

# Ōtaki to North of Levin Highway Project. Photo Simulations Volume III

October  
2022  
—

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**Land.  
People.  
Culture.  
Isthmus.**



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## Document record

Issue	Revision	Author	QA	Date
Draft	A	AE	LR	29.08.22
Final Draft	B	AE	LR	14.09.22
Final	Volume III	AE	LR	13.10.22

# Contents

Photosimulation Viewpoint Location Map.	5	Viewpoint 13 - Proposed - No Planting	80
Viewpoint 1 - Existing	6	Viewpoint 13 - Proposed - With Planting	82
Viewpoint 1 - Proposed - No Planting	8	Viewpoint 14 - Existing	84
Viewpoint 1 - Proposed - With Planting	10	Viewpoint 14 - Proposed - No Planting	86
Viewpoint 2 - Existing	12	Viewpoint 14 - Proposed - With Planting	88
Viewpoint 2 - Proposed - No Planting	14	Methodology	91
Viewpoint 2 - Proposed - With Planting	16		
Viewpoint 3 - Existing	18		
Viewpoint 3 - Proposed - No Planting	20		
Viewpoint 3 - Proposed - With Planting	22		
Viewpoint 4 - Existing	24		
Viewpoint 4 - Proposed - No Planting	26		
Viewpoint 4 - Proposed - With Planting	28		
Viewpoint 5 - Existing	30		
Viewpoint 5 - Proposed - No Planting	32		
Viewpoint 5 - Proposed - With Planting	34		
Viewpoint 6 - Existing	36		
Viewpoint 6 - Proposed - No Planting	38		
Viewpoint 6 - Proposed - With Planting	40		
Viewpoint 7 - Existing	42		
Viewpoint 7 - Proposed - No Planting	44		
Viewpoint 7 - Proposed - With Planting	46		
Viewpoint 8 - Existing	48		
Viewpoint 8 - Proposed - No Planting	50		
Viewpoint 8 - Proposed - With Planting	52		
Viewpoint 9 - Existing	54		
Viewpoint 9 - Proposed - No Planting	56		
Viewpoint 9 - Proposed - With Planting	58		
Viewpoint 10 - Existing	60		
Viewpoint 10 - Proposed - No Planting	62		
Viewpoint 10 - Proposed - With Planting	64		
Viewpoint 11 - Existing	66		
Viewpoint 11 - Proposed - No Planting	68		
Viewpoint 11 - Proposed - With Planting	70		
Viewpoint 12 - Existing	72		
Viewpoint 12 - Proposed - No Planting	74		
Viewpoint 12 - Proposed - With Planting	76		
Viewpoint 13 - Existing	78		





**Photosimulation Viewpoint Location Map.**





## Viewpoint 1 - Existing

Heatherlea East Road (opposite #21) looking south-east towards highway.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 12:09pm 17 March 2022 | 1794737 E, 5503916 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 40m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 1 - Proposed - No Planting

Heatherlea East Road (opposite #21) looking south-east towards highway.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 12:09pm 17 March 2022 | 1794737 E, 5503916 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 40m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations

Fencing to the edge of the highway is not shown, TBC.

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NIMT Overbridge location (observed)

## Viewpoint 1 - Proposed - With Planting

Heatherlea East Road (opposite #21) looking south-east towards highway.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | 12:09pm 17 March 2022 | 1794737 E, 5503916 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 40m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

 Dotted line shows approximate area of Re-established Tall Forest planting and height at 5 years. Actual planting not shown, as it would screen the highway from this viewpoint.

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5. Proposed taller planting in the foreground of this image (including for ecology or landscape and visual or natural character effects) has not been shown in the photosimulations. This is to ensure that the highway features and the rehabilitation planting on the earthworks footprint can be seen in the image. A photosimulation showing all the proposed planting would screen sections of, and/or the highway in its entirety from this viewpoint. Refer to the Planting Concept Plan for details of the planting proposed.

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## Viewpoint 2 - Existing

The Avenue (opposite #157) north of the intersection with Avenue North Road looking east toward the NIMT overbridge and ramps.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 11:57am 17 March 2022 | 794632 E, 5503336 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 46m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 2 - Proposed - No Planting

The Avenue (opposite #157) north of the intersection with Avenue North Road looking east toward the NIMT overbridge and ramps.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 11:57am 17 March 2022 | 794632 E, 5503336 N (NZTM)  
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Fencing to the edge of the highway is not shown, TBC.

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15





## Viewpoint 2 - Proposed - With Planting

The Avenue (opposite #157) north of the intersection with Avenue North Road looking east toward the NIMT overbridge and ramps.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 11:57am 17 March 2022 | 794632 E, 5503336 N (NZTM)  
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Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.





### Viewpoint 3 - Existing

Arapaepae Road (opposite #317) Road) looking south towards the O2NL and SH58 roundabout.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 12:44pm 17 March 2022 | 1797068 E, 5502145 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 18m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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### Viewpoint 3 - Proposed - No Planting

Arapaepae Road (opposite #317) Road) looking south towards the O2NL and SH58 roundabout.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | 12:44pm 17 March 2022 | 1797068 E, 5502145 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 18m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Powerlines have been removed from the view where an existing road is realigned. Detailed design lighting is tbc including options for underground services





### Viewpoint 3 - Proposed - With Planting

Arapaepae Road (opposite #317) Road) looking south towards the O2NL and SH58 roundabout.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | 12:44pm 17 March 2022 | 1797068 E, 5502145 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 18m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Powerlines have been removed from the view where an existing road is realigned. Detailed design lighting is tbc including options for underground services

Planting shown represents conservative growth rates at approximately Year 5.

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23





## Viewpoint 4 - Existing

Arapaepae Road (south of the intersection with Queen Street East) looking NE towards Ō2NL and Queen Street East overbridge.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 13:26pm 17 March 2022 | 1794946 E, 5499566 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 44m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 4 - Proposed - No Planting

Arapaepae Road (south of the intersection with Queen Street East) looking NE towards Ō2NL and Queen Street East overbridge.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 13:26pm 17 March 2022 | 1794946 E, 5499566 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 44m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

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## Viewpoint 4 - Proposed - With Planting

Arapaepae Road (south of the intersection with Queen Street East) looking NE towards Ō2NL and Queen Street East overbridge.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | 13:26pm 17 March 2022 | 1794946 E, 5499566 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 44m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Dotted line shows approximate area of Ecological Offsetting Site and height at 5 years. Actual planting not shown, as it would screen the highway from this viewpoint.**

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**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC. Fencing along Arapaepae Road to be retained.

Planting shown represents conservative growth rates at approximately Year 5. Proposed taller planting in the foreground of this image (including for ecology or landscape and visual or natural character effects) has not been shown in the photosimulations. This is to ensure that the highway features and the rehabilitation planting on the earthworks footprint can be seen in the image. A photosimulation showing all the proposed planting would screen sections of, and/or the highway in its entirety from this viewpoint. Refer to the Planting Concept Plan for details of the planting proposed.

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## Viewpoint 5 - Existing

Arapaepae Road (north of the intersection with Tararua Road) looking SE towards Ō2NL and the Tararua Road interchange



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 13:57pm 17 March 2022 | 1794107 E, 5498563 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 58m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 5 - Proposed - No Planting

Arapaepae Road (north of the intersection with Tararua Road) looking SE towards Ō2NL and the Tararua Road interchange



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 13:57pm 17 March 2022 | 1794107 E, 5498563 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 58m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

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33





## Viewpoint 5 - Proposed - With Planting

Arapaepae Road (north of the intersection with Tararua Road) looking SE towards Ō2NL and the Tararua Road interchange



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 13:57pm 17 March 2022 | 1794107 E, 5498563 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 58m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.

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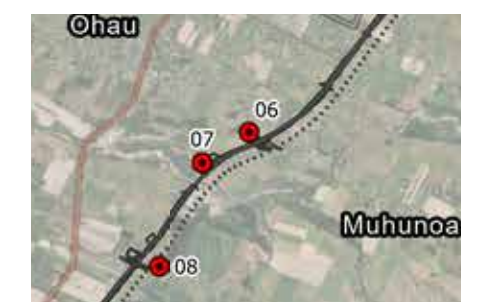
## Viewpoint 6 - Existing

Muhunua East Road (near #205) looking SE to Muhunua East Road overbridge and Ō2NL.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 15:07pm 17 March 2022 | 1792467 E, 5496234 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 61m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 6 - Proposed - No Planting

Muhunua East Road (near #205) looking SE to Muhunua East Road overbridge and Ō2NL.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 15:07pm 17 March 2022 | 1792467 E, 5496234 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 61m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

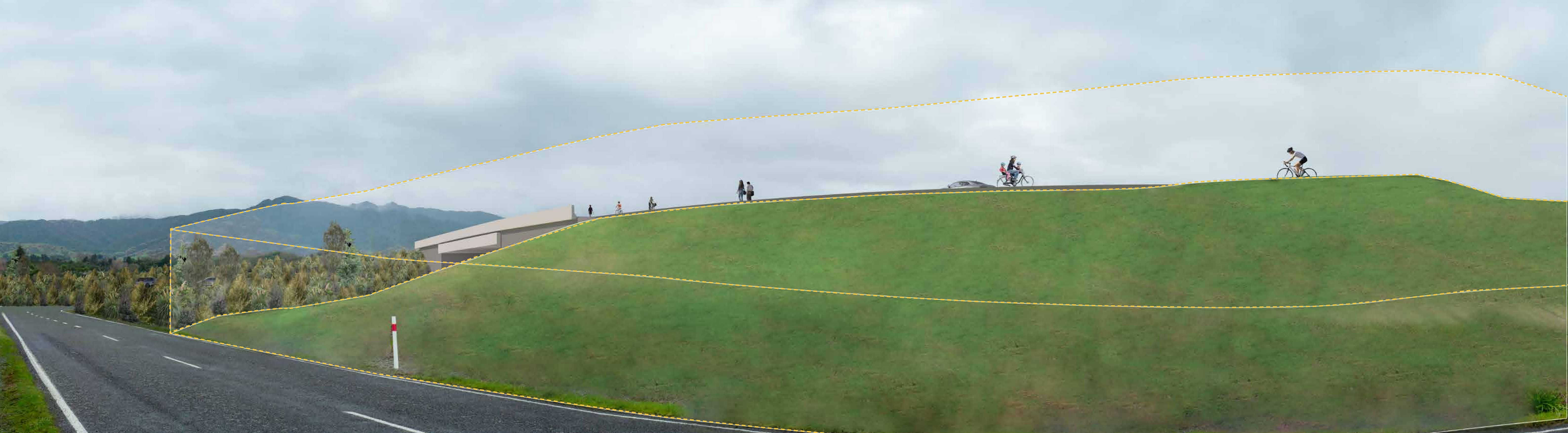
Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations

Fencing to the edge of the highway is not shown, TBC.

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## Viewpoint 6 - Proposed - With Planting

Muhunua East Road (near #205) looking SE to Muhunua East Road overbridge and Ō2NL.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | 15:07pm 17 March 2022 | 1792467 E, 5496234 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 61m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

 Dotted line shows approximate area of Re-established Tall Forest planting and height at 5 years. Actual planting not shown, as it would screen the highway from this viewpoint.

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5. Proposed taller planting in the foreground of this image (including for ecology or landscape and visual or natural character effects) has not been shown in the photosimulations. This is to ensure that the highway features and the rehabilitation planting on the earthworks footprint can be seen in the image. A photosimulation showing all the proposed planting would screen sections of, and/or the highway in its entirety from this viewpoint. Refer to the Planting Concept Plan for details of the planting proposed.

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## Viewpoint 7 - Existing

Private property at 210 Muhunua East Road looking south towards bridge over Ohau River.



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**Original Photo** AE | 50mm | DSLR Nikon D800 | March 2022 |  
 13:38pm 30 June 2022 | 1790973 E, 5495155 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 38m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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## Viewpoint 7 - Proposed - No Planting

Private property at 210 Muhunua East Road looking south towards bridge over Ohau River.



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**Original Photo** AE | 50mm | DSLR Nikon D800 | March 2022 |  
 13:38pm 30 June 2022 | 1790973 E, 5495155 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 38m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

Shared use path lighting is to be confirmed in particular locations during detailed design.

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## Viewpoint 7 - Proposed - With Planting

Private property at 210 Muhunua East Road looking south towards bridge over Ohau River.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 | March 2022 | 13:38pm 30 June 2022 | 1790973 E, 5495155 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 38m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.

Shared use path lighting is to be confirmed in particular locations during detailed design.

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47





## Viewpoint 8 - Existing

Kuku East Road (near #111) looking south-east toward Kuku Road East overbridge and Ō2NL. Kuku Stream to right.



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**Original Photo** AE | 50mm | 30 June 2022 |  
 1790397 E, 5493786 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation:  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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49





## Viewpoint 8 - Proposed - No Planting

Kuku East Road (near #111) looking south-east toward Kuku Road East overbridge and Ō2NL. Kuku Stream to right.



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**Original Photo** AE | 50mm | 30 June 2022 |  
 1790397 E, 5493786 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation:  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting these are only proposed at the interchanges and roundabouts) and there are no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations

Fencing to the edge of the highway is not shown, TBC.

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51





## Viewpoint 8 - Proposed - With Planting

Kuku East Road (near #111) looking south-east toward Kuku Road East overbridge and Ō2NL. Kuku Stream to right.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | 30 June 2022 |  
1790397 E, 5493786 N (NZTM)

Reading distance for correct scale: 400mm | Viewpoint Elevation:  
Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Planting shown represents conservative growth rates at approximately Year 5. Proposed taller planting in the foreground of this image (including for ecology or landscape and visual or natural character effects) has not been shown in the photosimulations. This is to ensure that the highway features and the rehabilitation planting on the earthworks footprint can be seen in the image. A photosimulation showing all the proposed planting would screen sections of, and/or the highway in its entirety from this viewpoint. Refer to the Planting Concept Plan for details of the planting proposed.

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53





## Viewpoint 9 - Existing

Private property at 121A North Manakau Road looking north-west toward Waikawa Stream.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 16:23pm 17 March 2022 | 1788548 E, 5491814 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 49m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)





## Viewpoint 9 - Proposed - No Planting

Private property at 121A North Manakau Road looking north-west toward Waikawa Stream.



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**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 16:23pm 17 March 2022 | 1788548 E, 5491814 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 49m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

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57





## Viewpoint 9 - Proposed - With Planting

Private property at 121A North Manakau Road looking north-west toward Waikawa Stream.



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Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 16:23pm 17 March 2022 | 1788548 E, 5491814 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 49m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

 Approximate location of active stream bed (obscured)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.

Isthmus.





## Viewpoint 10 - Existing

North Manakau Road (near #51) looking east towards Ō2NL and North Manakau Road overbridge.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 |  
 14:54pm 30 June 2022 | 1788142 E, 5491393 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 50m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

Isthmus.





## Viewpoint 10 - Proposed - No Planting

North Manakau Road (near #51) looking east towards Ō2NL and North Manakau Road overbridge.



**Isthmus.**

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 |  
 14:54pm 30 June 2022 | 1788142 E, 5491393 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 50m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

**Isthmus.**





## Viewpoint 10 - Proposed - With Planting

North Manakau Road (near #51) looking east towards Ō2NL and North Manakau Road overbridge.




Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 |  
 14:54pm 30 June 2022 | 1788142 E, 5491393 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 50m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

 Dotted line shows approximate area of Re-established Tall Forest planting and height at 5years. Actual planting not shown, as it would screen the highway from this viewpoint.

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

Mahi toi elements, including narratives to be integrated within design of structures or as standalone elements, have not been confirmed and are not shown on the photosimulations.

Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5. Proposed taller planting in the foreground of this image (including for ecology or landscape and visual or natural character effects) has not been shown in the photosimulations. This is to ensure that the highway features and the rehabilitation planting on the earthworks footprint can be seen in the image. A photosimulation showing all the proposed planting would screen sections of, and/or the highway in its entirety from this viewpoint. Refer to the Planting Concept Plan for details of the planting proposed.





## Viewpoint 11 - Existing

Manakau Heights Drive looking south-west toward highway, Pukehou in left background



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 17:23pm 17 March 2022 | 1787286 E, 5489123 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 39m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)





## Viewpoint 11 - Proposed - No Planting

Manakau Heights Drive looking south-west toward highway, Pukehou in left background



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 |  
 17:23pm 17 March 2022 | 1787286 E, 5489123 N (NZTM)  
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Fencing to the edge of the highway is not shown, TBC.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III





## Viewpoint 11 - Proposed - With Planting

Manakau Heights Drive looking south-west toward highway, Pukehou in left background



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.





## Viewpoint 12 - Existing

South Manakau Road looking south-east to Ō2NL and bridges over South Manakau Road, Manakau Stream, and Waiauti Stream.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | March 2022 | 1786473 E, 5489001 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 41m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

Isthmus.





## Viewpoint 12 - Proposed - No Planting

South Manakau Road looking south-east to Ō2NL and bridges over South Manakau Road, Manakau Stream, and Waiauti Stream.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | March 2022 | 1786473 E, 5489001 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 41m  
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Fencing to the edge of the highway is not shown, TBC.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

Isthmus.





## Viewpoint 12 - Proposed - With Planting

South Manakau Road looking south-east to Ō2NL and bridges over South Manakau Road, Manakau Stream, and Waiauti Stream.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.





## Viewpoint 13 - Existing

Existing SH1 (adjacent to #419) looking south-west towards Ō2NL. Pukehou in background.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | March 2022 | 1785629 E, 5488476 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 46m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Isthmus.





## Viewpoint 13 - Proposed - No Planting

Existing SH1 (adjacent to #419) looking south-west towards Ō2NL. Pukehou in background.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | March 2022 | 1785629 E, 5488476 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 46m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

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Fencing to the edge of the highway is not shown, TBC.

Isthmus.





## Viewpoint 13 - Proposed - With Planting

Existing SH1 (adjacent to #419) looking south-west towards Ō2NL. Pukehou in background.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

**Original Photo** Lisa Rimmer | 50mm | DSLR Nikon D800 | March 2022 | 1785629 E, 5488476 N (NZTM)  
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Fencing to the edge of the highway is not shown, TBC.

Planting shown represents conservative growth rates at approximately Year 5.





## Viewpoint 14 - Existing

Existing SH1 (adjacent to 141) looking south-east to roundabout and southern tie-in.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 | 15:53pm 30 June 2022 |  
 1783166 E, 5483166 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 33m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III

Isthmus.





## Viewpoint 14 - Proposed - No Planting

Existing SH1 (adjacent to 141) looking south-east to roundbout and southern tie-in.



Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 | 15:53pm 30 June 2022 |  
 1783166 E, 5483166 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 33m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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Fencing to the edge of the highway is not shown, TBC.

Isthmus.





## Viewpoint 14 - Proposed - With Planting

Existing SH1 (adjacent to 141) looking south-east to roundbout and southern tie-in.




Isthmus.

Ōtaki to North Levin | October 2022 - Photo Simulations Volume III



**Original Photo** AE | 50mm | DSLR Nikon D800 | 15:53pm 30 June 2022 | 1783166 E, 5483166 N (NZTM)  
 Reading distance for correct scale: 400mm | Viewpoint Elevation: 33m  
 Field of View Approximately 110° horizontal (across 2 x A3 pages)

 Dotted line shows approximate area of Re-established Tall Forest planting and height at 5years. Actual planting not shown, as it would screen the highway from this viewpoint.

**Note:** Photosimulations do not show detailed design features such as road markings, vehicle barriers, reflector markers, traffic signs or pole lighting (noting lighting is only proposed at the interchanges and roundabouts) and there are currently no gantries or overhead signs required for the project, including names and narratives.

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89



### Photosimulation Methodology Statement

- Photos were taken with a fixed lens on DSLR camera. Locations were fixed using a handheld GPS unit with accuracy of 5m. Reference points in the landscape were also located to assist referencing of photo to digital terrain model.
- A sequence of photos was taken from each viewpoint and stitched to form panoramas. Photos were overlapped by approximately 30% and edges cropped prior to stitching to eliminate edge distortion.
- A digital model was created incorporating 3D models of the proposed development. Computer images were generated within the digital model from the same locations as the photos. The image was overlaid and aligned with the photo using reference points and visual matching. (Photos were imported in RAW format to avoid degradation of the image, requiring resizing to match the computer image).
- The wire-frame was then switched off leaving the proposed development in its correct location and scale relative to the photo. Lower parts of the proposed development were erased using Photoshop software where they would be behind foreground topography or vegetation.
- The time and weather when the photo was taken was entered to the programme in order to replicate lighting conditions.
- The completed photomontage is presented over two pages:
  - The photos are produced to replicate correct scale at the nominated reading distance (in this case 400mm).
  - Each photomontage is printed across two facing pages to illustrate a field of view of approximately 110° at a reading distance of 400mm. This approximates the field of human binocular vision. (But not peripheral vision which extends to approximately 200°)

### Notes on use of Photosimulations:

- The Photosimulations are a useful tool but they cannot not precisely reproduce real life for the following reasons:
  - 2D Photography flattens an image compared to binocular vision.
  - Photography is static, whereas the human vision can scan and remember information.
  - Photographs are passive, whereas the eye seeks out detail.
  - The human eye can see more contrast than can be reproduced through photography.
  - Physical resolution of photography and printing is less than that of the human eye.

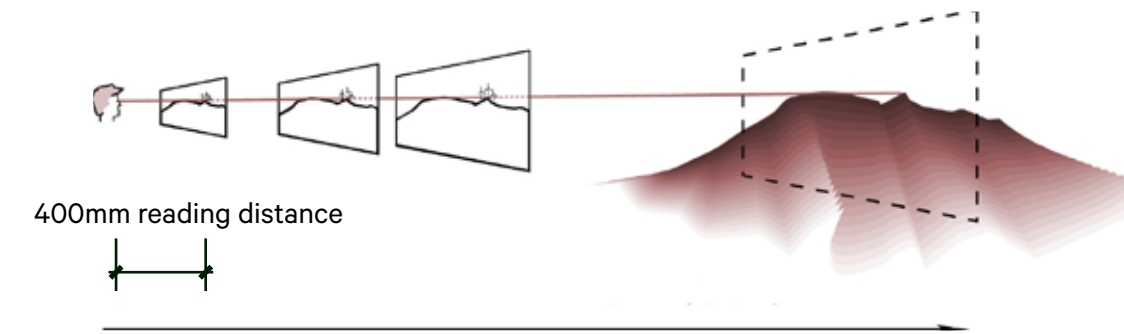


Figure 01: The relationship between reading distance and real life scale.

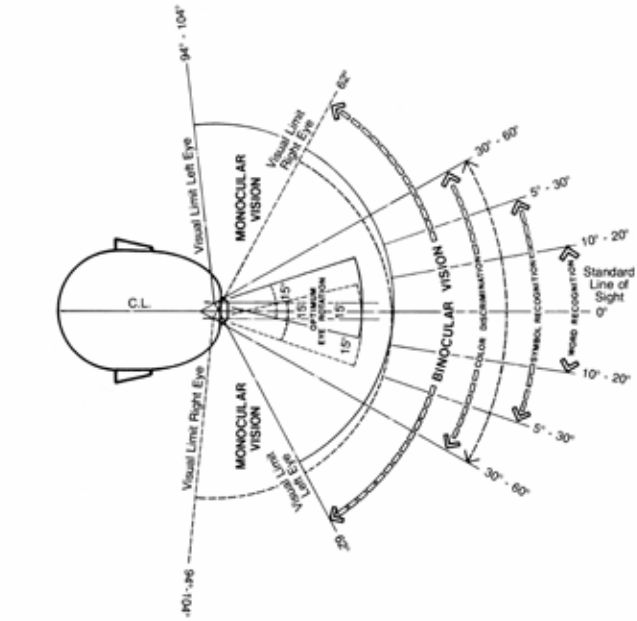


Figure 02: Binocular vision is approximately 124°. Field of view is approximately 110° across 2 x A3 pages at correct scale image for 400mm reading distance (vertical field of view is approximately 33°)

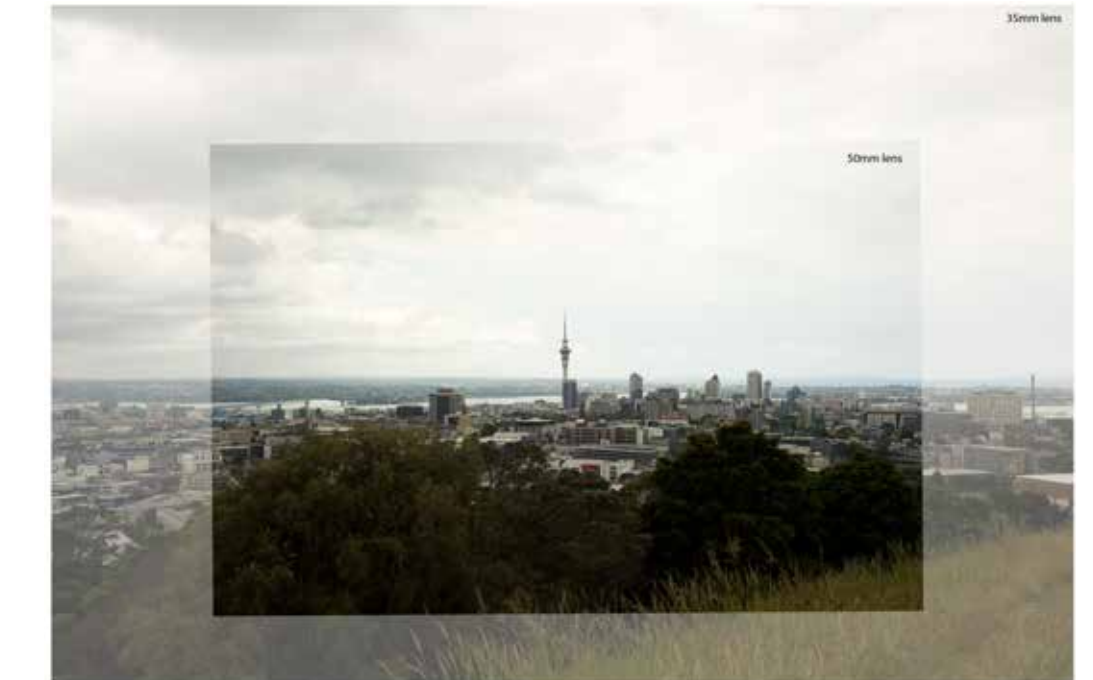


Figure 03: Comparison of 35mm lens and 50mm lens

Two images from the same location. With 35mm and 50mm lenses perspective is influenced by field of view, not by lens focal length. The overlaid portion is identical.

## Methodology