

1 September 2026

Rebecca Clarkson
Principal Advisor
Aquaculture Direct

Dear Rebecca

**Re: North Western Mussels Limited Fast-track Application
Addendum to Natural Character, Landscape/Seascape and Visual Effects Assessment**

I refer to the Natural Character, Landscape/Seascape and Visual Effects Assessment prepared by Wayfinder in December 2023, and the subsequent further information response prepared in February 2024.

I understand that North Western Mussels Limited is now preparing a substantive application under the Fast-track Approvals process, and that the proposal has been amended through the removal of Site D. This addendum has been prepared to address the landscape, seascape, natural character and visual effects implications of that amendment. It also responds to matters raised through the independent peer review prepared by Dave Mansergh for Waikato Regional Council and corrects one point in the December 2023 assessment relating to the visibility distance for navigation lighting.

This addendum should be read alongside the December 2023 assessment, the February 2024 further information response, and the revised graphic attachment prepared to reflect the amended proposal (attached). Except where specifically amended below, the methodology, receiving environment description, assessment framework and conclusions of the original assessment remain applicable.

Given the proposal is now advancing through the Fast-track process, I have also attached a brief overview of my qualifications and experience.

Proposal change

As noted above, the original assessment considered four proposed mussel spat catching, nursery and harvesting areas off the west coast of Waikato, near Raglan, identified as Sites A, B, C and D. The amended proposal removes Site D and now comprises only Sites A, B and C, located north of Raglan Harbour off the Te Akau coast.

With the removal of Site D, a revised graphical attachment has also been prepared to reflect the amended project. The previous visualisations were based on Site D, which is no longer part of the proposal. The revised attachment therefore includes new visualisations of the proposed Site A farm from approximately 500m away, so the visibility assessment is illustrated using a site that remains within the proposal.

The removal of Site D is a material reduction in the geographic extent and landscape sensitivity of the proposal. Site D was the southernmost site and was the only site located within the proposed Waikato Karioi Outstanding Natural Landscape identified in the Proposed Waikato Regional Coastal Plan. Its removal means that the proposal is now located further away from the Karioi coastal context, including Mt Karioi, Whaanga Road, Ruapuke Beach, Te Toto Gorge, Papanui Point and the associated Waikato Karioi outstanding landscape/seascape values.

The assessment of effects can therefore focus on Sites A, B and C, which are located north of Raglan Harbour within the broader Waikato North coastal and seascape context.



Consequential changes to receiving environment and relevant values

The December 2023 assessment described the receiving environment for all four sites, including both the Te Akau coast north of Raglan and the Karioi coastline south of Raglan. With Site D removed, the relevant receiving environment is now more confined to the coastline and seascape north of Raglan Harbour, between the general coastal context of Ngātutura Point, Te Hara Point and the adjacent Te Akau rural coastal landscape.

This part of the coast remains characterised by a high energy west coast seascape, steep coastal escarpments, black sand beaches, dynamic coastal processes, limited public access, sparse settlement and a strong sense of remoteness. It is also a working rural landscape, with the inland coastal landforms substantially modified by pastoral farming. The remoteness value is therefore not derived from an absence of all modification, but more from limited access, low levels of visible human activity, and the scale and openness of the coastal and seascape setting.

The key values identified in the December 2023 assessment remain relevant to Sites A, B and C. These include the openness and expansiveness of the seascape, the high energy and transient qualities of the west coast environment, the bold coastal landforms, the modified rural hinterland, the limited number of viewers, the low frequency of boating activity in the immediate vicinity of the proposed sites, and the darkness of the coastal environment at night.

However, with Site D removed, the revised proposal no longer includes a site within the Waikato Karioi Outstanding Natural Landscape. Sites A, B and C are located well to the north of that landscape context, in the order of 20 km from the Karioi coastal area. On that basis, the assessment no longer needs to address direct effects on the Waikato Karioi Outstanding Natural Landscape, or visual and experiential effects from the Karioi, Whaanga Road and Ruapuke Beach viewing context, except at the broadest regional scale. The assessment of those remaining sites is provided below.

Natural character effects

The conclusions of the December 2023 assessment in relation to natural character remain applicable to the revised proposal. The proposal will have very low effects on abiotic natural character values, as the primary physical interaction with the seabed will be limited to removable anchoring systems. The proposal will have very low effects on biotic natural character values, noting the nature of the spat catching activity, the limited scale of the activity in the context of the wider coastal environment, and the absence of known material effects from similar activities.

The main natural character effect remains experiential. The proposed farms will introduce a visible human-made and productive element into a seascape that presently has little marine farming activity. That change has the potential to slightly reduce the perceived remoteness of the immediate seascape, particularly for people on the water close to the proposed sites. However, the receiving environment is expansive, access is limited, the number of viewers is likely to be low, and the level of human activity associated with the farms will be infrequent.

With Site D removed, there is also a reduced potential for effects on the more sensitive Karioi coastal context. Overall, I remain of the view that the natural character effects of the revised proposal will be *low*.

Landscape and seascape effects

The revised proposal will still introduce a degree of built or modified form into the seascape through the presence of buoy lines in a structured arrangement. This will be most apparent from the water and in relatively close proximity to the farms. The proposal will not alter the coastal landforms, cliff faces, beaches, dune systems, surf breaks, sea spray, coastal vegetation patterns or rural landforms that contribute to the broader landscape and seascape character of the Te Akau coast.



The key landscape and seascape effect remains the potential effect on perceptual values, particularly the sense of remoteness. In this regard, the proposal will introduce a new activity into the seascape, but it will not introduce a high level of human presence. The farms will be largely untended and will not contain buildings or platforms. For most of the time they will be static, low-profile elements within a very large and dynamic marine setting.

The removal of Site D also removes the site that had the closest relationship to the Waikato Karioi Outstanding Natural Landscape and the more publicly accessible southern coastal viewing context. On that basis, the overall landscape and seascape effects of the revised proposal are reduced when compared with the proposal assessed in December 2023. However, the remaining sites will still introduce a structured marine farming activity into an otherwise open seascape, and this will still be apparent to people on the water within approximately 2 km of the farms. For that reason, while the geographic extent and sensitivity of the effects are reduced, I consider the overall landscape and seascape effects rating remains *low*.

Visual effects during daylight

The December 2023 assessment concluded that visual effects during daylight hours would be very low. That conclusion remains applicable to the revised proposal.

Sites A, B and C are located several kilometres offshore. From land-based locations, the proposed farms are likely to be difficult to discern, except potentially in clear viewing conditions from elevated locations where they may appear as a darker or more regular texture on the sea surface. The detailed arrangement of individual buoys is unlikely to be readily apparent from land.

From the water, the farms will be more visible at closer distances. Within approximately 2 km, and particularly within 1 to 1.5 km, the buoy pattern and activity will be more legible. However, this effect will be experienced by a limited number of marine users and within a very large seascape context. Beyond that closer viewing range, the farms are expected to become less distinct and increasingly absorbed into the movement, colour and texture of the sea surface.

Overall, the visual effects of the revised proposal during daylight hours will remain *very-low* from land-based locations and *low* to *very-low* from marine locations, depending on proximity.

Night effects and Maritime NZ lighting requirement

The December 2023 assessment referred to the navigation lights being visible from at least 2 km away. It is now understood that Maritime NZ requires the lights to be visible from at least 2 nautical miles, which is approximately 3.7 km.

This clarification does not alter the conclusions of the December 2023 assessment. The assessment already proceeded on the basis that the navigation lights would be visible at night, including from land-based locations in some circumstances. The key assessment question is not whether the lights will be visible, but whether their visibility would materially affect the values of the surrounding landscape and seascape.

The navigation lights will introduce intermittent points of light into a generally dark coastal and marine environment. This may slightly reduce the perceived remoteness of the night-time seascape, particularly for people who are aware of the lights or who view them from elevated locations. However, the lights are required for marine safety, will be distant from most land-based viewers, will not create the type of light spill or sky glow associated with land-based lighting, and are unlikely to compete with the wider night sky.



With Site D removed, potential night-time visual effects from Ruapuke Beach are eliminated. Potential effects on the wider Karioi viewing context are also substantially reduced, given Sites A, B and C are located some 20 km to the north. However, the navigation lights associated with Sites A, B and C may still be visible from parts of the coastal landform east of those sites, including around Gibson Beach, depending on viewing conditions. I therefore remain of the view that the night-time visual effects of the revised proposal will be *low*.

Response to peer review matters

The peer review prepared by Dave Mansergh concluded that the December 2023 assessment and February 2024 further information response were generally consistent with *Te Tangi a te Manu* and contained sufficient information for the landscape, natural character and visual effects of the proposal to be understood. I understand the peer review as being largely aligned with the overall methodology, principal findings and broader effects conclusions of the December 2023 assessment, particularly in relation to effects beyond approximately 2 km of each application site.

The remaining area of difference is relatively confined. It relates mainly to the degree of effect that may be experienced by people on the water within approximately 2 km of the farms, where the buoy lines and marine farming character of the activity would be more apparent than from more distant marine or land-based locations. The peer review raised caution that effects within this closer range may be greater than reported in the original assessment, particularly where the introduction of marine farming into an otherwise open seascape could affect perceptions of natural character and remoteness.

I accept that the proposal will be more apparent from locations on the water within approximately 2 km of the proposed sites. That position is consistent with the December 2023 assessment, which identified that the farms are unlikely to be readily visible from distant locations, particularly from sea level, but would be experienced by people on the water in closer proximity. The closer a viewer is to the farms, the more legible the buoy lines, grid structure and productive marine farming character of the activity will become.

However, I do not consider this alters the overall conclusion of the assessment. The relevant near-water viewing audience is expected to be small. The original assessment identified that boating activity in this part of the coast is limited, with most recreational and commercial vessels tending to travel west from Raglan Harbour or Manu Bay toward deeper water. The proposal will not create buildings, platforms or permanent above-water structures of substantial scale. The visible components remain low in profile, will move with the swell, and will be seen within a large, open and dynamic seascape.

Accordingly, while the effects experienced by a person on the water within close proximity to Sites A, B or C may be greater than those experienced from land or from more distant marine locations, those effects remain localised, intermittent and limited in their overall influence on the wider landscape, seascape and natural character values of the area.

Implications for policy assessment

The December 2023 assessment and February 2024 further information response considered the proposal against the relevant provisions of the New Zealand Coastal Policy Statement, the Waikato Regional Policy Statement, the Operative Waikato Regional Coastal Plan and the Proposed Waikato Regional Coastal Plan.

The removal of Site D materially reduces the proposal's interaction with the Proposed Waikato Regional Coastal Plan's Waikato Karioi Outstanding Natural Landscape overlay. As a result, the revised proposal is less directly engaged with the outstanding landscape values identified for that southern coastal and seascape context.



The revised proposal remains relevant to provisions concerning natural character, landscape/seascape values, amenity, use and occupation of coastal space, and the management of activities in remote and isolated coastal areas. For the reasons set out in the original assessment and this addendum, I consider the proposal will continue to avoid significant adverse effects on natural character, landscape and seascape values, and that other adverse effects will be low and able to be regarded as less than minor in the context of the overall receiving environment.

Conclusion

The removal of Site D reduces the overall scale, extent and sensitivity of the proposal from a landscape, seascape, natural character and visual effects perspective. In particular, it removes the component of the proposal located within the Waikato Karioi Outstanding Natural Landscape and reduces the proposal's relationship with the Karioi, Whaanga Road and Ruapuke Beach coastal context.

The revised proposal will still introduce marine farming activity into part of the Waikato west coast seascape where such activity is presently limited. That change will be most apparent to marine users within close proximity to Sites A, B and C, and at night through the presence of navigation lighting required for maritime safety. However, the effects remain limited by the offshore location of the sites, the low profile of the visible structures, the small number of likely viewers, the infrequency of tending activity, and the expansive, dynamic nature of the receiving seascape.

Having considered the revised proposal, the peer review matters, and the clarification to the Maritime NZ lighting visibility distance, I remain of the view that the natural character and landscape/seascape effects of the proposal will be *low*, the visual effects during daylight hours will be *very-low*, and the night-time visual effects will be *low*. I also consider that this conclusion is broadly consistent with the peer review, with the remaining difference being confined to the weight given to close-range effects experienced from the water within approximately 2 km of the farms.

Overall, I consider the landscape, seascape, natural character and visual effects of the revised proposal will be *less than minor*.

Yours sincerely

Shannon Bray
Registered Fellow Landscape Architect

Shannon Bray

Principal Landscape Architect, Managing Partner

Shannon Bray has extensive experience in landscape planning, master-planning, urban design, and landscape and visual effects assessment. His work broadly encompasses complex infrastructure, energy, land development, and public realm projects across Aotearoa. He is a recognised expert witness who regularly appears before Council hearing panels, the Environment Court, Boards of Inquiry, and Fast-Track consenting processes, valued for his clear communication and balanced, evidence-based assessment.

Wayfinder focusses on delivering design outcomes that reflect place, identity, and community values. Shannon has led landscape and urban design inputs for major transport corridors, large-scale wind and solar developments, regional open space networks, and significant residential masterplans. His work includes the internationally recognised Waiaroha Water Discovery Centre in Hastings, and he is frequently engaged for peer reviews, policy support, and strategic design advice on landscape risk and environmental effects.

A Fellow and Registered Member of the New Zealand Institute of Landscape Architects, Shannon has served two terms as National President and chaired the NZILA Resource Management Reform Group, leading sector submissions on the Government's proposed planning reforms. He is a Trustee of Te Mata Park—where Wayfinder also delivers pro bono strategy work—and a Trustee of the Hawke's Bay Foundation, which supports long-term community philanthropy. Shannon also contributes to the wider design community as a local judge for the New Zealand Institute of Architects awards.

With earlier experience in business strategy roles in the UK and extensive travel across diverse cultural and natural landscapes, Shannon brings a broad perspective to his work. He is recognised for a calm, solutions-focused approach and for translating complex landscape issues into clear, practical guidance for clients, stakeholders, and decision-makers.

B.L.A. (Hons)
Lincoln University 1996

B.For.Sc,
University of Canterbury 1994

Fellow & Registered Member
Past President
Tuia Pito Ora
New Zealand Institute of
Landscape Architects

Making Good Decisions



Key Project Experience:

Infrastructure

- ▶ Waiairoha Water Discovery Centre *Project Design Lead, Consenting*
- ▶ Frimley Water Storage *Design Framework, Detailed Design, Consenting*
- ▶ Matarouahou Water Reservoir *Consenting*
- ▶ Reefton Gold Mine *Long-term Landscape Masterplan, Fast Track*
- ▶ Westport Coal Mine *Peer Review, Fast Track*
- ▶ Omarunui Landfill *Long-term Landscape Masterplan, Consenting*
- ▶ Maraekakaho Quarry *Long-term Landscape Masterplan, Consenting*
- ▶ Horokiwi Quarry *Character Mapping, District Plan Policy*
- ▶ Puke Coal *Long-term Landscape Masterplan, Consenting*
- ▶ Mangatangi Coal Mine *Peer Review, Evidence*
- ▶ Linton Quarry *Long-term Landscape Masterplan, Consenting*
- ▶ Pilot Road Quarry *Iwi Engagement, Consenting*
- ▶ Taheke 8C Hydroelectricity Dam *Effects Assessment, Landscape Masterplan*
- ▶ Te Awamutu Waste to Energy *Peer Review, Evidence (BoI)*
- ▶ Poads Road Water Reservoir *Landscape Design*
- ▶ Wind Farms: Over 35 projects nationally Consenting (incl Fast Track)
- ▶ Solar Farms: Over 20 projects nationally Consenting (incl Fast Track)
- ▶ Transmission: Over 30 projects nationally Consenting (incl Fast Track)
- ▶ Telecommunications: Over 80 projects nationally Consenting

Waterways

- ▶ Pekaheka Wetlands Restoration *Concept Design, Detailed Design*
- ▶ Harakeke Waterway Naturalisation *Concept Design, Detailed Design*
- ▶ Havelock North Urban Streams Restoration *Community Engagement*
- ▶ Cross-Country Drain Naturalisation *Community & Iwi Engagement, Design*
- ▶ Taipo Stream Restoration *Iwi Engagement, Design*
- ▶ Whakaki Lagoon Restoration *Iwi Engagement, Design*
- ▶ Karamū Stream Restoration *Design, Management Plans*
- ▶ Orakei Basin Coastal Walkway *Effects Assessment, Evidence*
- ▶ Wairoa River Flood Protection *Engagement, Concept Design*

Transport

- ▶ Southern Corridor Motorway *Landscape and UD Design Lead, Consenting*
- ▶ SH20B Motorway *Landscape and UD Design Lead, Consenting*
- ▶ Cameron Road Tauranga *Landscape and UD Lead, Engagement Lead, Consenting*
- ▶ Papakura to Bombay Motorway *Landscape and UD Lead, Consenting*
- ▶ Northern Corridor Motorway *Landscape and UD Lead, Consenting*
- ▶ SH16/SH18 Motorway *Masterplanning Landscape and UD Lead, Engagement*
- ▶ Waterview Shared Use Path *Landscape and UD Lead, Consenting*
- ▶ Pūhoi to Warkworth *Bid Design, Landscape and UD Lead*

Land Development

- ▶ Hastings Golf Course Residential Rezoning (180 lots) *Landscape Lead*
- ▶ Mission Estate Future Opportunities *Landscape Lead, Consenting*
- ▶ Ara Hills Residential Development (650 Lots) *Landscape Lead, Consenting*
- ▶ Tararua Growth Strategy *Project Lead and Author*
- ▶ Greytown Residential Rezoning (300 Lots) *Landscape Lead, Consenting*
- ▶ Over 150 Residential Subdivisions *Landscape Lead, Consenting*

Awards

- ▶ Waiairoha Water Discovery Centre Over 10 national and international awards
- ▶ Best Professional Services Company *Hastings City Business Awards 2024*
- ▶ Award for Innovation *Hawke's Bay Chamber of Commerce 2023*
- ▶ RMA Reforms NZILA *Presidential Award 2023*
- ▶ Ātea a Rangi Te Karanga o Te Tui Award (NZILA Supreme Award) 2019

Representations

- ▶ Over 100 Resource Consent Council Hearings
- ▶ Over 15 Plan Change or District Plan Review Council Hearings
- ▶ Over 25 Environment Court Expert Appearances
- ▶ 14 Fast Track Processes (including Covid and FTAA) & 3 Boards of Inquiry



Landscape Effects Assessment

Graphic Attachment

(Attachment A)

Proposed Mussel Spat Nursery &
Harvesting Farms
North Western Mussels Ltd

September 2026



Legend

-  Application site
-  Photograph locations
-  Context Photo Locations
-  Roads



Context Map

Proposed Raglan Spat Nursery & Harvesting Farms

Prepared for
**North Western Mussels
Ltd**

FOR CONSENT

01 September 2026

Revision: 01

Drawn: BOD

Reviewed: SB

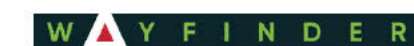
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Sheet 02

2333_RaglanMussels_GA_26-09-01

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Landscape Planning & Strategy



Photo 01 (REF 59): SITE A: Image taken from proposed site looking East towards Pukerewa Road
Latitude: 37° 35' 15.882" S
Longitude: 174° 42' 36.678" E



Photo 02 (REF 83): SITE B: Image taken approximately 2000m East from the centre of proposed site looking East towards Te Akau Coast Road
Latitude: 37° 39' 4.722" S
Longitude: 174° 46' 26.79" E



Photograph Details:
Date: 2 November 2023
Site A - 8:27am
Site B - 8:50am
Camera: Apple iPhone 14 Pro Focal
Length: 24mm Equivalent

Context Photographs

Proposed Raglan Spat
Nursery & Harvesting
Farms

Prepared for
North Western Mussels
Ltd

FOR CONSENT

01 September 2026

Revision: 01
Drawn: B OD
Reviewed: SB

Not to scale
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Sheet 03

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Photo 03 (REF: 96): SITE C: Image taken from approximately 1500m East from the centre of proposed site looking East towards Pukerewa Road
Latitude: 37° 41' 42.12" S
Longitude: 174° 47' 7.002" E



Photograph Details:
Date: 2 November 2023
Site C - 9:02am
Site A - 12:49pm
Camera: Apple iPhone 14 Pro Focal
Length: 24mm Equivalent



Photo 04 (REF: 135): SITE A: Image taken from Pukerewa Road looking West towards proposed SITE A
Latitude: 37°35'10.76"S
Longitude: 174°47'1.89"E

Context Photographs

**Proposed Raglan Spat
Nursery & Harvesting
Farms**

Prepared for
**North Western Mussels
Ltd**

FOR CONSENT

01 September 2026
Revision: 01
Drawn: B OD
Reviewed: SB

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Sheet 04

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Photo 05 (REF: 125): SITE C: SITE B, C: Image taken from Pukerewa Road looking South West towards proposed SITE B & C (REF: 125)
Latitude: 37°35'10.76"S
Longitude: 174°47'1.89"E



Photograph Details:
Date: 2 November 2023
Site B, C - 12:50pm
Camera: Apple iPhone 14 Pro Focal
Length: 24mm Equivalent

Context Photographs

Proposed Raglan Spat
Nursery & Harvesting
Farms

Prepared for
North Western Mussels
Ltd

FOR CONSENT

01 September 2026
Revision: 01
Drawn: B OD
Reviewed: SB

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Sheet 05

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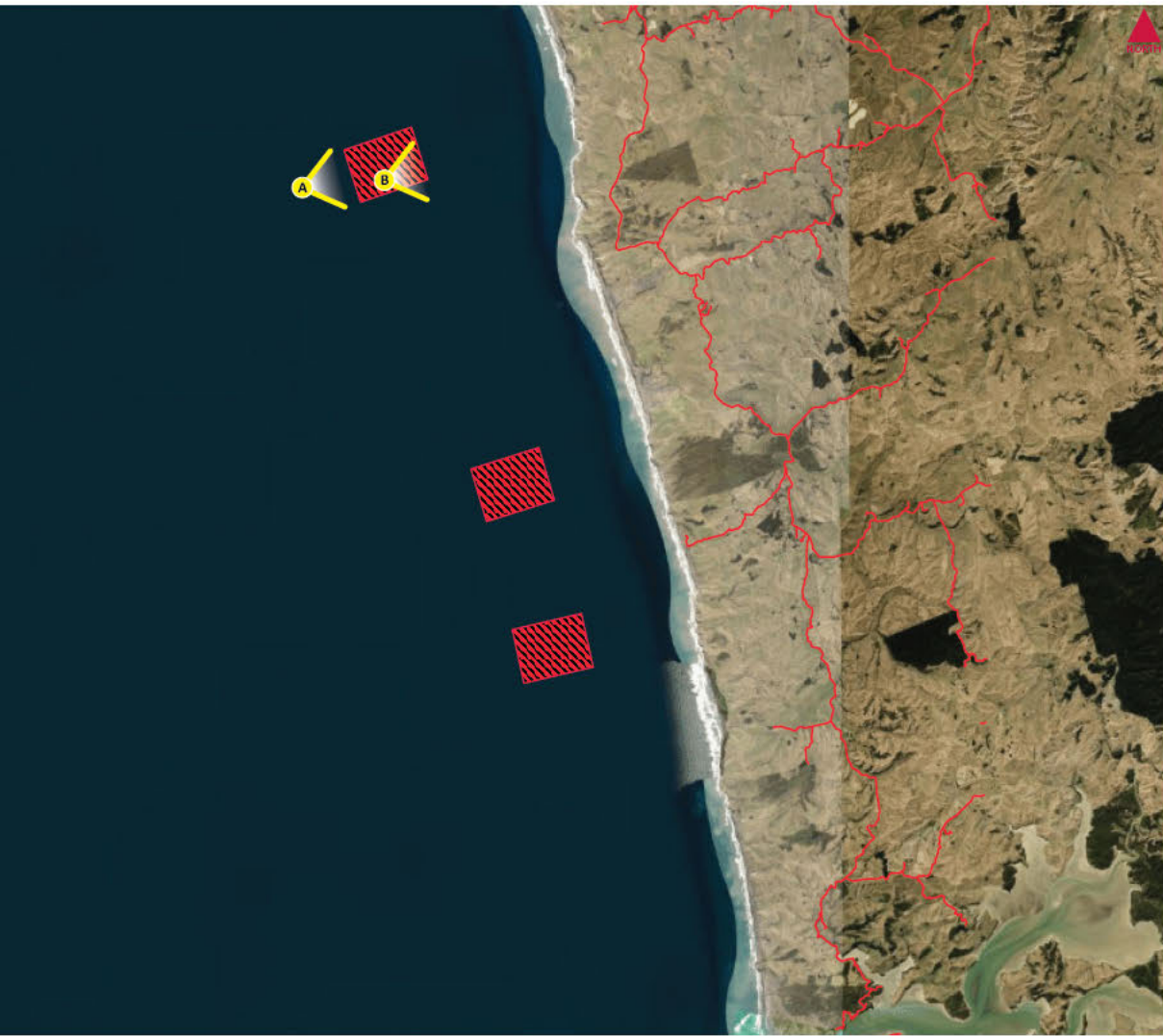


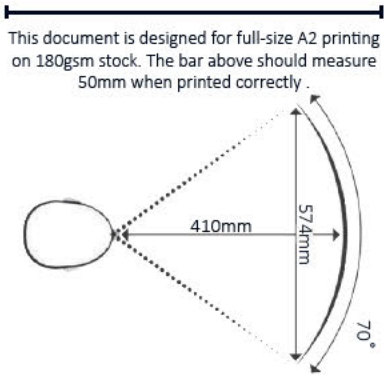
Image Capture:
iPhone 14 Pro
2 November 2023 - 08:27am
Lens 24mm

Geo Location:
Latitude: 37° 35' 15.882" S
Longitude: 174° 42' 36.678" E

Elevation / Eye Level:
0m (Sea Level)
1.65m

Field of View:
70° Horizontal

Reading Distance:
398mm @ A2



Viewpoint A Panorama Existing Photograph

Image from proposed Site A looking East towards
Pukerewa Road

Proposed Raglan Spat Nursery & Harvesting Farms

Prepared for
**North Western Mussels
Ltd**

Print at A2 01 September 2026 Prepared: BOD
Not to Scale Revision 1 Reviewed: SB

FOR CONSENT Sheet 06

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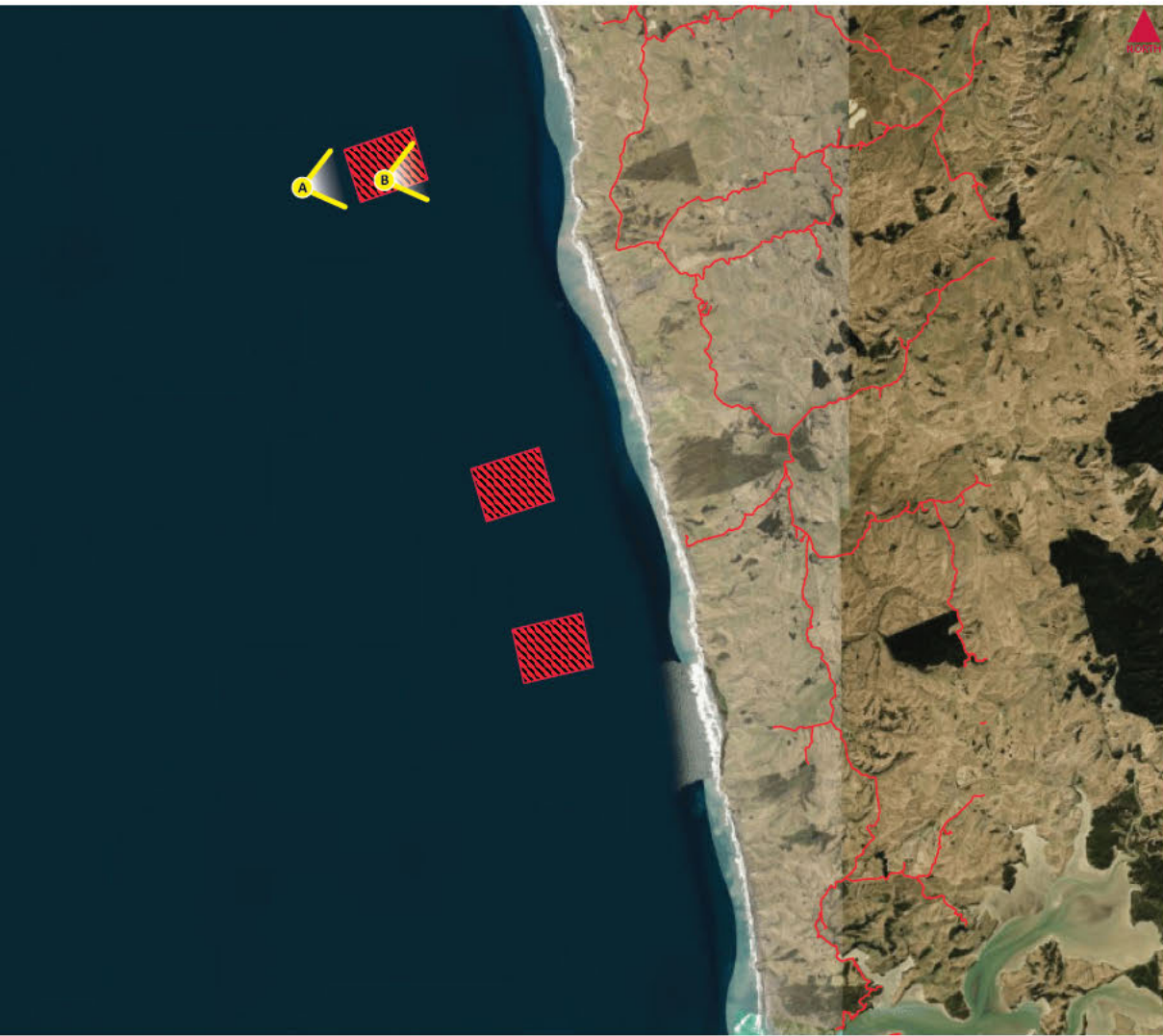


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Lens 24mm

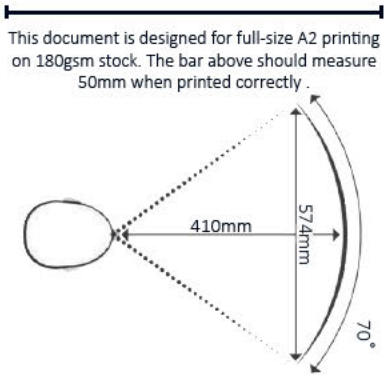
Geo Location:
Latitude: 37° 35' 15.882" S
Longitude: 174° 42' 36.678" E

Elevation / Eye Level:
0m (Sea Level)
1.65m

Field of View:
70° Horizontal

Reading Distance:
398mm @ A2

Note: Buoys have been depicted black with a separation of 2m
(depending on length of dropper lines distance may vary between 2-10m)



Viewpoint A
Visual Simulation
500m from edge of Site A

Image from proposed Site A looking East towards
Pukerewa Road

**Proposed Raglan Spat
Nursery & Harvesting
Farms**

Prepared for
**North Western Mussels
Ltd**

Print at A2 01 September 2026 Prepared: BOD
Not to Scale Revision 1 Reviewed: SB

FOR CONSENT Sheet 07

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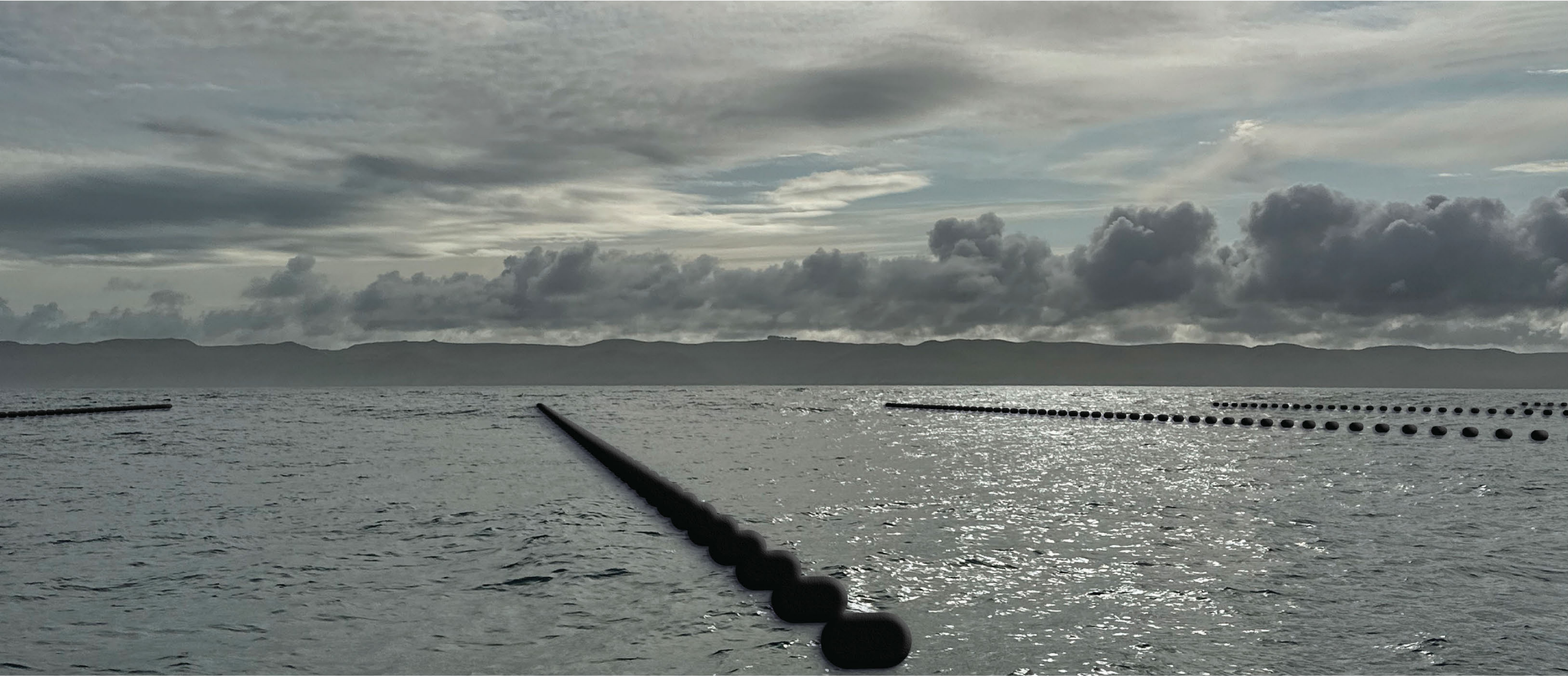


Image Capture:
iPhone 14 Pro
2 November 2023 - 08:27am
Lens 24mm

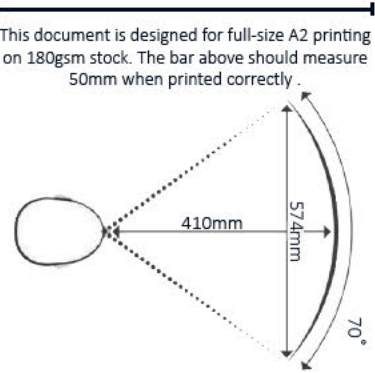
Geo Location:
Latitude: 37° 35' 15.882" S
Longitude: 174° 42' 36.678" E

Elevation / Eye Level:
0m (Sea Level)
1.65m

Field of View:
70° Horizontal

Reading Distance:
710mm @ A2

Note: Buoys have been depicted black with a separation of 2m
(depending on length of dropper lines distance may vary between 2-10m)



Viewpoint B Visual Simulation

From within Site A

Image from proposed Site A looking East towards
Pukerewa Road

Proposed Raglan Spat Nursery & Harvesting Farms

Prepared for

**North Western Mussels
Ltd**

Print at A2 01 September 2026 Prepared: BOD
Not to Scale Revision 1 Reviewed: SB

FOR CONSENT Sheet 08

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WAYFINDER

Landscape Planning & Strategy

VISUALISATION METHODOLOGY

OVERVIEW

The visualisations contained in this document have been prepared in accordance with the New Zealand Institute of Landscape Architects Best Practice Guide for Visual Simulations (BPG10.2 dated November 2010).

The main objective of a visualisation (or visual simulation) is to represent a proposed activity, modification, or change in the observed landscape as realistically and accurately as possible. A visualisation provides a two-dimensional illustrative view of a proposed activity from a specific viewpoint, as depicted in a photograph and as it would be perceived in real life with the human eye.

It must be noted that visualisations have limitations. Principally, they are based on the capture of a still image with a fixed field of view, and therefore they are unable to accurately capture the whole experience of being in a particular location.

SELECTION OF VIEWPOINTS

The viewpoints depicted in this document have been selected to provide a range of views of the proposal and its surrounding context. The number of viewpoints provided reflects the nature and scale of the proposal.

It is not possible to select every single viewpoint where a proposal might be visible from- it would result in too many photographs to meaningfully use. Therefore, viewpoints are selected to be representative of the broader range of views available. Identification of viewpoints does not mean an assessment is only taken from those locations, they are simply used to help capture the context to support the assessment.

The viewpoint locations are identified on each Sheet, and also shown on a wider context map. The orientation of the view captured to the nearest main compass point is also indicated. These have been GPS captured to an accuracy of 1.0m or less.

PHOTOGRAPH CAPTURE

Details are provided on each Sheet of what camera has been used to capture the photograph from the viewpoint, together with the lens size (focal length, expressed in the equivalent of a 35mm film camera), the date & time of the photograph, its GPS location, the height at which the photo has been taken, and the corresponding field of view that is depicted in the image.

For each viewpoint, a panoramic image is captured to illustrate the full context of the proposal. To capture these images, the camera is positioned at eye level and kept perfectly level—without any tilt—using a tripod with a bubble level. A sequence of photographs is then taken at 10-degree intervals, ensuring at least 50% overlap between frames. This approach minimizes distortion during the merging and blending process within the panoramic software.

CONTEXT INFORMATION

When the photographs are taken, field notes are also captured to provide an overview of the scene. A Nikon Forestry Pro laser rangefinder is then used to identify the heights and distance's from the viewer of recognisable points in the scene (such as the high points of trees, landforms, buildings or other infrastructure). Up to 5 such points are captured for each viewpoint.

Additionally, the GPS location and lens height of the camera is captured.

DEVELOP SITE MODEL

A site model is created by accessing publicly available Lidar data, and is extracted with sufficient context to encompass all viewpoint locations and identifiable landscape features. The Lidar information is converted into contours using GIS software (QGIS) and then imported into Vectorworks Landmarks to develop a site land-form model.

A 3D model of the proposal is generated using data provided by the client, which is then integrated with the site land-form model. Additional site markers and features such as power poles, streetlights, buildings, and fences (where heights and locations are known) are added to use as scale markers when setting up the CGI view.

ALIGNING MODEL WITH PANORAMA

Viewpoint locations are incorporated into the site model using GPS location data, which precisely establishes their geographic coordinates within the model. Elevation data is obtained by intersecting the viewpoint locations with the site model, thereby determining the altitude of each viewpoint.

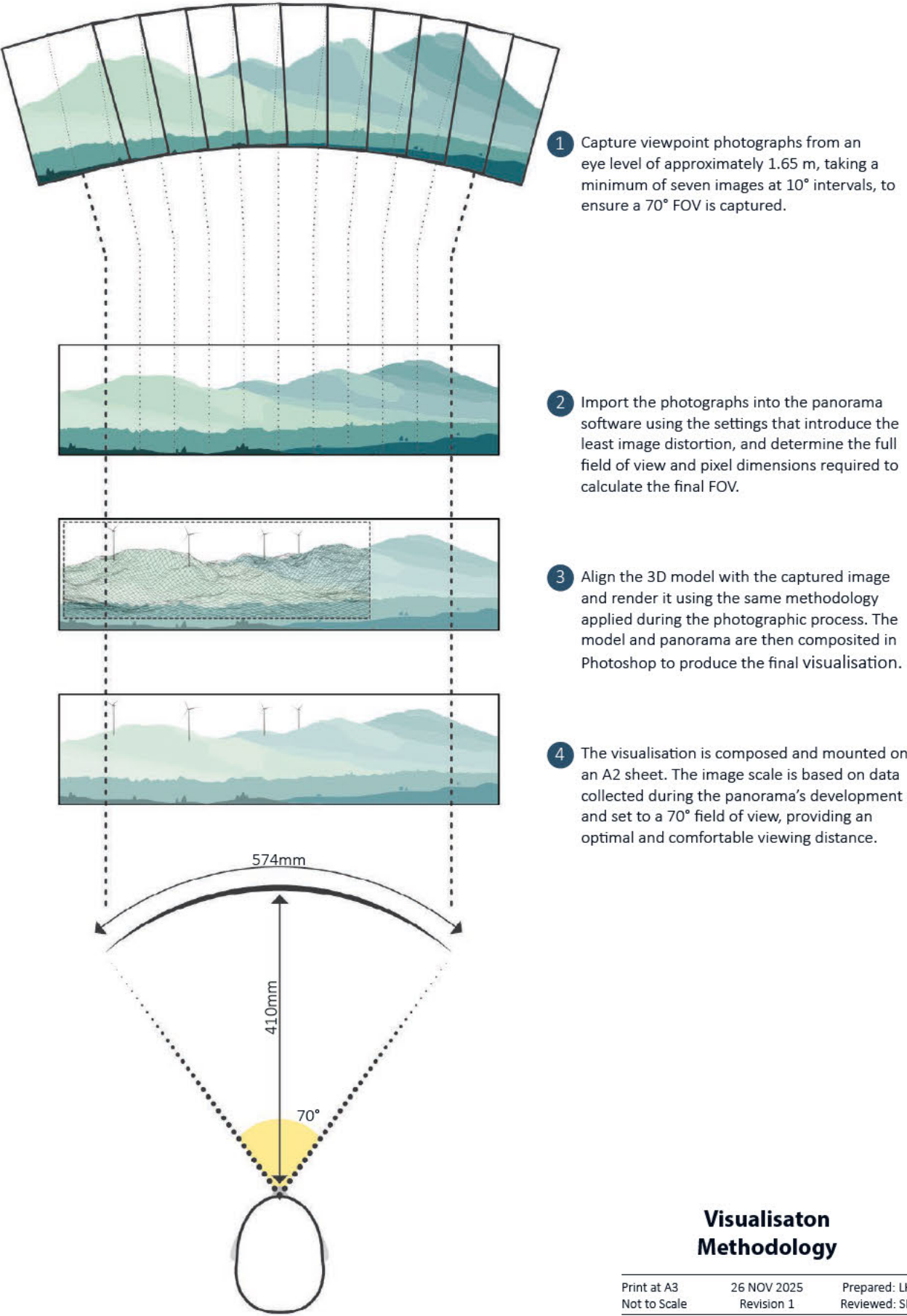
Virtual cameras within the software are configured to correspond with photographed viewpoints. Information extracted from the photograph data is entered into the virtual camera to replicate the settings of the original image (such as focal length). The virtual camera is then slightly adjusted to ensure that the existing site features within the model align and accurately overlay with the photograph. The finalised virtual cameras are exported and rendered with global sun and shadow settings setup to match the date and time of the corresponding photographed viewpoint.

FORMALISING VISUALISATIONS

A composite image is generated using the exported render from Vectorworks and the original photograph, built as layers into Adobe Photoshop. They are then edited to accurately integrate the two, primarily by removing elements of the image or the render that in real life would be situated behind other elements (for example, if part of the proposal is located behind a tree, then those parts of the render that would be hidden are erased).

The visualisations are then mounted into a document using Adobe InDesign. At Wayfinder this is done by mounting the original image on the first page, and then perfectly aligning the visualisation on a second page. This allows the viewer to flick between the two pages to better understand the proposed change. Information such as the lens size, location, date of image and reading distance are added to the mounted images.

VISUALISATION PROCESS DIAGRAM



Visualisation Methodology

Print at A3
Not to Scale

26 NOV 2025
Revision 1

Prepared: LH
Reviewed: SB

WAYFINDER

Landscape Planning & Strategy