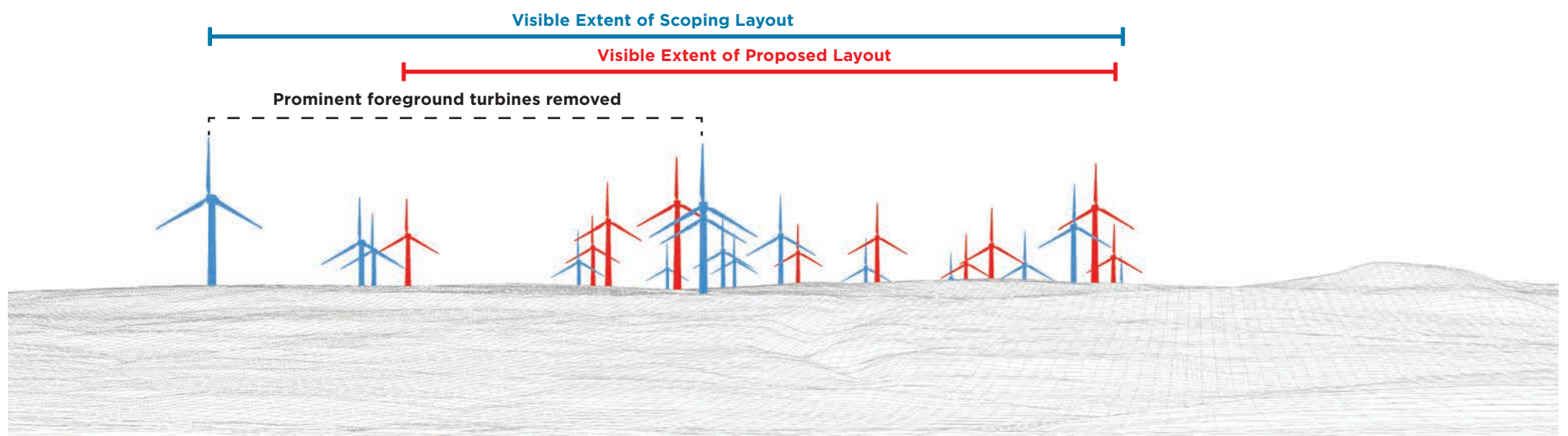
53.5° (planar projection)

Figure 21: Layout Comparison: VP1 Doughnot Hill



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

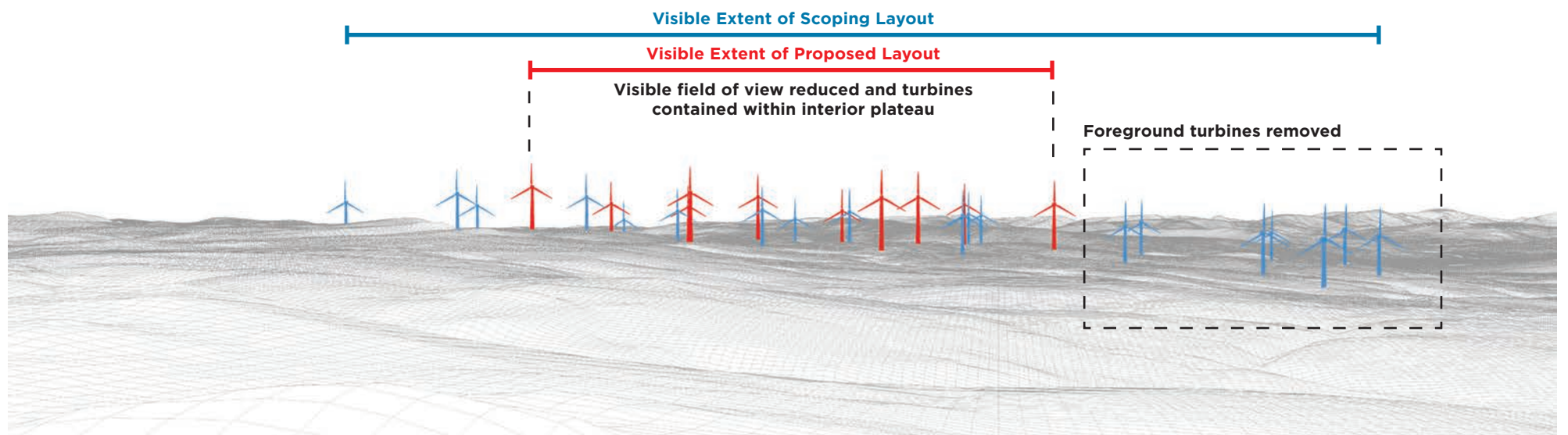
53.5° (planar projection)

Figure 22: Layout Comparison: VP2 Minor road (John Muir Way/NCR 7) north of site



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

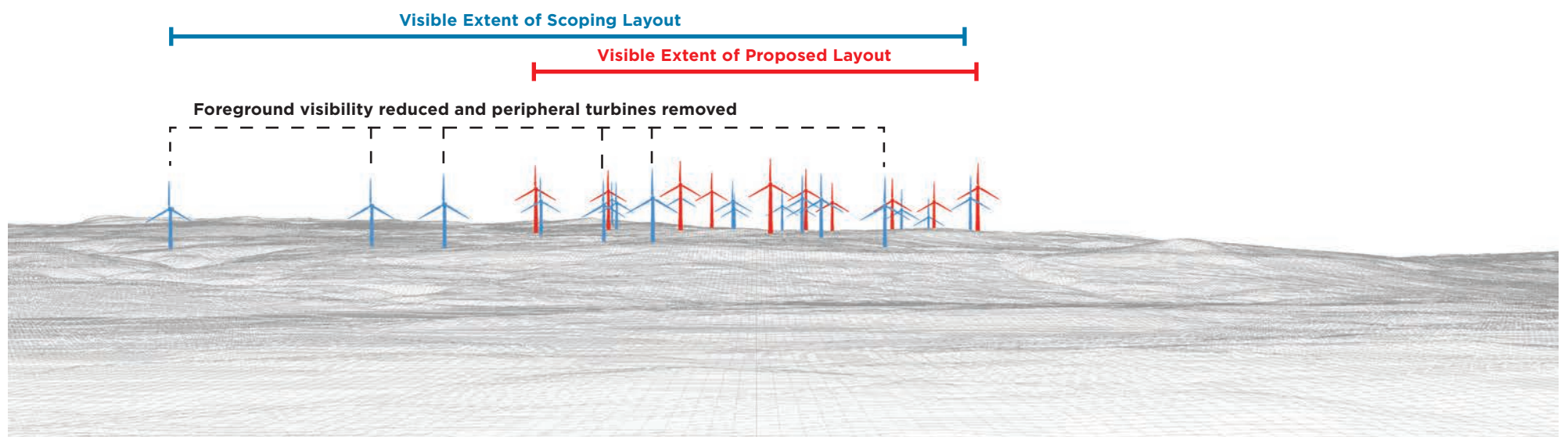
53.5° (planar projection)

Figure 23: Layout Comparison: VP6 The Whangie



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



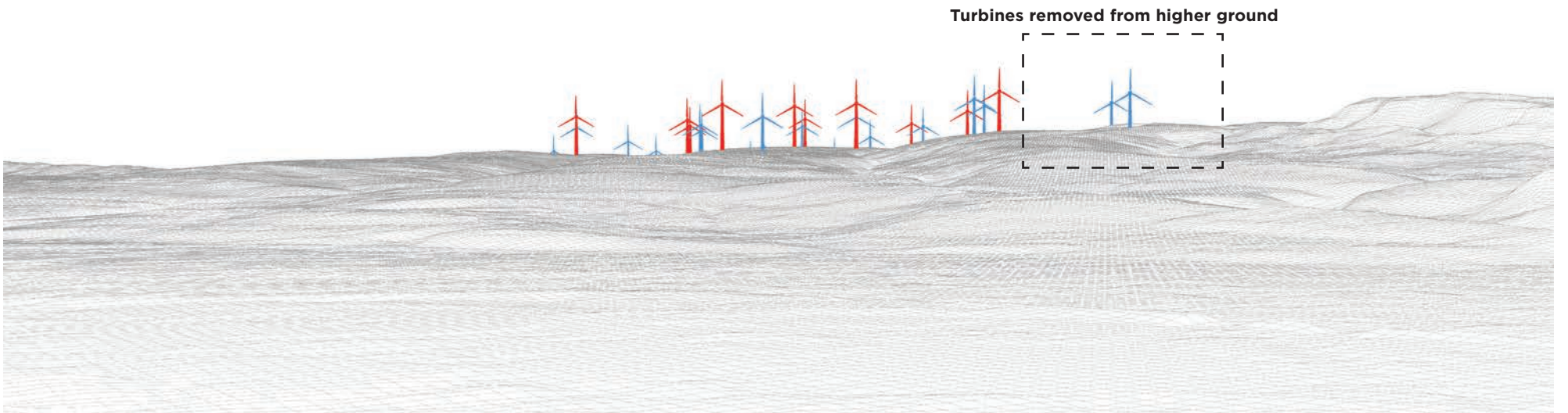
PHOTOMONTAGE: Proposed Layout

53.5° (planar projection)



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

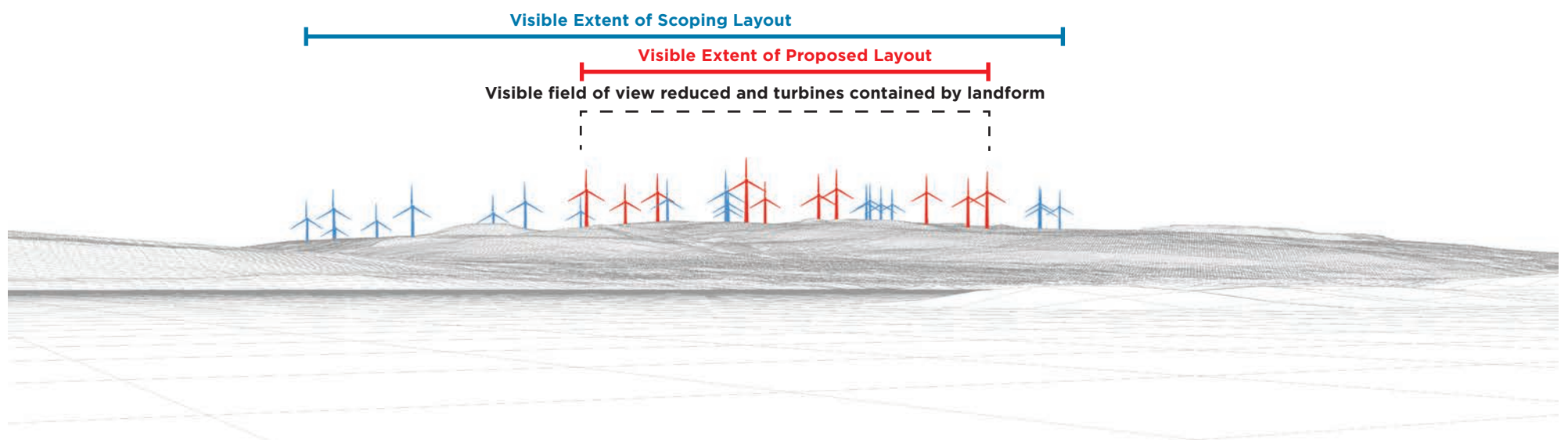
53.5° (planar projection)

Figure 25: Layout Comparison: VP8 Dumbarton Rock



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



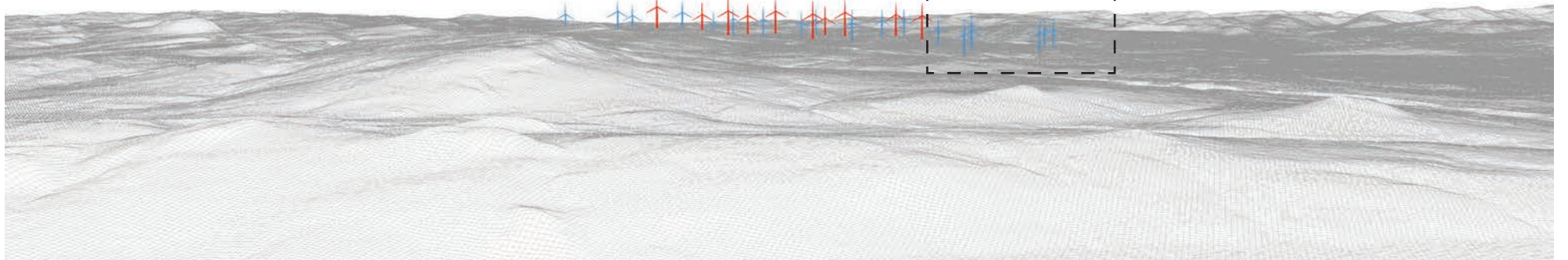
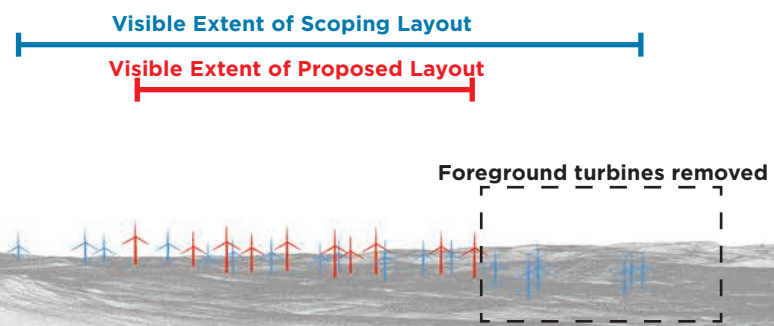
PHOTOMONTAGE: Proposed Layout

53.5° (planar projection)



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

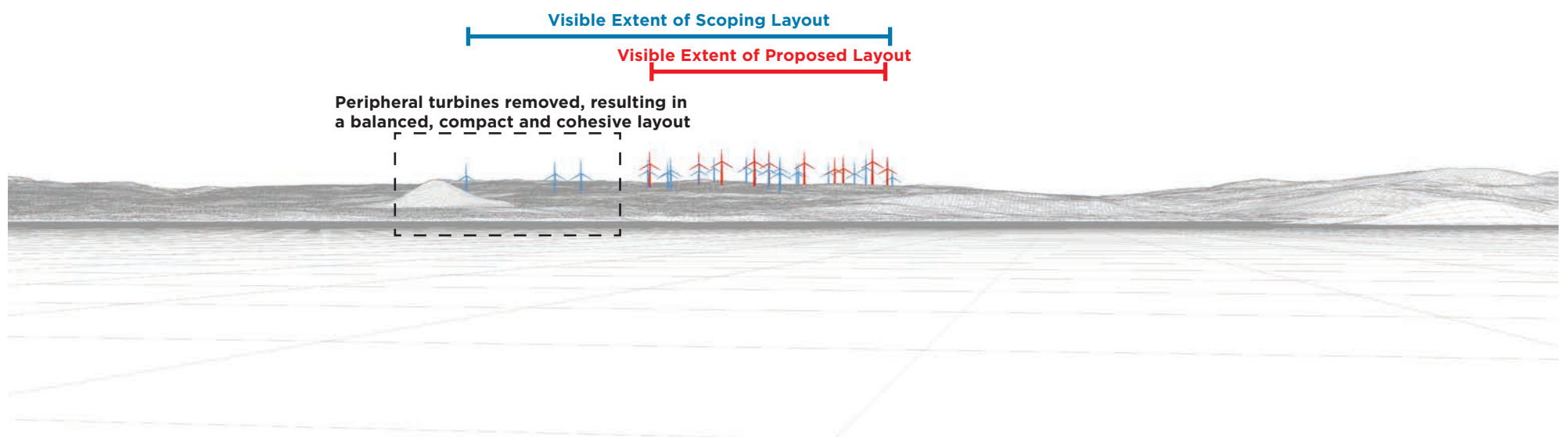
53.5° (planar projection)

Figure 27: Layout Comparison: VP16 Dumgoyne Hill



BASELINE PHOTOGRAPHY

53.5° (planar projection)



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

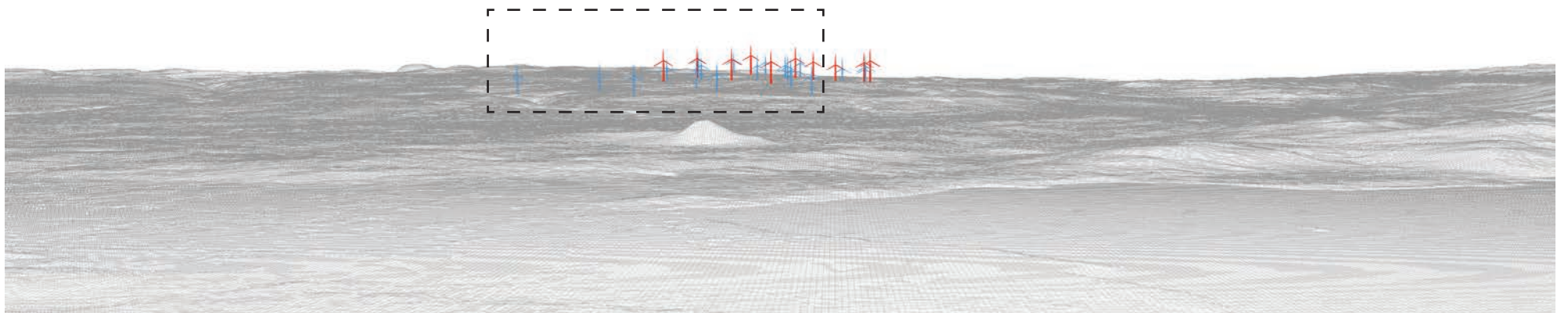
53.5° (planar projection)



BASELINE PHOTOGRAPHY

53.5° (planar projection)

Peripheral turbines removed, resulting in a balanced and cohesive layout that is contained within the interior plateau



COMPARATIVE WIRELINE: Proposed Layout in red, Scoping Layout in blue

53.5° (planar projection)



PHOTOMONTAGE: Proposed Layout

53.5° (planar projection)

Figure 29: Layout Comparison: VP19 Conic Hill