



Briefing Note: Analysis of Waiheke Island's Isolation Index

To:	Hon Jan Tinetti, Minister of Education		
Date:	14 February 2023	Priority:	Low
Security Level:	In Confidence	METIS No:	1303183
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Messaging seen by Communications team:	No	Round Robin:	No

Purpose of Report

The purpose of this paper is to provide you with research and analysis undertaken regarding the Isolation Index of schools on Waiheke Island.

Summary

- The Isolation Index has been updated in 2023 to reflect changes in population density and roading infrastructure over the last 20 years. Te Kāhui Ako o Waiheke has expressed concern regarding the updated Isolation Index and whether it captures the isolation-related challenges that schools on Waiheke Island face.
- Waiheke Island schools were eligible for Targeted Rural Funding prior to its disestablishment in 2002. This funding was replaced with Targeted Funding for Isolation (TFI), a component of schools' operational grant funding, which uses the Isolation Index to determine eligibility. Since 2002, Waiheke Island schools have not been eligible for TFI.
- All schools and kura are assigned an Isolation Index, based on distance and travel time from population centres of different sizes. Schools on offshore islands are assigned a notional Isolation Index, based on the Isolation Index of mainland schools facing similar isolation-related challenges. Waiheke Island schools are assigned an Isolation Index of 0.59. The current eligibility threshold for TFI is 1.27.
- In response to the concerns of Te Kāhui Ako o Waiheke, the Ministry has completed two desktop analysis exercises. First, to reassess Waiheke Island's level of relative isolation comparative to mainland schools. Second, to assess Waiheke Island's relative isolation using the Isolation Index formula. The Ministry has concluded that Waiheke Island's level of relative isolation does not meet the eligibility threshold for isolation-based resourcing of 1.27 under either scenario.
- The Isolation Index will be re-calculated following the release of 2023 census data. The Ministry intends to complete another costing exercise for all offshore islands in 2024 or 2025 after the results of the 2023 Census are available, to ensure that the differentials with mainland schools are set correctly.

Proactive Release

- a **agree** that the Ministry of Education release this briefing in full once it has been considered by you.

☒ Agree ☐ Disagree.



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14/02/2023



Hon Jan Tinetti
Minister of Education

18/02/2023

Background

1. The Isolation Index was introduced in 2002 and is used to measure the relative isolation of schools and kura. It is used to identify which schools in New Zealand are the most isolated so that we can target additional resourcing to them, to recognise isolation-related challenges.
2. There are a number of different types of resourcing that use the Isolation Index to determine eligibility. The main isolation-based resourcing component for schools is Targeted Funding for Isolation (TFI), which replaced Targeted Rural Funding in 2002 and is a component of schools' operational grant funding. The Isolation Index also impacts eligibility for small components of property funding and for the Voluntary Bonding Scheme.
3. The Isolation Index has been updated in 2023 and all schools and kura have been allocated a new Index. The previous Isolation Index used 2001 Census and roading information, so the new Index reflects changes in New Zealand's population density and roading infrastructure over the last 20 years. This has resulted in some changes to the allocation of isolation-based resourcing.
4. Te Kāhui Ako o Waiheke has expressed concern regarding the updated Isolation Index and whether it appropriately captures the isolation-related challenges that schools on Waiheke Island face.

History of Waiheke Island's Isolation Classification

5. Waiheke Island schools were previously eligible for Targeted Rural Funding prior to its disestablishment in 2002. In 2002, this funding was replaced with TFI, and the Isolation Index was introduced to determine eligibility. The eligibility threshold for TFI was 1.65 between 2002 and 2022. Waiheke Island schools were not eligible as their Index was 0.8.
6. The Isolation Index and TFI have been updated in 2023. The new eligibility threshold for TFI is 1.27.¹ Waiheke Island schools' new index is 0.59, therefore they remain ineligible.
7. The Isolation Index also determines eligibility and funding amounts for the Property Maintenance Grant and 5 Year Agreement funding isolation top ups. These property components have not yet transitioned to the updated Isolation Index. However, Waiheke Island schools' eligibility will be unchanged.

Calculating Waiheke Island's Isolation Index

8. The Isolation Index formula has only been used to calculate the relative isolation of mainland schools, as it is partially based on roading data. When the Index was developed in 2001, offshore islands were set notional Isolation Index values comparable to mainland schools that the Ministry determined have similar relative isolation in terms of costs and access to goods and services.
9. Waiheke Island was benchmarked against the Indexes of schools in Kāpiti and Helensville. These mainland schools can drive to a population centre of 60,000+ for a day and do not incur overnight accommodation costs, as there are accessible and regular transport links. However, they are far away enough from these centres to feel removed from the municipality.
10. When work began to update the Isolation Index in 2019, the Ministry determined that there had not been significant changes in the relative level of isolation of offshore island schools compared to mainland schools. Waiheke Island's index has been updated to 0.59 to reflect the new scale of the Index (as the range of values is smaller due to changes in the formula).

¹ The eligibility threshold has changed due to updates to the Isolation Index formula which has changed the scale of the Index; however, the same proportion of schools are eligible. Updates include the addition of travel time as a measure of isolation and the reduction of the largest population centre size from 100,000 to 60,000 based on a better understanding of where isolation is more strongly felt.

Whilst their new Index number is lower, the Ministry has clarified with them that this does not mean they are less isolated - rather the updated Index reflects that we consider their level of isolation is unchanged.

Waiheke Island Reports 2011

11. Two reports completed in 2011 noted that:
 - a. Waiheke Island is in close proximity to Auckland City with regular and reliable transport links; and
 - b. there are accessible and readily available services and provision of goods which is comparable to the wider Auckland market.
12. This exercise was not re-done alongside the development of the updated Isolation Index because the Ministry considered that there had been no significant changes that would impact the relative isolation for offshore islands.

Key Areas of Concern Raised by Te Kāhui Ako o Waiheke

13. The section below highlights the key areas of concern raised by Te Kāhui Ako o Waiheke and what Ministry analysis has shown in relation to these areas.

Waiheke Island schools face additional costs in terms of travel time for vehicles, accessing the ferry and for shipping large and dangerous goods; there is only one building supply company with a narrower range and higher prices than mainland stores

Ministry response

14. The Ministry acknowledges that there is an additional degree of cost and travel time associated with travelling on the ferry to central Auckland and obtaining larger goods and services for larger projects. However, we do not consider Waiheke Island's isolation as comparable to other schools that meet the eligibility threshold for isolation-based resourcing, as reflected in the desktop research exercise and analysis that has been completed (refer to Appendix 3 and 4).
15. Refer to Appendix 1 for further information on property projects.

Has the Ministry developed a robust comparison whereby they have sent out tender documents for similar projects and then compared quotes for offshore islands with urban schools?

Ministry response

16. All schools located on offshore islands are given a notional Isolation Index value, equivalent to that of mainland schools that experience similar additional costs because of their isolation.
17. The Ministry does not include tender documents in this exercise because the nature of property costs and factors that influence it may have a disproportionate impact on the Isolation Index. As noted, the Isolation Index is primarily used in TFI, and only used to determine a small portion of the Property Maintenance Grant and 5YA funding.
18. Where there are significant discrepancies between property-based costs for offshore islands versus mainland schools, additional funding would be made available.

Has the Ministry considered reducing the funding of urban schools to distribute to rural and more isolated schools to create equity across the schooling network?

Ministry response

19. The Ministry does not intend to reduce operational grant funding for urban schools to redistribute to more rural and isolated schools. Instead, the funding system is designed so that all schools receive 'core' components of operational grant funding (such as Per-Pupil funding, Property Maintenance Grant, and Heat, Light and Water funding) to provide a base level of funding for general operating costs and delivery of the curriculum. Other operational grant components are included on top of these 'core' components and are targeted towards specific needs, which may differ between schools (such as Equity Funding and Support for Inclusion Funding). Not all schools receive every component.
20. TFI is the Ministry's main form of isolation-based resourcing and is paid to eligible schools as a component of their operational grant funding. The purpose of this funding is to recognise and help address barriers that isolated schools face, including access to teaching and learning, and services and trades. Approximately 20% of schools in New Zealand receive TFI. It is targeted to the most isolated schools to contribute meaningfully to their access barriers, from a pool of approximately \$9.1 million per annum (excluding GST).
21. The Ministry recognises that many schools that do not meet the eligibility threshold for TFI face additional costs in relation to where they are located, however the intention of the funding is to ensure that the most isolated schools receive meaningful support.
22. In addition, the Government invested an additional ongoing \$75 million as part of the implementation of the Equity Index. The transition to the Equity Index has been combined with the updated Isolation Index to reduce the amount of change schools need to manage and to simplify the transition. The majority of the most isolated schools received an increase in funding in 2023 as a result of the combined changes and are able to use this funding as they determine is the most appropriate for their learners.

Waiheke Island schools are unable to claim for work undertaken by school staff in relation to maintaining self-supply water

Ministry response

23. School staff costs for time spent on energy-related work are covered by the base and per-pupil component of schools' operational grant funding. However, the Ministry provides Waiheke Schools with additional funding to support the maintenance of their Heat, Light and Water infrastructure (HLW funding).
24. The Ministry acknowledges the maintenance and operation of water services infrastructure places a significant burden on self-supply schools. If those schools incur costs which exceed their HLW budgets, schools can apply for one-off reimbursement of costs from the Ministry. If the higher level of expenditure becomes an on-going issue, the Ministry recommends they apply for a budget review.
25. Refer to Appendix 2 for further information on HLW.

Two primary schools are part of the School Donations Scheme and unable to request contributions for any educational trips or shows

Ministry response

26. Schools that are opted into the donations scheme receive \$154.13 per student per year. All schools that have opted in receive the same rate of funding through the scheme.

27. When schools are eligible and choose to opt-in to the scheme, they cannot ask parents or whānau for donations towards curriculum-related activities, with the exception of overnight camps. This is clear at the point that schools opt into the scheme and the same requirements apply to all schools. Eligible schools decide whether to opt into the scheme each year.
28. This is a completely voluntary scheme. If a school would rather have the ability to seek additional locally raised funds from parents or whānau, they can choose not to opt in.

The Ministry has undertaken two desktop exercises to assess Waiheke Island's Isolation

Desktop research exercise to assess Waiheke Island's level of relative isolation comparative to mainland schools

29. We compared Waiheke Island schools to schools with:
- a) the same Isolation Index as Waiheke Island (0.59)
 - b) higher Isolation Indexes than Waiheke Island (1.0) that do not meet the eligibility threshold for isolation-based resourcing
 - c) higher Isolation Indexes than Waiheke Island (1.27) that meet the eligibility threshold for isolation-based resourcing
30. We assessed basic service and trades provisions and the average travel time between these services and the schools. We also included the distance and travel time to each of three different population centres schools are measured to in the Isolation Index formula.
31. The 20,000-population centre is weighted more heavily in the Isolation Index formula than the 5,000 and 60,000 centre (weighted at 0.8 and 0.4 respectively) recognising that the 20,000 centre will have the vast majority of goods and services schools need. It is important that these are all considered as they directly influence the Isolation Index output for schools.
32. Refer to Appendix 3 for the table with this analysis in full.

Summary of findings

33. Waiheke Island schools have a number of trades and services in close proximity to them (between a 3-to-10-minute drive). In comparison, other isolated schools we have analysed do not have ready access to services or are significantly further away from their nearest population centre of 20,000 and / or 60,000.
34. If we were to change the methodology used to calculate Waiheke Island's Isolation Index, to incorporate an actual measure of the distance and travel time associated with travelling by ferry to Auckland, the Ministry has assessed that their level of relative isolation would be higher than 0.59. However, it would still be below the eligibility threshold for isolation-based resourcing and would be a departure from our approach for other offshore islands, which we do not consider to be flawed.
35. The Ministry has completed an additional exercise to calculate Waiheke Island's Isolation Index, using the Index formula and a range of distance and travel time assumptions.

Desktop exercise to calculate Waiheke Island's relative isolation using the Isolation Index formula

36. It is possible to use distance and travel time to Waiheke Island to generate an Isolation Index using the standard Isolation Index formula. The Ministry has used a range of distance and travel time assumptions from Waiheke Island schools to the three different

sized population centres relevant to them. We have done this as another way to test their level of relative isolation, in addition to the analysis in Appendix 3.

37. There are two routes between Waiheke Island and Auckland CBD. As a result, we have included two sets of assumptions in the exercise:

- a) Option 1 – Person only ferry (Auckland Downtown Ferry Terminal – Matiatia Ferry Terminal (Waiheke))
- b) Option 2 – Car ferry (Halfmoon Bay Ferry Terminal – Kennedy Point Ferry Terminal)

38. Although we are able to measure distance in kilometres from the Auckland CBD to Waiheke Island schools, some assumptions regarding travel time must be made. We have used the travel time assumptions Te Kāhui Ako o Waiheke provided in their letter. For example, the ferry ride between Waiheke Island and Auckland is approximately 45 – 60 minutes long. We have used 60 minutes as our travel time assumption and recognised the additional wait time on the ferry to ensure we are testing the most generous assumptions.

39. Refer to Appendix 4 for a table containing the distance and travel time assumptions used for each option and Waiheke Island's Isolation Index based on these assumptions.

Summary of findings

40. The assumptions used in option 1 generated an Isolation Index of 0.83.

41. The assumptions used in option 2 generated an Isolation Index of 1.14.

42. Therefore, we do not consider Waiheke Island's level of relative isolation meets the eligibility threshold for isolation-based resourcing of 1.27 under any scenario.

Other property-related information for delivering new builds

43. The Ministry has recently done a comparative exercise looking into the cost of delivering new builds relative to a school's isolation. The findings from this exercise show only a very slight trend indicating increased costs in remote areas.

44. New builds in urban areas often experience significant challenges and are therefore more expensive to deliver due to space constraints. Space is more limited in urban areas, and so schools are often multi storey and consequently more expensive. Anecdotally, there is also some evidence that contractors in more remote areas charge lower rates due to having lower costs.

45. The data for this exercise has come from a study of the construction costs of new builds delivered by and for schools, and the Waiheke schools were not part of this study. However, this information is useful to highlight that many schools, including those onshore and within Auckland city, also face significant challenges with delivering property projects.

Next Steps

46. Based on our desktop research exercise and our exercise to calculate Waiheke Island's isolation using the Isolation Index formula, we have determined that Waiheke Island schools do not reach the 1.27 threshold for eligibility for isolation-based resourcing.

47. When the Isolation Index is re-calculated following the release of 2023 census data, the Ministry plans to work with the external geospatial mapping company who calculates the Isolation Index to see if the index for Waiheke Island schools can be calculated using the

formula. This approach could only apply to Waiheke Island and not for other offshore islands, due to Waiheke's daily regular and reliable transport links (which is not the case for other offshore islands).

48. The Ministry intends to complete another costing exercise for all offshore islands after the results of the 2023 Census are available to ensure that the differentials with mainland schools are set correctly.

Appendices

- Appendix 1 – Delivery of property projects for schools on Waiheke Island
- Appendix 2 – Heat, Light and Water funding, and the Water Services Infrastructure Programme
- Appendix 3 – Waiheke Island desktop research exercise
- Appendix 4 – Desktop exercise to calculate Waiheke Island's relative isolation using the Isolation Index formula

Appendix 1 – Delivery of property projects for schools on Waiheke Island

The Ministry has contacted the relevant Infrastructure Manager and Property Advisor to discuss their experience with delivering property projects on the island. They have explained that Waiheke High School in particular has had substantial property work within the last three years. Waiheke High School has had good relations with local contractors and that they have not reported experiencing substantial increases in costs due to its relative isolation. The school has not made any requests for extra funding.

The Ministry is aware that most schools have suffered delays with delivering property projects, including Waiheke schools. This reflects the significant challenges faced by the wider-construction industry. The Auckland market in particular, is burdened by capacity constraints, resulting in higher constructions costs and delays. It is difficult to assess the degree to which this problem is affecting Waiheke schools more or less than onshore Auckland schools.

The Ministry will continue to offer the Waiheke schools with support as required. If the Waiheke schools have Priority 1 or 2 projects that cannot be funded within a school's baseline 5YA, the Ministry would provide that school with additional support (likely through Supplementary 5YA funding). The Infrastructure Manager for the area has stated that additional support is best delivered by ensuring that they have regular contact with the schools, and that the Infrastructure Manager and Property Advisor will continue to do this.

Appendix 2 – Heat, Light and Water funding, and the Water Services Infrastructure Programme

The Ministry provides Waiheke Schools with additional funding to support the maintenance of their Heat, Lighting and Water infrastructure (HLW funding). Waiheke schools in particular are reliant on complex infrastructure systems, which would increase costs relative to other schools.

The Ministry does not have sufficient information at an individual school level about water use, and water and wastewater treatment system operation and maintenance requirements sufficient to estimate costs. Due to the complexity of the water infrastructure systems used by Waiheke schools, it is likely those schools should be given additional support by the Ministry. If those schools incur costs which exceed their HLW budgets, the Ministry recommends they apply for a budget review.

In addition to applying for a budget review, the Water Services Infrastructure Programme (WSIP) has been set up by the Ministry to provide more support for school's water-services infrastructure and requirements. The purpose of this programme is to improve the condition of water-services infrastructure, improve the data being collected about the infrastructure and ensure compliance with regulatory requirements and health and safety obligations. The Ministry will initially provide this support to schools where drinking water-services infrastructure has a high-risk of failure. No Waiheke schools are identified as part of this initial tranche of 80 schools, but the Ministry intends to expand this programme out to the remaining schools and ultimately out to all types of water-services infrastructure across the school property portfolio. The nature of this expansion is yet to be finalised by the Ministry and is dependent on funding.

Appendix 3 – Waiheke Island desktop research exercise

School	Education Region	Isolation Index	Distance travel time to nearest 5,000+ centre	Distance/travel time to nearest 20,000+ centre	Distance/travel time to nearest 60,000+ centre	Services and trades travel time and distance
Schools on Waiheke Island	Auckland (Waiheke)	0.59 (notional)	Waiheke Island 1.3 km 5 minutes	Central Auckland Zone 29.6 km OR 39.5km 85 minutes OR 120 minutes	Central Auckland Zone 29.6 km OR 39.5km 85 minutes OR 120 minutes	There are a number of services and trades located on Waiheke Island. These are between a 3- and 10-minute drive from each of the three schools, travelling up to approximately 5.8km for those services 10 minutes away.
School in Whanganui	Taranaki Whanganui Manawātū	0.59	Whanganui 13.809 km 14.610 minutes	Whanganui 13.809 km 14.61 minutes	Palmerston North 87.389 km 78.192 minutes	Closest services and trades are located in Whanganui. Travel time for the closest services are approximately 10 minutes, travelling 10.8km.
School in Featherston	Wellington	0.59	Carterton 22.103 km 21.33 minutes	Upper Hutt Zone 32.074 km 26.821 minutes	Upper Hutt Zone 32.074 km 26.821 minutes	Some services and trades are located in Featherston. To drive to these services takes a few minutes, travelling around less than 1km. Additional services are in Greytown. Travel time is approx. 12 minutes, travelling 13.7km.
School near Blenheim	Nelson Marlborough West Coast	0.59	Blenheim 11.286 km 13.788 minutes	Blenheim 11.286 km 13.788 minutes	Nelson 102.311 km 81.526 minutes	Some services and trades located in local area, with additional located in Blenheim. Travel time for the closest services is approx. 2 minutes, travelling 650m. Travel time for services located in Blenheim are approx. 15 minutes, travelling 11.7km.
School in Waitara	Taranaki Whanganui Manawātū	1.0	Waitara 1.734 km 2.973 minutes	New Plymouth 17.635 km 16.908 minutes	Hamilton Zone 222.295 km 180.966 minutes	There are a number of services and trades located in Waitara. These are between 3 and 8 minutes from the school, travelling up to 3.6km. Additional services are located in New Plymouth. Travel time is approximately 17 minutes, travelling 17.6km.
School in Reporoa	Bay of Plenty Waiariki	1.0	Taupō 36.99 km 29.977 minutes	Taupō 36.99 km 29.977 minutes	Tauranga 104.778 km 93.083 minutes	There are no services or trades located nearby surrounding the school. The nearest services and trades are located in Taupō. Travel time to the closest service is approx. 26 minutes, travelling 35 km.
School near Rangiora	Canterbury Chatham Islands	1.0	Rangiora 33.904 km 28.858 minutes	Christchurch 56.541 km 50.707 minutes	Christchurch 56.541 km 50.707 minutes	There are no services or trades located within the local area. One service is located 3.5km away, travel time approx. 6 minutes. Additional services and trades are located in Rangiora. Travel time is approximately 26 minutes, travelling 32.4km.

School in Wyndham	Otago Southland	1.27	Gore 29.309 km 29.31 minutes	Invercargill 42.952 km 37.853 minutes	Dunedin 171.223 km 142.361 minutes	Some services and trades located in Wyndham. Additional services and trades located in Invercargill. Travel time for the closest services is approx. 2 minutes, travelling 600m. Travel time for services located in Invercargill are approx. 34 minutes, travelling 42.7km.
School in Wellsford	Auckland	1.27	Warkworth 31.268 km 29.559 minutes	Northern Auckland Zone 78.978 km 67.831 minutes	Northern Auckland Zone 78.978 km 67.831 minutes	No services or trades located nearby surrounding the school. The closest services are variably located in surrounding towns, Matakana has all services and trades considered in this exercise. Travel time for these services is approximately 31 minutes, travelling on non-State Highway roads for 31.1km, or a slightly longer route partially via SH1 for approx. 39 minutes for 39.4km.
School near Picton	Nelson Marlborough West Coast	1.27	Blenheim 53.962 km 50.883 minutes	Blenheim 53.962 km 50.883 minutes	Nelson 87.282 km 76.227 minutes	No services or trades are located in the local area. All services are in Picton. Travel time is approx. 30 minutes, travelling 20.7km.

Appendix 4 - Desktop exercise to calculate Waiheke Island's relative isolation using the Isolation Index formula

	Option 1 – Person only ferry (Auckland Downtown Ferry Terminal – Matiatia Ferry Terminal (Waiheke))					Option 2 – Car ferry (Halfmoon Bay Ferry Terminal – Kennedy Point Ferry Terminal)				
Population centre	Distance	Auckland Central to ferry travel time	Travel time	Ferry wait time	Ferry to school travel time	Distance	Auckland Central to ferry travel time	Travel time	Ferry wait time	Ferry to school travel time
5,000+ Waiheke Island	1.3 km	N/A	5 minutes	N/A	N/A	1.3 km	N/A	5 minutes	N/A	N/A
20,000+ Central Auckland Zone	29.6km	5 minutes	60 minutes	10 minutes	10 minutes	39.5 km	20 minutes	60 minutes	30 minutes	10 minutes
60,000+ Central Auckland Zone	29.6km	5 minutes	60 minutes	10 minutes	10 minutes	39.5 km	20 minutes	60 minutes	30 minutes	10 minutes
Isolation Index	0.83					1.14				