



macro perspective  micro analysis

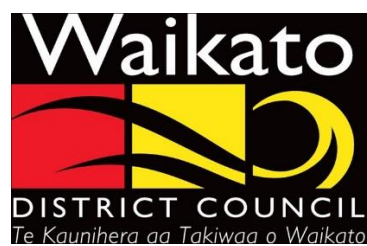
Waikato District Cemetery Strategy Projections

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Report prepared by:



for:



Quality Assurance Statement

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Executive Summary

Rationale Limited has been engaged to provide supply and demand projections for the Waikato District Council (WDC) cemeteries. The objective of this study is to assist WDC in developing the cemetery strategy for the management and provision of future land for cemeteries in the district. The study period is 30 years (2015 to 2045).

The WDC is responsible for 22 cemeteries. Of these, the Alexandra Redoubt Cemetery, Pokeno Old Soldiers Cemetery and Rangiriri Old Cemetery are all closed with no further development planned. There are also privately owned cemeteries and numerous Urupa in the district.

The focus of the study is on the plots required for casket burials required on the WDC owned cemeteries. Non-council and private cemeteries, and the small amount of land used for internment of cremations were excluded from the scope of this study. They have however been considered in the demand assessment.

A supply and demand model has been developed to cater for a range of scenarios. The model is informed by historical data and future projections from WDC and Statistics New Zealand.

The study considers both actively maintained land and additional available land, not yet developed for cemetery purposes. The district-wide supply is summarised in the table below:

	Number of Burial Plots
Existing number of burials on actively maintained land	11,700
Residual supply of actively maintained land	4,200
Residual supply of additional land	18,000 to 26,000
Total	33,900 to 41,900

Over the 30 year study period, the number of deaths in the district are projected to increase from around 400 to around 700 per year. The increase is due to population growth and the impact of an ageing population. The number of casket burials at WDC cemeteries over the same period are projected to increase from around 110 per year to over 200 burials per year.

The results focus on the best estimate (base case) and the worst case (assuming lower supply and higher demand). The key findings based on the assumptions under the base case are shown in the following table. The cemeteries are grouped into categories showing the capacity status or redevelopment work required.

Category	Number of cemeteries in category	Cemetery	Year	Residual Capacity at 2045
Already closed	3	Alexandra Redoubt		0
		Pokeno Old Soldiers		0
		Rangiriri Old		0
Total capacity reached within the next 30 years – to be closed	4	Ngaruawahia Old	2016	0
		Tuakau	2016	0
		Huntly Kimihia ¹	2035	0
		Pokeno	2040	0
Redevelopment of additional land required in the next five years	3	Te Mata	2015	190
		Rangiriri	2017	320
		Whatawhata	2017	4,230
Redevelopment of additional land required – 2020 to 2024	3	Matahura/Waiterimu	2020	1,760
		Huntly Kimihia ¹	2023	0
		Waerenga	2024	1,520
Redevelopment of additional land required – 2025 to 2045	5	Gordonton	2027	150
		Maramarua	2035	1,590
		Okete	2035	270
		Jackson Street	2040	2,760
		Orini	2045	340
Sufficient residual capacity available until at least 2045	5	Mercer	n/a	1,620 ²
		Muslim	n/a	25
		Onewhero	n/a	2,860 ²
		Raglan	n/a	240
		Taupiri	n/a	3,350 ²

1. The Huntly Kimihia is projected to require redevelopment in 2023 and reach total capacity around 2035.

2. Includes the residual capacity of additional land not projected to be required until post 2045.

The number of casket burials at WDC cemeteries between 2015 and 2045 is projected to be between 5,000 and 7,200. Under the base case there are projected to be over 21,200 burial plots still available in the WDC cemeteries at the end of the 30 year study period. Under the worst case, this residual capacity in 2045 would be reduced to less than 15,000 burial plots. Despite some cemeteries being projected to reach capacity, all parts of the district are forecast to have surplus capacity in nearby cemeteries.

The appendix includes a detailed overview of the key findings for each cemetery. These have been developed to be inserted as summary information in the cemetery strategy and includes:

- A brief synopsis of the findings, including both the base and worst case scenario.
- A summary supply and demand graph showing both historical figures and future projections under the base case and the worst case.
- A summary table showing the key outputs.

1 Introduction

The Waikato District Council (WDC) is responsible for 22 cemeteries. There are also privately owned cemeteries and numerous Urupa in the district.

WDC are developing a Cemetery Strategy to examine the current service and availability of cemeteries within the district for future planning requirements. A key component of the strategy is understanding the existing supply of suitable cemetery land and comparing this to the likely demand for burial sites throughout the district. The objective of this study is to provide a supply and demand model to guide WDC in developing the strategy for the management and provision of future land for cemeteries in the district. The study period is 30 years (2015 to 2045).

The cemeteries considered in this study are listed below:

- | | |
|-----------------------------|---------------------|
| Gordonton Cemetery | Orini Cemetery |
| Huntly Kimihia Cemetery | Pokeno Cemetery |
| Jackson Street Cemetery | Raglan Cemetery |
| Maramarua Cemetery | Rangiriri Cemetery |
| Matahura/Waiterimu Cemetery | Taupiri Cemetery |
| Mercer Cemetery | Te Mata Cemetery |
| Muslim | Tuakau Cemetery |
| Ngaruawahia Old Cemetery | Waerenga Cemetery |
| Okete Cemetery | Whatawhata Cemetery |
| Onewhero Cemetery | |

The Alexandra Redoubt Cemetery, Pokeno Old Soldiers Cemetery and Rangiriri Old Cemetery are all closed with no further development planned. Therefore for the purpose of this study, no further demand was allocated to these cemeteries. The non-council and private cemeteries were also excluded from scope of this study.

2 Method

The focus of this study is on the burial plots available and required for casket burials. Interment of cremations at the WDC cemeteries has not been considered due to the small land area required for these types of internments.

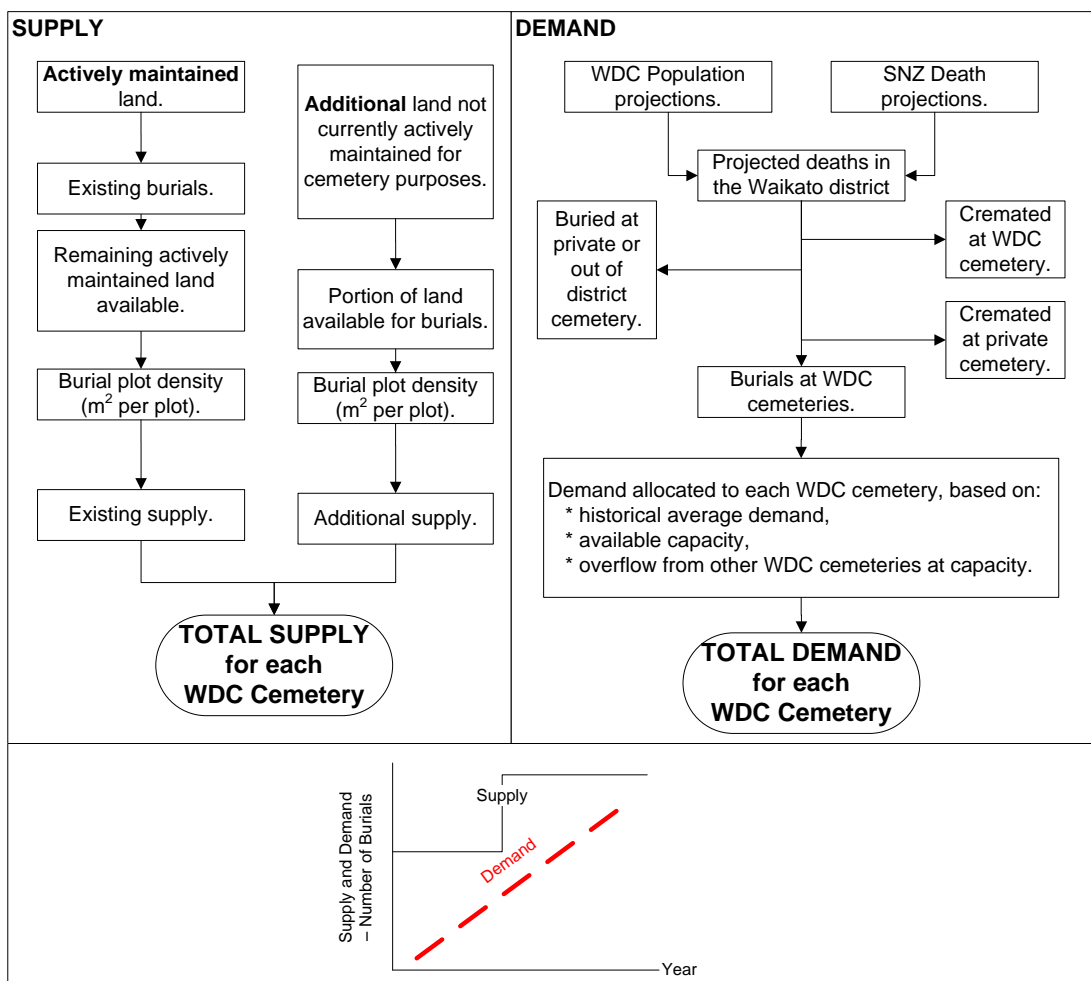
The supply and demand model has been built to consider the following scenarios:

- Base case - this is the most likely scenario based on the data available and the assumptions agreed with council officers.
- Worst case - this is a scenario to demonstrate how each cemetery would be affected if there was higher demand and lower supply.
- Best case - this is a scenario to demonstrate how each cemetery would be affected if there was lower demand and higher supply.

The focus of this report is the base case and the worst case scenario. The best case scenario is of less relevance as it is unlikely to be suitable for planning future development.

An overview of the method is shown in the following diagram.

Figure 1 : Supply and demand methodology overview



The two sides of the supply and demand model are explained in further detail in the following sections.

2.1 Supply

The supply for future casket burials is quantified using the number of burial plots available. The supply side has been split into two components:

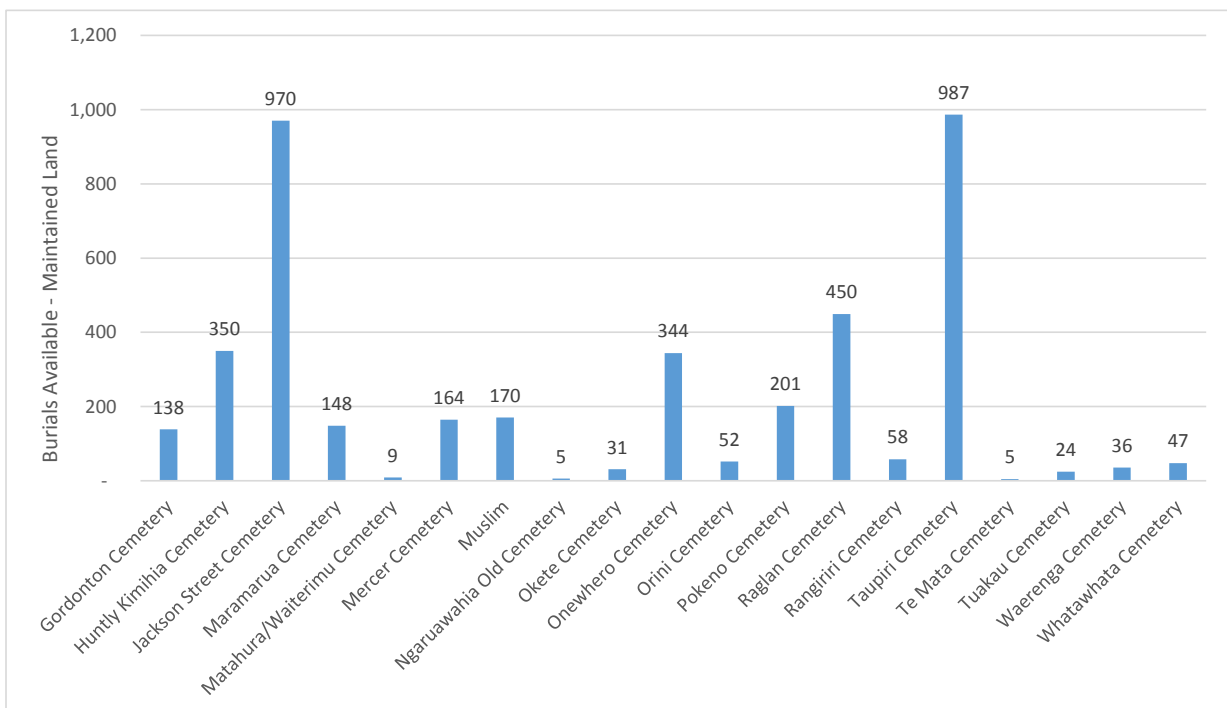
1. Further utilisation of actively maintained land.
 2. Development of land that is available but not currently actively maintained for cemetery purposes.
- Not all cemeteries have this type of land available for future development.

The existing supply (as at 2014) of actively maintained land for each cemetery has been based on the following parameters:

- The total area of actively maintained land that is available for burial plots
- The number of burials to date
- The density of existing burial plots.

The supply outputs on actively maintained land have been agreed with council officers to provide the following 2014 supply of burial plots. The total existing capacity for the district is over 4,000 burial plots, however a number of cemeteries are nearing capacity.

Figure 2 : Burial plots available on actively maintained land



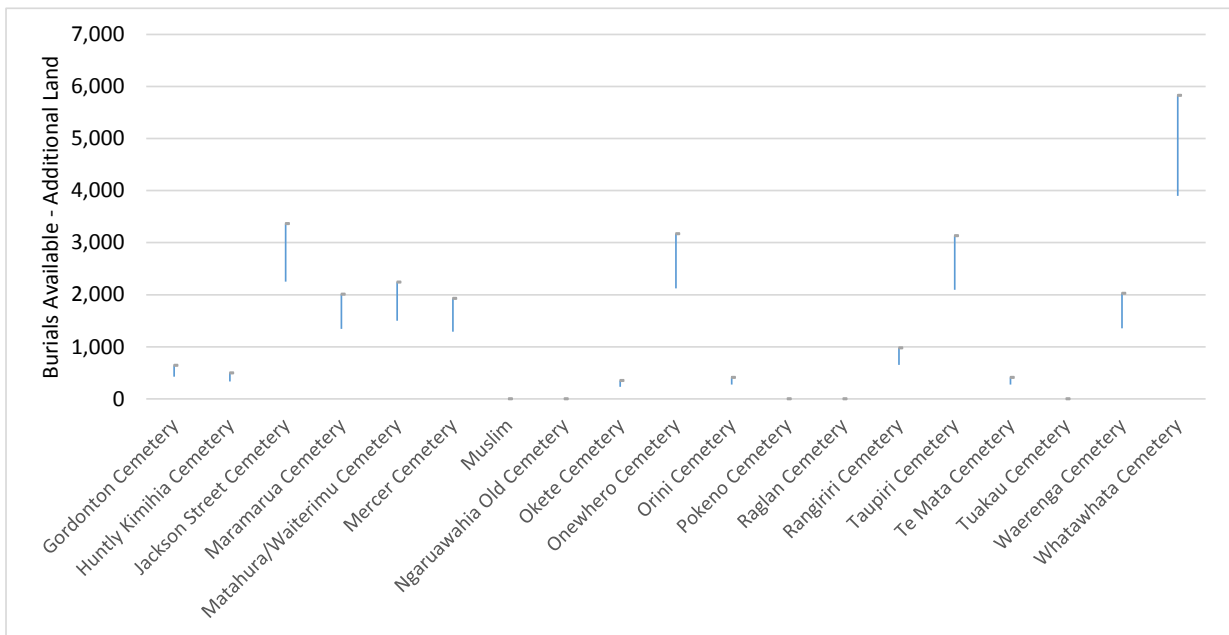
A similar approach has been used for the development of additional land that is not currently maintained for cemetery purposes. However the portion of land available for burials and the density of burial plots are input variables that can be modified to model a range of supply scenarios. The key assumptions are:

- That 80% of the additional land will be suitable for cemetery purposes. The remaining 20% is assumed to be used for green spaces, eco-burials, car parks, driveways and pathways. This assumption has been agreed with Council officers.

- The density of burial plots is 8.3m² per burial plot. This is based on guidance from WDC’s Cemetery Planning Manual where each plot is 2.2m x 0.75m with a space of 0.75m on all four sides. This density is applied as an average. In reality there will be some plots that are dug to include two caskets and also some pre-booked plots. The overall average and scenarios discussed below account for these factors and how they influence the overall supply.

The range of potential supply available, excluding the actively maintained land, is summarised in the following graph. The range is based on a +/-10% change in the assumptions for available additional land and burial density to model the best and worst case.

Figure 3 : Range of burials available on additional land



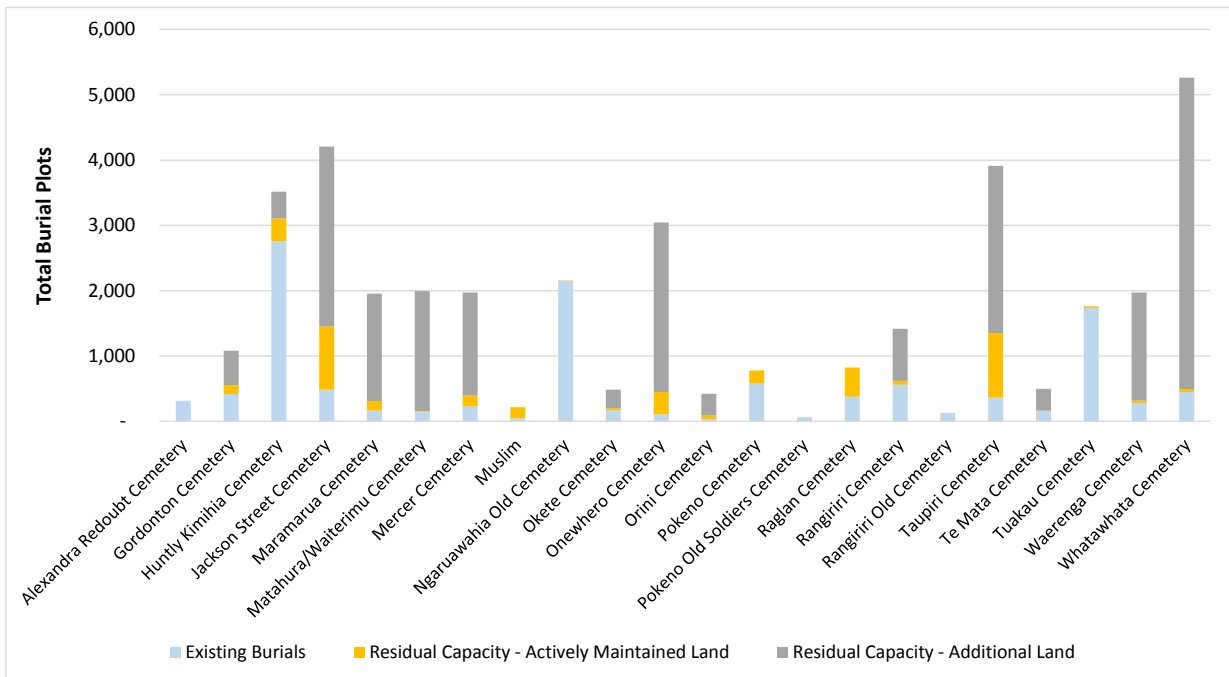
This graph shows that eight cemeteries have at least another 1,000, (and as many as 6,000) burial plots available should all future land be developed. For example Whatawhata Cemetery potentially has between 3,900 and 5,800 burial plots on additional land. A further six cemeteries have several hundred additional burial plots available. The total burial plots across the district on additional land is between 18,000 and 26,000.

A district wide summary is shown in the following table and a summary of the supply for each cemetery is shown in the graph on the following page. The number of existing burials are also shown for perspective.

Table 1 : District-wide supply summary – base case

	Number of Burial Plots
Existing number of burials on actively maintained land	11,700
Residual supply of actively maintained land	4,200
Residual supply of additional land	18,000 to 26,000
Total	33,900 to 41,900

Figure 4 : Number of existing burials and the number of burials available (base case)



2.2 Demand

2.2.1 Historical Background

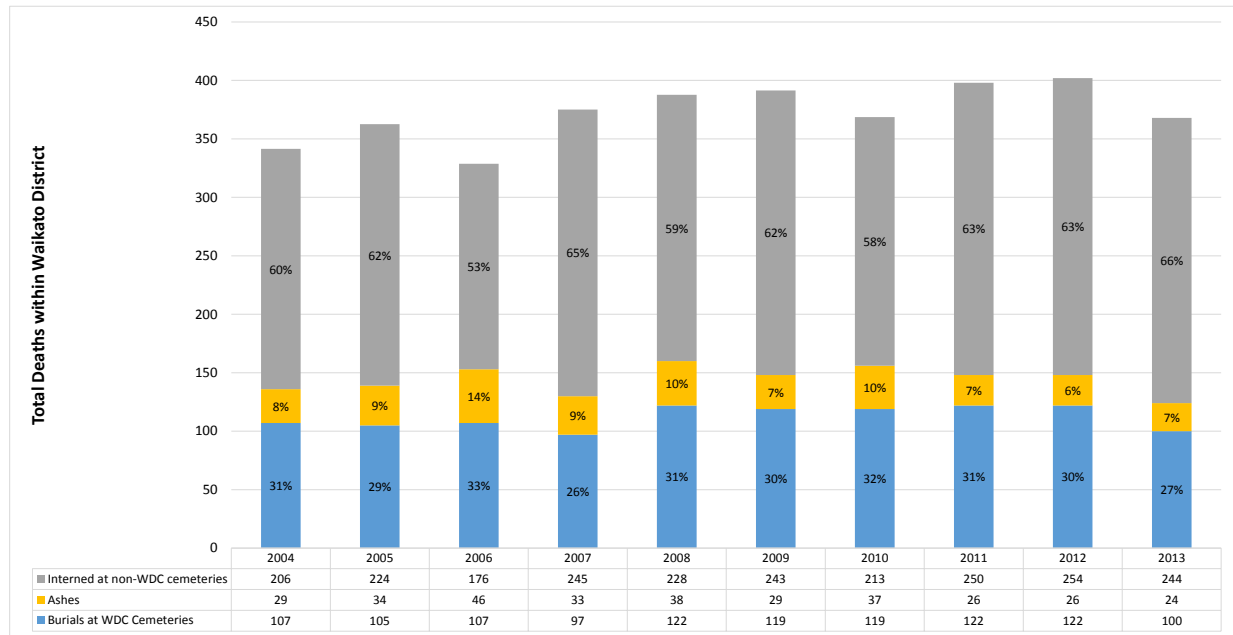
The number of deaths in the Waikato district have increased over the last 15 years from around 350 per year to nearly 400 people per year. This includes the portion of the Franklin District merged into Waikato District to ensure a consistent comparison.

Using WDC data, the deaths over the past decade have been split into burials at WDC cemeteries, ashes interments at WDC cemeteries and burials/cremations at non WDC cemeteries (these include cemeteries outside the district or at private cemeteries). The number of burials at WDC cemeteries ranges from 95 to 125 per year. The following graph shows that the proportion of the Waikato deaths that are buried at WDC cemeteries has ranged from 26% to 33%. This portion also includes the people that pass away elsewhere and are buried at WDC cemeteries.

The largest portion is those that pass away in the Waikato district and are buried or cremated at private, non-council cemeteries or outside the district.

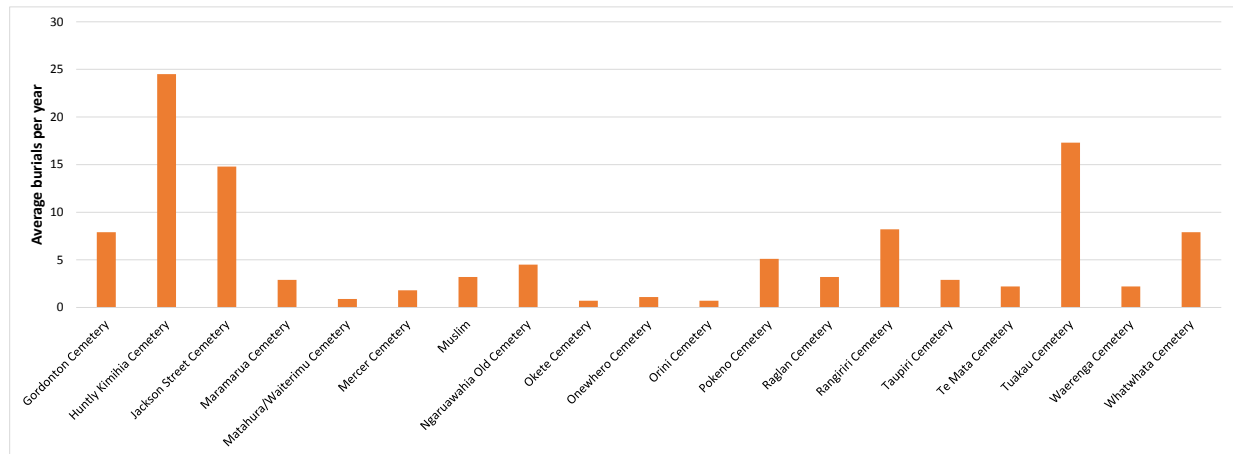
The ashes interments within the district are relatively low, varying from 6% to 14%. As discussed earlier these interments have been excluded from the land area analysis.

Figure 5 : Historic split of Waikato District deaths



The average number of burials at each WDC cemetery over the last 10 years are shown in the following graph. The Huntly Kimihia Cemetery, Jackson Street Cemetery and Tuakau Cemetery have had the highest demand in recent times.

Figure 6: Average burials at Waikato District Council cemeteries - 2004 to 2013



The historical burials at some cemeteries fluctuates over the last 10 years, however the average is an accurate reflection of the annual demand at the cemeteries.

2.2.2 Projected Demand

The projection of demand for burial plots in the Waikato district is based on two assumptions:

1. The projected number of deaths in the district,
2. The ratio of deaths to those that are buried in the WDC cemeteries.

The final step of the demand projections is the allocation of the demand to each cemetery. The assumptions used are explained in the following section.

Projected Deaths

The projected deaths in the Waitako district are based on Statistics New Zealand (SNZ) population projections for the district. These population projections include a low, medium and high series and are informed by a range of birth, death and net migration rates. These are summarised in the following table for each scenario. The district wide projections are provided until 2031. Following this point national projections are used to inform the projections until 2045. The death rate for all three series is projected to increase over time due to population growth and the impact of an ageing population.

Table 2 : Average annual deaths – Waikato District

Scenario	2001 - 2005	2006 - 2010	2011- 2013	2014- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045
Low	350	370	390	420	440	500	560	620	680	730
Medium				400	440	480	540	595	650	700
High				400	420	460	520	575	630	680

The projected deaths in the district are intrinsically linked to the resident population. The population projections WDC have adopted indicate the district’s population will grow from around 68,000 in 2015 to over 97,000 in 2045. This is an increase of nearly 29,000 people at a growth rate of around 1,000 people per year.

The base case uses the projected death from the SNZ High series as this aligns best with WDC adopted growth projections. This results in a slightly lower number of deaths than under the SNZ Medium and Low series. The worst case scenario uses the SNZ Low series which projects more deaths and therefore places a higher demand on the cemeteries.

Burials at WDC cemeteries

The ratio of the districts deaths to those that are buried at WDC cemeteries is a key assumption in this study. The base case uses the historical average of 0.3 to 1 (30%) of the district deaths. The worst case scenario uses a higher ratio, 0.4 to 1 (40%). This ratio is derived from the burials and internments at non-Waikato district cemeteries and cremations. Therefore the ratio also accounts for people that live outside the district who are buried at WDC cemeteries.

Allocation of Demand

The total projected burials within the district are allocated to each cemetery based on the average historical demand. Consideration of the overflow from other cemeteries is also included.

When the actively maintained land in a cemetery is full, and there is additional land available, then this land is assumed to be developed in time to accommodate further burials. In reality this development may be staged over time.

When a cemetery is full and there is no additional land available (or if the developed additional land is also utilised) then the demand is assumed to be accommodated by other cemeteries within the district. The overflow is allocated by a two-step process.

1. In the first step the overflow is allocated to the remaining cemeteries based on their respective demand, i.e. the more popular cemeteries receive a greater proportion of the overflow.
2. In the second step the remaining cemeteries with the highest residual capacity receives an equivalent portion of the overflow.

The only exception to the allocation of the overflow is the Muslim cemetery. The demand for this cemetery is based solely on the historic average.

3 Results

3.1 Overview

A summary table of the residual capacity of the WDC cemeteries for the base case is shown in the following table. The 2014 figure represents the current residual capacity, namely the number of burial plots available on the actively maintained land. As the future demand is allocated to each cemetery, the residual capacity decreases. The table shows the annual change for the first 10 years, and then at five year periods from 2025 to 2045. The final column shows the residual capacity of the additional land that is not projected to be required in the next 30 years.

The green (light) cell indicates redevelopment of further additional land is required, this is assumed to occur around three years before the cemetery is full. The red (dark) cell indicates the cemeteries that reach the maximum capacity and do not have any additional land to develop and are therefore closed. The cemeteries that are already closed (Alexandra Redoubt, Pokeno Old Soldiers and Rangiriri Old cemeteries) are not shown.

Table 3 : Residual capacity for all cemeteries

Cemetery	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2035	2040	2045	Remaining additional land
Gordonton Cemetery	138	130	119	108	97	86	75	63	51	38	26	14	470	390	281	147	0
Huntly Kimihia Cemetery	350	324	291	256	222	187	153	115	77	448	410	372	159	0	0	0	0
Jackson Street Cemetery	970	954	934	914	893	872	851	828	805	783	760	737	608	461	3,012	2,758	0
Maramarua Cemetery	148	145	141	137	133	129	125	120	116	111	107	102	77	1,692	1,637	1,586	0
Matahura/Waiterimu Cemetery	9	8	7	6	4	3	1,837	1,836	1,834	1,833	1,832	1,830	1,822	1,802	1,773	1,756	0
Mercer Cemetery	164	162	160	157	155	152	150	147	144	141	139	136	120	102	77	46	1,577
Muslim	170	167	163	160	156	152	149	145	141	137	133	129	107	82	55	26	0
Ngaruawahia Old Cemetery	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Okete Cemetery	31	30	29	28	27	26	25	24	23	22	21	20	14	294	282	270	0
Onewhero Cemetery	344	343	341	340	338	337	335	333	332	330	328	326	317	304	287	268	2,596
Orini Cemetery	52	51	50	49	48	47	46	45	44	43	42	41	35	28	18	340	0
Pokeno Cemetery	201	196	189	182	175	167	160	152	145	137	129	121	76	27	0	0	0
Raglan Cemetery	450	446	442	437	433	428	424	419	414	409	404	399	371	338	292	237	0
Rangiriri Cemetery	58	49	38	825	814	802	791	778	765	753	740	727	656	572	457	318	0
Taupiri Cemetery	987	984	980	976	972	967	963	959	954	950	945	941	916	882	835	785	2,564
Te Mata Cemetery	5	337	334	331	328	324	321	318	315	311	308	304	285	262	230	193	0
Tuakau Cemetery	24	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waerenga Cemetery	36	33	30	27	24	21	18	14	11	8	1,661	1,657	1,638	1,606	1,562	1,523	0
Whatawhata Cemetery	47	39	28	4,784	4,773	4,762	4,750	4,738	4,726	4,714	4,702	4,689	4,621	4,515	4,366	4,227	0
WDC	4,189	4,403	4,277	9,716	9,590	9,464	11,173	11,035	10,896	11,167	12,685	12,546	12,290	13,356	15,164	14,479	6,737

3.2 Key Findings

The key findings are summarised below.

The Ngaruawahia Old Cemetery and the Tuakau Cemetery are projected to reach their total capacity within the next two years. The Pokeno Cemetery is projected to reach the total capacity around 2040. The total capacity reflects the fact that there is no additional land to be developed at these cemeteries.

The following cemeteries are projected to require additional land to be developed in the next five years:

- 2015 Te Mata Cemetery.
- 2017 Rangiriri Cemetery.
- 2017 Whatawhata Cemetery.

The following cemeteries are projected to require additional land to be developed in five to ten years' time:

- 2020 Matahura/Waiterimu Cemetery. It should be noted this cemetery only has an existing residual capacity of nine burials. Although the historic demand has been low there is potential for this capacity to be used up before 2020.
- 2023 Huntly Kimihia Cemetery (Despite additional land being developed, this cemetery is projected to reach its total capacity around 2035).
- 2024 Waerenga Cemetery.

The following cemeteries are projected to require additional land to be developed in between 2025 and 2045:

- 2027 Gordonton Cemetery.
- 2035 Maramarua Cemetery.
- 2035 Okete Cemetery.
- 2040 Jackson Street Cemetery.
- 2045 Orini Cemetery.

The Mercer, Muslim, Onewhero, Raglan and Taupiri cemeteries are all projected to have sufficient residual capacity for the next 30 years.

At the end of the 30 year study period there are still nearly 21,200 burial plots available in the WDC cemeteries. The map on the following page provides a visual overview of the districts cemeteries. This shows that most parts of the district have surplus capacity.

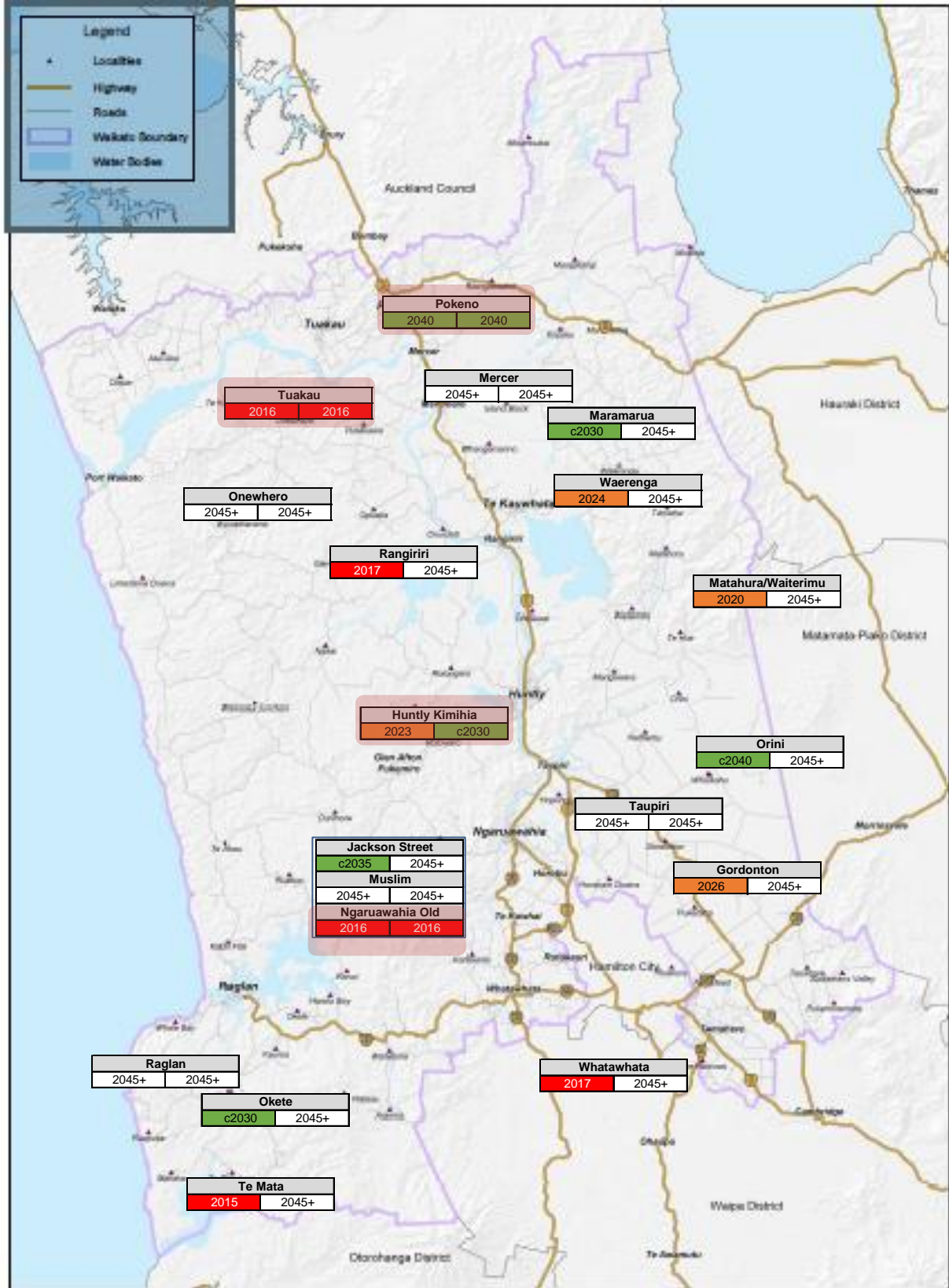
The potential exception is the northern part of the district which is the most constrained. Both Tuakau and Pokeno cemeteries are forecast to be closed within the 30 year study period. This constraint is offset by the fact that Maramarua, Mercer and Waerenga cemeteries all have a large residual capacity of over 1,500 burial plots.

The appendix includes a detailed overview of the key findings for each cemetery.

Cemetery Name	
Date that actively maintained land is fully utilised.	Date that the total potential capacity is fully utilised.

0 to 5 years
5 to 15 years
16 to 30 years
Over 30 years

Closed before 2045



Appendix

This appendix provides the following information about each WDC cemetery:

- A brief synopsis of the findings, including both the base and worst case scenario.
- A summary supply and demand graph showing both historical figures and future projections under the base case (solid line) and the worst case (dashed line).
- A summary table showing the key outputs.

Gordonton Cemetery

The Gordonton Cemetery currently has 416 burials. In the base case the burials per year are projected to increase over the next 30 years from around 10 to nearly 30 burials per year. There is residual capacity on the actively maintained land for a further 140 burials. There is also additional land that can be developed to provide a further 525 burial plots.

The base case scenario projects that redevelopment of Gordonton Cemetery will be required around 2027. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be around 150 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward six years to 2021. The final closure of the cemetery would be within the 30 year study period, between 2035 and 2040.

Figure 7 : Gordonton Cemetery - Summary graph

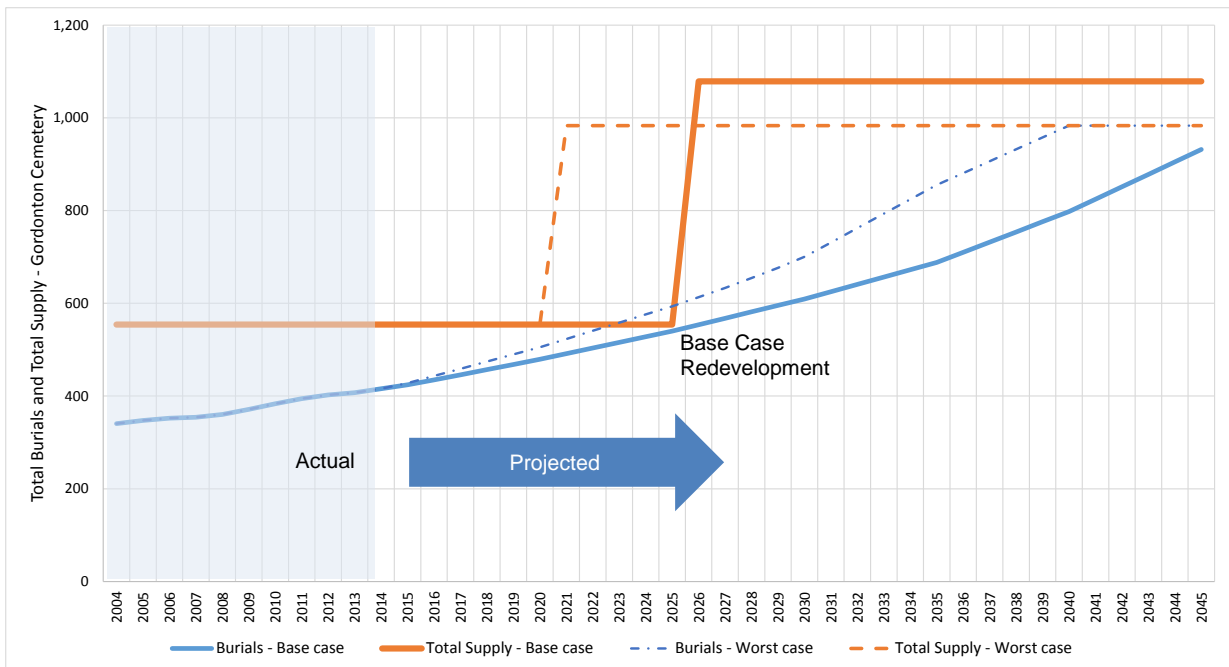


Table 4 : Gordonton Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		138	Existing number of burials (2014)		416
Additional land for burial plots		525	Historical average burials per year (2004 to 2014)		8
Total available residual supply as at 2014		663	Projected burials (2015 to 2045)		516
Total Supply (Residual + existing burials)		1,079	Total burials at 2045		932
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2027	2045+	147
Worst case			2021	2040	0

Huntly Kimihia Cemetery

The Huntly Kimihia Cemetery currently has over 2,750 burials. In the base case the burials per year are projected to increase over the next 15 years from around 25 to over 40 burials per year. There is residual capacity on the actively maintained land for a further 350 burials. There is also additional land that can be developed to provide a further 400 burial plots.

The base case scenario projects that redevelopment of Huntly Kimihia Cemetery will be required around 2023. This would provide sufficient capacity to meet demand until around 2035, at which time the cemetery would be full.

Under the worst case scenario the redevelopment of additional land would need to be brought forward four years to 2019. The final closure would also be brought forward eight years to 2027.

Figure 8 : Huntly Kimihia Cemetery - Summary graph

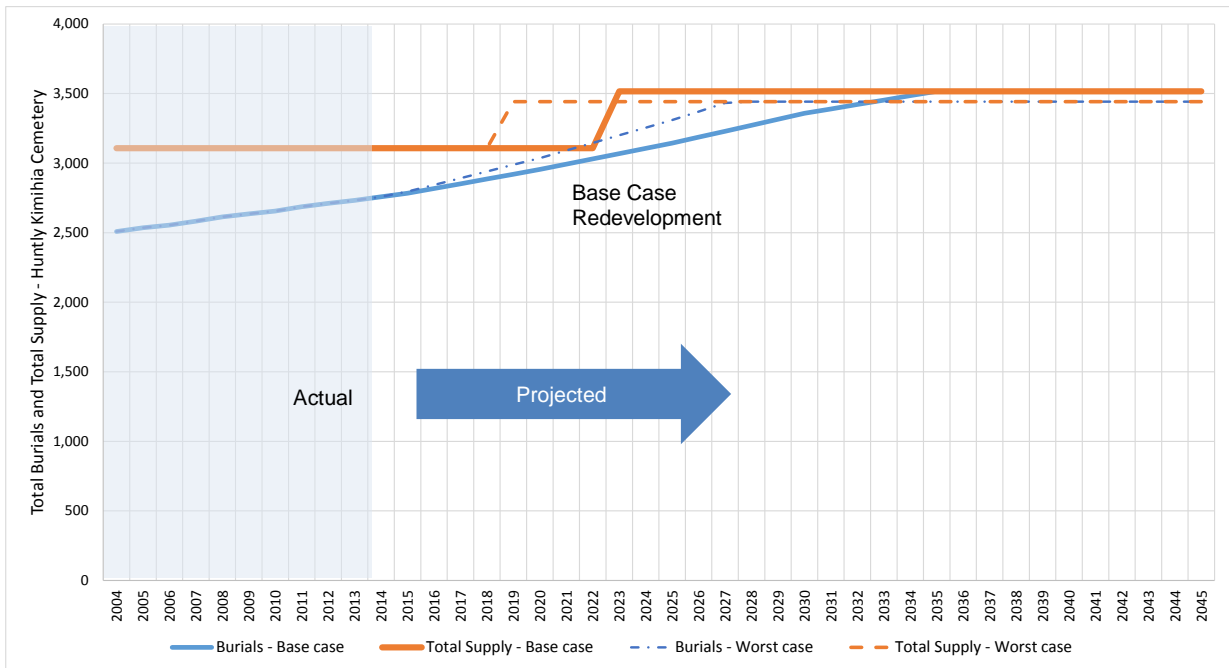


Table 5 : Huntly Kimihia Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		350	Existing number of burials (2014)		2,758
Burials on additional land		408	Historical average burials per year (2004 to 2014)		25
Total available residual supply as at 2014		758	Projected burials (2015 to 2045)		758
Total Supply (Residual + existing burials)		3,516	Total burials at 2045		3,516
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2023	2035	0
Worst case			2019	2027	0

Jackson Street Cemetery

The Jackson Street Cemetery currently has over 480 burials. In the base case the burials per year are projected to increase over the next 30 years from around 15 to over 50 burials per year. There is residual capacity on the actively maintained land for a further 970 burials. There is also additional land that can be developed to provide a further 2,750 burial plots.

The base case scenario projects that redevelopment of Jackson Street Cemetery will be required around 2040. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity is projected to be nearly 2,760 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward five years to 2035 and the 2045 residual capacity would be around 1,620 burial plots.

Figure 9 : Jackson Street Cemetery - Summary graph

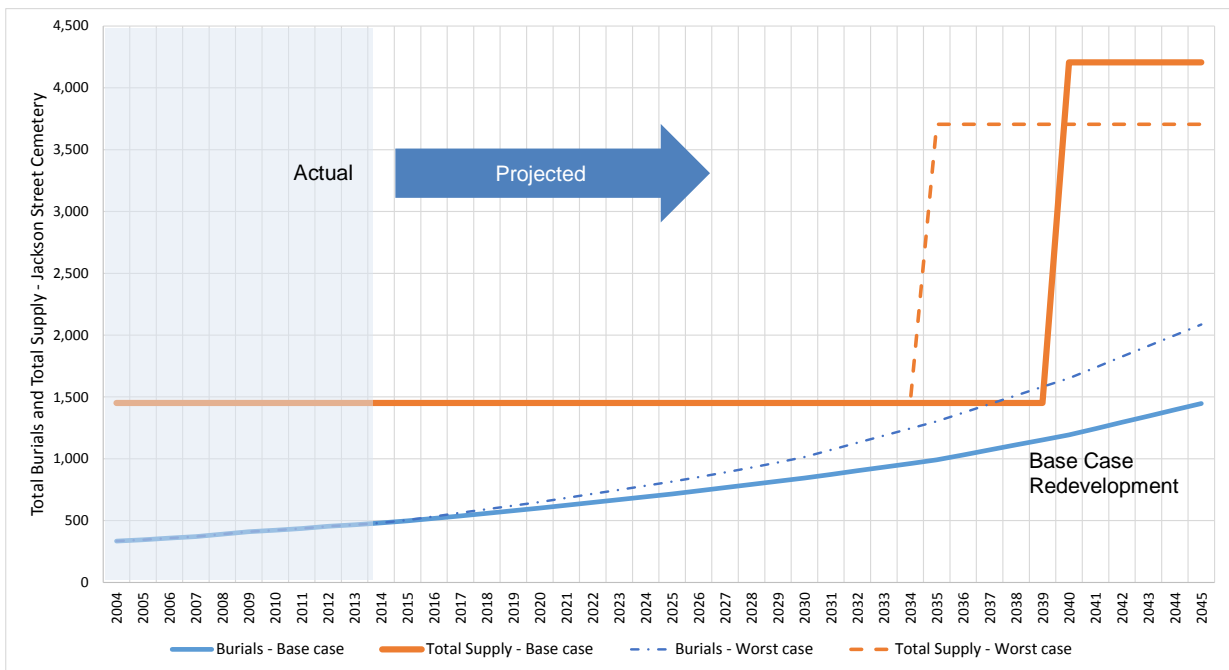


Table 6 : Jackson Street Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		970	Existing number of burials (2014)		482
Burials on additional land		2,753	Historical average burials per year (2004 to 2014)		15
Total available residual supply as at 2014		3,723	Projected burials (2015 to 2045)		965
Total Supply (Residual + existing burials)		4,205	Total burials at 2045		1,447
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2040	2045+	2,758
Worst case			2035	2045+	1,619

Maramarua Cemetery

The Maramarua Cemetery currently has over 160 burials. In the base case the burials per year are projected to increase over the next 30 years from around 3 to over 10 burials per year. There is residual capacity on the actively maintained land for a further 150 burials. There is also additional land that can be developed to provide a further 1,640 burial plots.

The base case scenario projects that redevelopment of Maramarua Cemetery will be required around 2035. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity is projected to be nearly 1,600 burial plots.

Under the worst case scenario the redevelopment of additional land would occur at the same time, however the 2045 residual capacity would be under 1,200 burial plots.

Figure 10 : Maramarua Cemetery - Summary graph

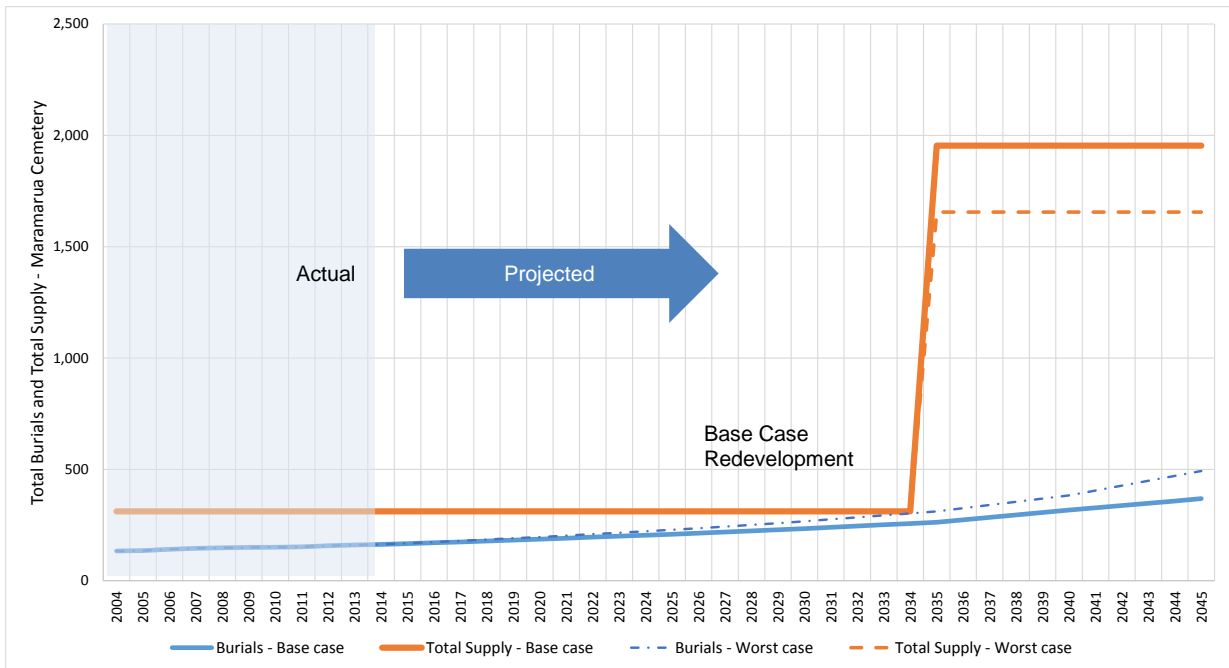


Table 7 : Maramarua Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		148	Existing number of burials (2014)		163
Burials on additional land		1,643	Historical average burials per year (2004 to 2014)		3
Total available residual supply as at 2014		1,791	Projected burials (2015 to 2045)		205
Total Supply (Residual + existing burials)		1,954	Total burials at 2045		368
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2035	2045+	1,586	
Worst case		2035	2045+	1,163	

Matahura/Waiterimu Cemetery

The Matahura/Waiterimu Cemetery currently has nearly 150 burials. In the base case the burials per year are projected to increase over the next 30 years from around one to over five burials per year. There is residual capacity on the actively maintained land for a further nine burials. There is also additional land that can be developed to provide a further 1,835 burial plots.

The base case scenario projects that redevelopment of Matahura/Waiterimu Cemetery will be required around 2020. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be around 1,750 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward three years to 2017 and the 2045 residual capacity would be around 1,335 burial plots.

Figure 11 : Matahura/Waiterimu Cemetery - Summary graph

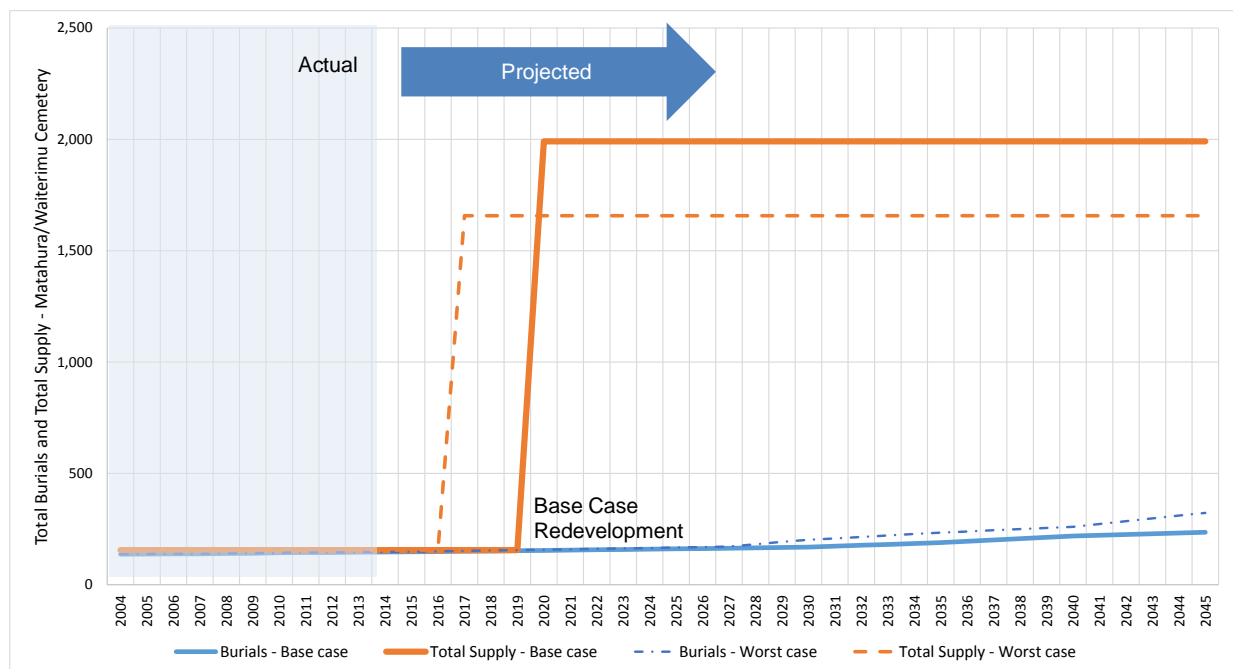


Table 8 : Matahura/Waiterimu Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		9	Existing number of burials (2014)		147
Burials on additional land		1,835	Historical average burials per year (2004 to 2014)		1
Total available residual supply as at 2014		1,844	Projected burials (2015 to 2045)		89
Total Supply (Residual + existing burials)		1,991	Total burials at 2045		235
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2020	2045+	1,756	
Worst case		2017	2045+	1,335	

Mercer Cemetery

The Mercer Cemetery currently has nearly 230 burials. In the base case the burials per year are projected to increase over the next 30 years from around two to over six burials per year. There is residual capacity on the actively maintained land for a further 164 burials. There is also additional land that can be developed to provide a further 1,577 burial plots.

The base case scenario projects that redevelopment of Mercer Cemetery will not be required before 2045. However the residual capacity of the actively maintained land at this time will be only 46 burial lots, with the capacity of the additional land (1,580 burials plots) also still available.

Under the worst case scenario the redevelopment of additional land would be needed around 2035 and the 2045 residual capacity would be around 1,220 burial plots.

Figure 12 : Mercer Cemetery - Summary graph

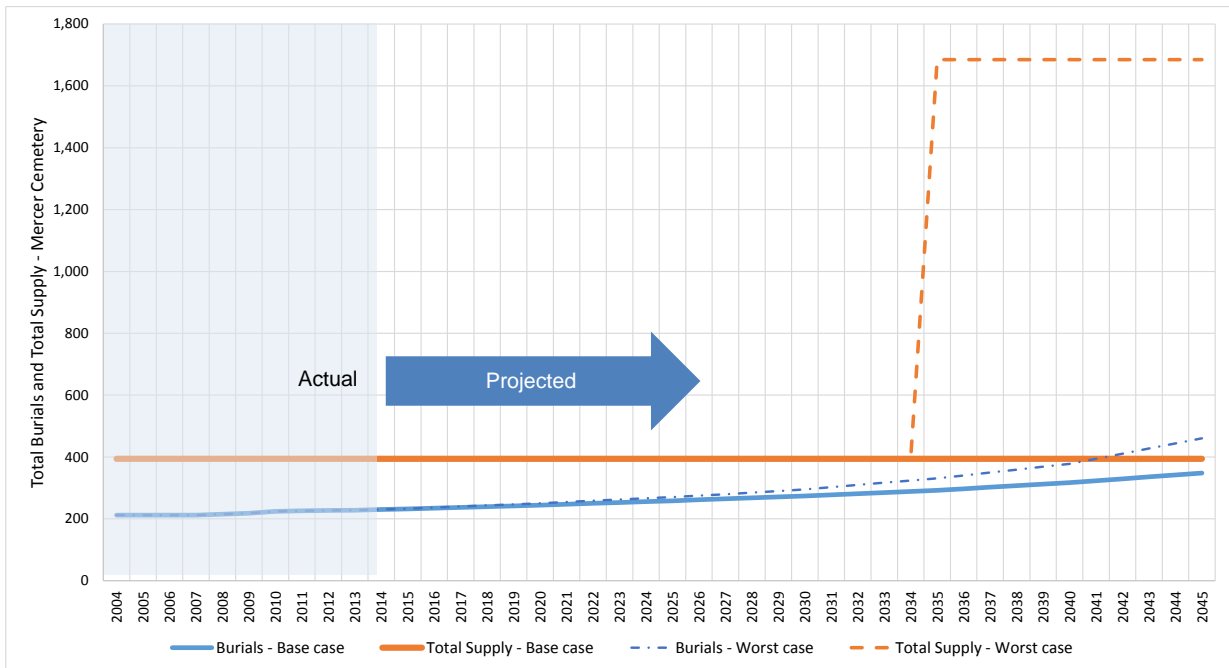


Table 9 : Mercer Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		164	Existing number of burials (2014)		230
Burials on additional land		1,577	Historical average burials per year (2004 to 2014)		2
Total available residual supply as at 2014		1,741	Projected burials (2015 to 2045)		118
Total Supply (Residual + existing burials)		1,971	Total burials at 2045		348
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2045+	2045+	1,623
Worst case			2035	2045+	1,224

Muslim Cemetery

The Muslim Cemetery currently has nearly 50 burials. In the base case the burials per year are projected to increase over the next 30 years from around three to nearly six burials per year. There is residual capacity on the actively maintained land for a further 170 burials. There is no additional land available.

The base case scenario projects that Muslim Cemetery will not reach capacity before 2045. The residual capacity at this time will be around 26 burial lots.

Under the worst case scenario the Muslim Cemetery would reach capacity around 2045.

Figure 13 : Muslim Cemetery - Summary graph

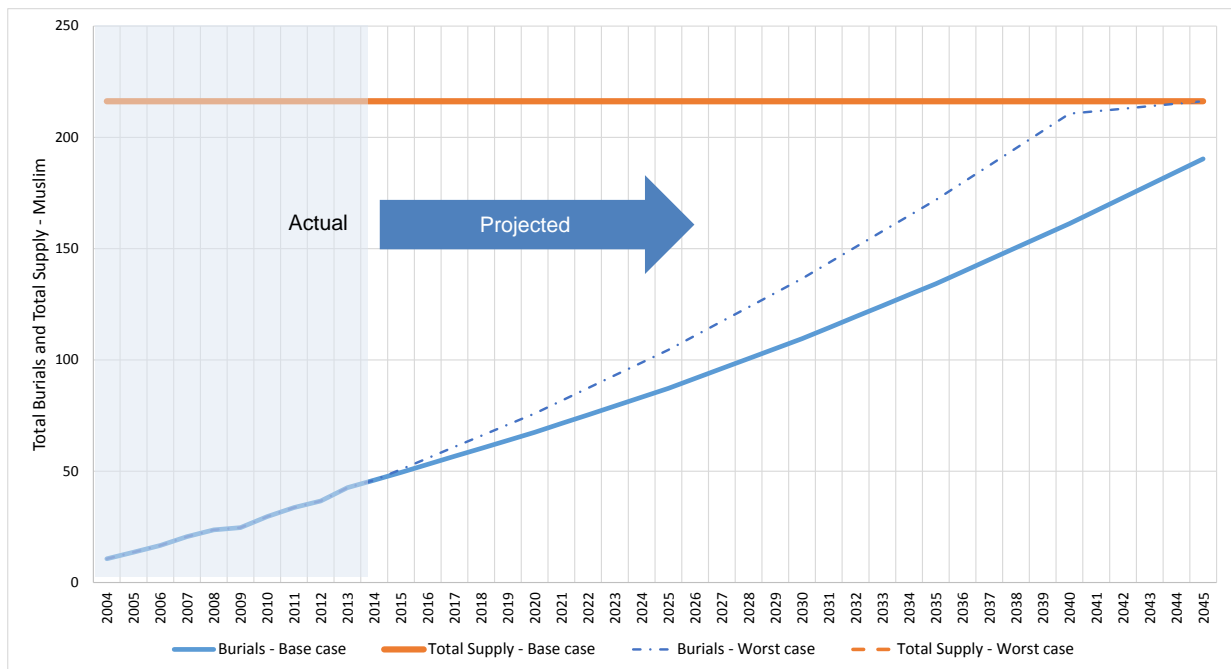


Table 10 : Muslim Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		170	Existing number of burials (2014)		46
Burials on additional land		0	Historical average burials per year (2004 to 2014)		3
Total available residual supply as at 2014		170	Projected burials (2015 to 2045)		144
Total Supply (Residual + existing burials)		216	Total burials at 2045		190
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2045+	2045+	26	
Worst case		2045	2045	0	

Ngaruawahia Old Cemetery

The Ngaruawahia Old Cemetery currently has nearly 2,150 burials. There is only a small residual capacity on the actively maintained land, around five burials. There is no additional land that can be developed therefore the Ngaruawahia Old Cemetery is projected to be full within two years.

Figure 14 : Ngaruawahia Old Cemetery - Summary graph

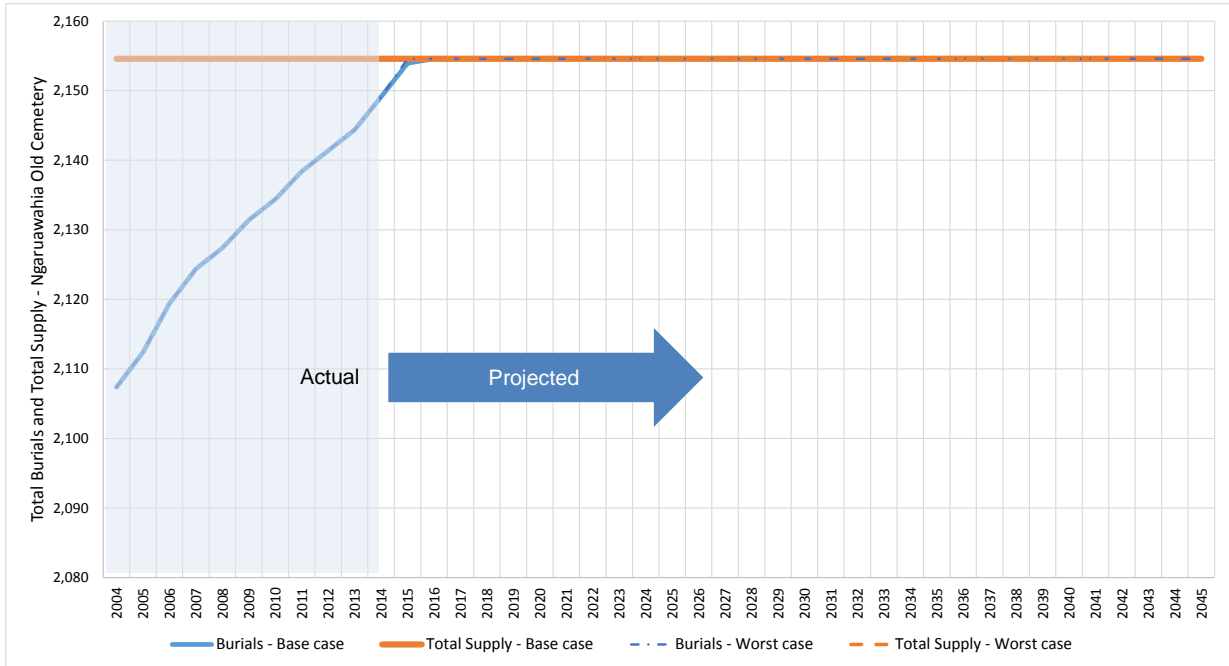


Table 11 : Ngaruawahia Old Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		5	Existing number of burials (2014)		2,149
Burials on additional land		0	Historical average burials per year (2004 to 2014)		5
Total available residual supply as at 2014		5	Projected burials (2015 to 2045)		5
Total Supply (Residual + existing burials)		2,155	Total burials at 2045		2,155
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2016	2016	0
Worst case			2015	2015	0

Okete Cemetery

The Okete Cemetery currently has over 160 burials. In the base case the burials per year are projected to increase over the next 30 years from around one to over two burials per year. There is residual capacity on the actively maintained land for a further 31 burials. There is also additional land that can be developed to provide a further 287 burial plots.

The base case scenario projects that redevelopment of Okete Cemetery will be required around 2035. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be around 270 burial plots.

Under the worst case scenario the redevelopment of additional land would still be 2035, however the 2045 residual capacity would be less than 200 burial plots.

Figure 15 : Okete Cemetery - Summary graph

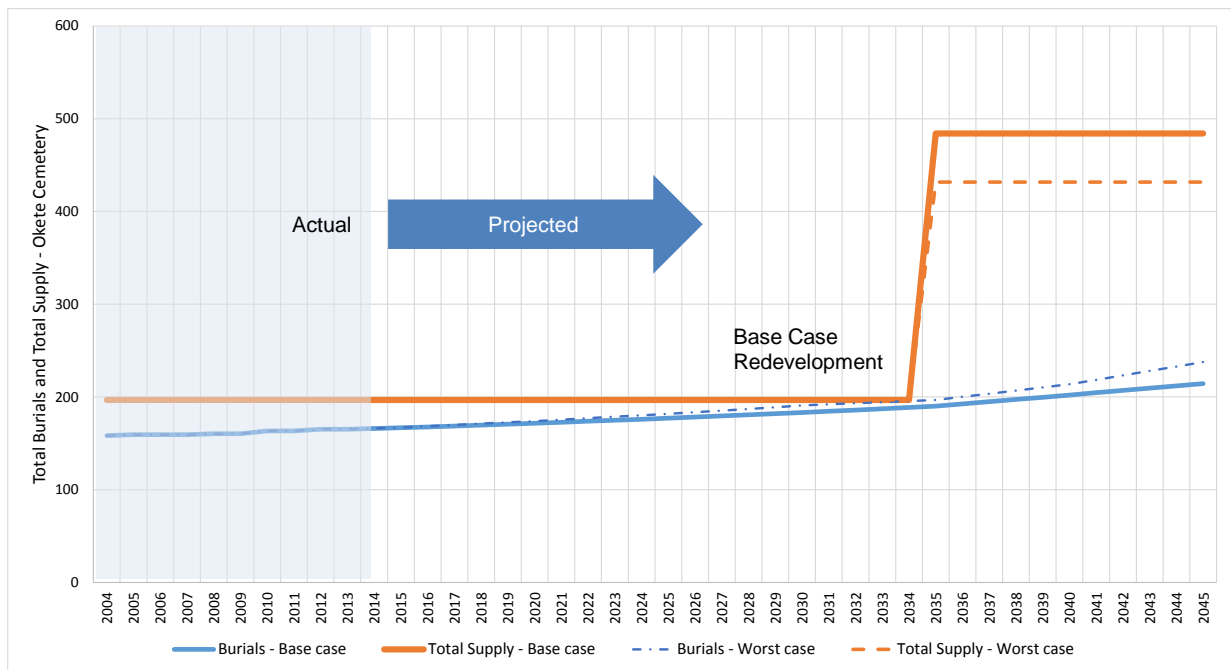


Table 12 : Okete Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		31	Existing number of burials (2014)		166
Burials on additional land		287	Historical average burials per year (2004 to 2014)		1
Total available residual supply as at 2014		318	Projected burials (2015 to 2045)		48
Total Supply (Residual + existing burials)		484	Total burials at 2045		214
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2035	2045+	270	
Worst case		2035	2045+	194	

Onewhero Cemetery

The Onewhero Cemetery currently has over 100 burials. In the base case the burials per year are projected to increase over the next 30 years from around one to nearly four burials per year. There is residual capacity on the actively maintained land for a further 344 burials. There is also additional land that can be developed to provide a further 2,600 burial plots.

The base case scenario projects that redevelopment of Onewhero Cemetery will not be required before 2045. The residual capacity of the actively maintained land at this time will be nearly 270 burial lots, with the capacity of the additional land (2,600 burials plots) also still available.

The worst case scenario is much the same as the base case, with capacity projected to be available well past 2045.

Figure 16 : Onewhero Cemetery - Summary graph

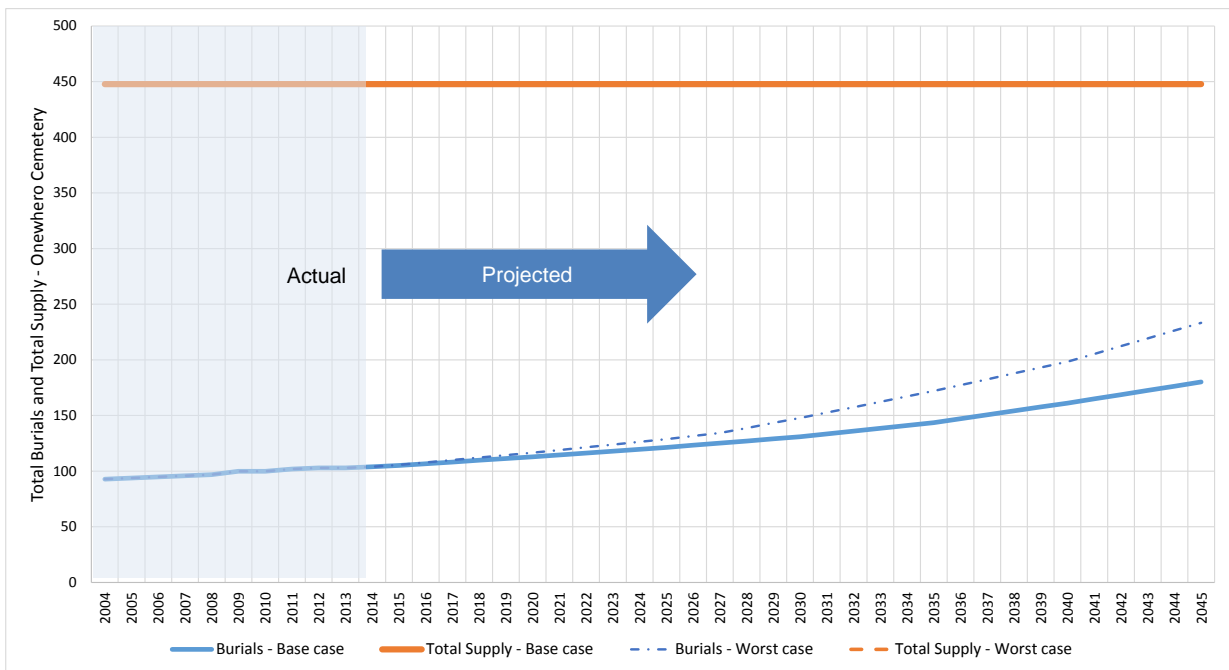


Table 13 : Onewhero Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		344	Existing number of burials (2014)		104
Burials on additional land		2,596	Historical average burials per year (2004 to 2014)		1
Total available residual supply as at 2014		2,939	Projected burials (2015 to 2045)		76
Total Supply (Residual + existing burials)		3,043	Total burials at 2045		180
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2045+	2045+	2,864	
Worst case		2045+	2045+	2,338	

Orini Cemetery

The Orini Cemetery currently has nearly 40 burials. In the base case the burials per year are projected to increase over the next 30 years from around one to over two burials per year. There is residual capacity on the actively maintained land for a further 52 burials. There is also additional land that can be developed to provide a further 334 burial plots.

The base case scenario projects that redevelopment of Orini Cemetery will be required around 2045. This would increase the residual capacity to around 340 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward ten years to 2035 and the 2045 residual capacity would be reduced to less than 245 burial plots.

Figure 17 : Orini Cemetery - Summary graph

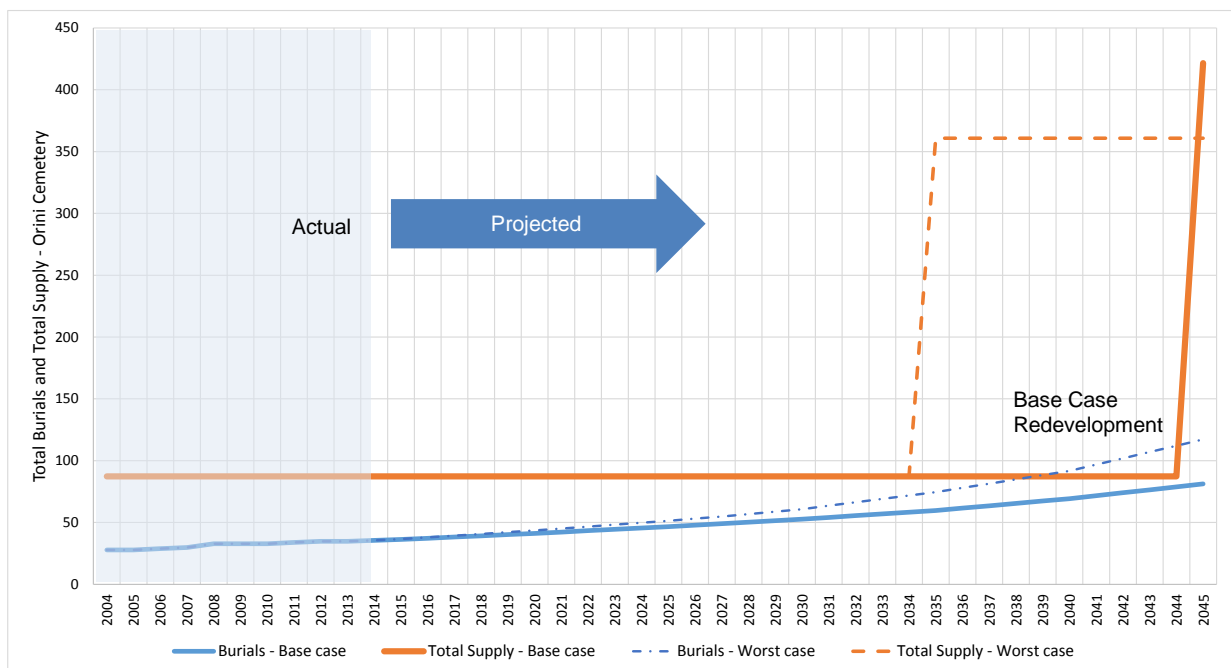


Table 14 : Orini Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		52	Existing number of burials (2014)		36
Burials on additional land		334	Historical average burials per year (2004 to 2014)		1
Total available residual supply as at 2014		386	Projected burials (2015 to 2045)		46
Total Supply (Residual + existing burials)		422	Total burials at 2045		81
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2045	2045+	340
Worst case			2035	2045+	244

Pokeno Cemetery

The Pokeno Cemetery currently has nearly 580 burials. In the base case the burials per year are projected to increase over the next 25 years from around five to around ten burials per year. There is residual capacity on the actively maintained land for a further 200 burials. There is no additional land available.

The base case scenario projects that Pokeno Cemetery will reach the total capacity around 2040. Under the worst case scenario the closure is projected to be brought forward five years to around 2035.

Figure 18 : Pokeno Cemetery - Summary graph

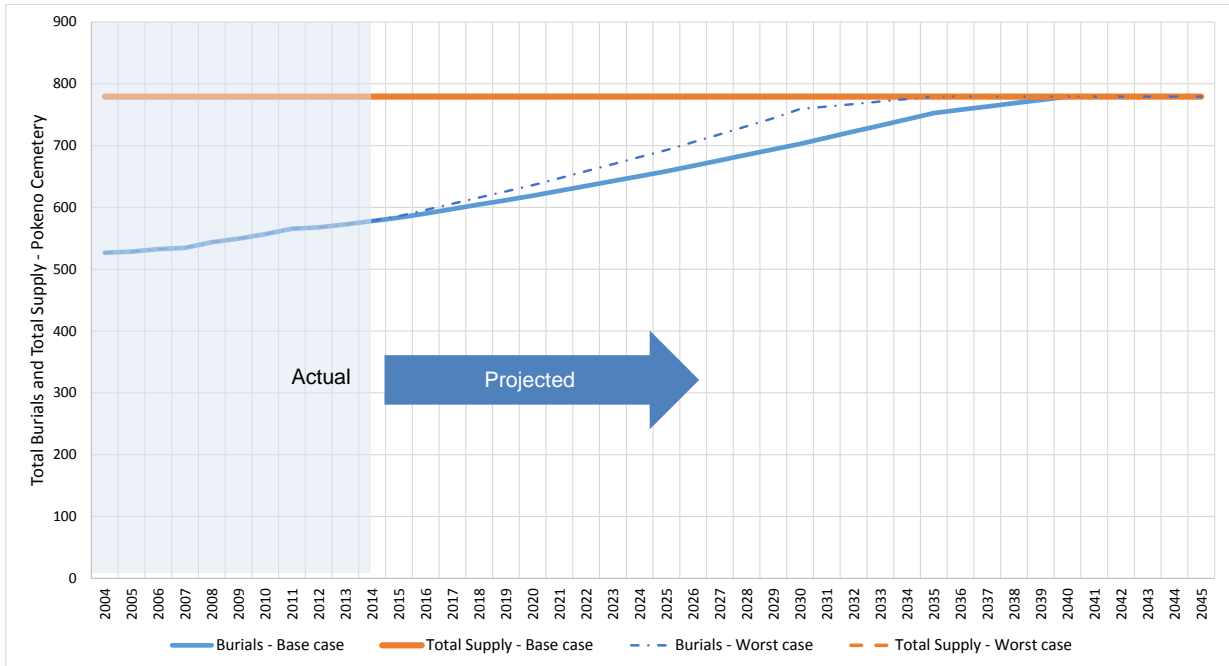


Table 15 : Pokeno Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		201	Existing number of burials (2014)		578
Burials on additional land		0	Historical average burials per year (2004 to 2014)		5
Total available residual supply as at 2014		201	Projected burials (2015 to 2045)		201
Total Supply (Residual + existing burials)		779	Total burials at 2045		779
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2040	2040	0	
Worst case		2035	2035	0	

Raglan Cemetery

The Raglan Cemetery currently has around 375 burials. In the base case the burials per year are projected to increase over the next 30 years from around three to over ten burials per year. There is residual capacity on the actively maintained land for a further 450 burials. There is no additional land available.

The base case scenario projects that Raglan Cemetery will not reach capacity before 2045. The residual capacity at this time will be nearly 240 burial lots.

Under the worst case scenario the Raglan Cemetery will not reach capacity before 2045. The 2045 residual capacity under this scenario is projected to be reduced to around 100 burial lots.

Figure 19 : Raglan Cemetery - Summary graph

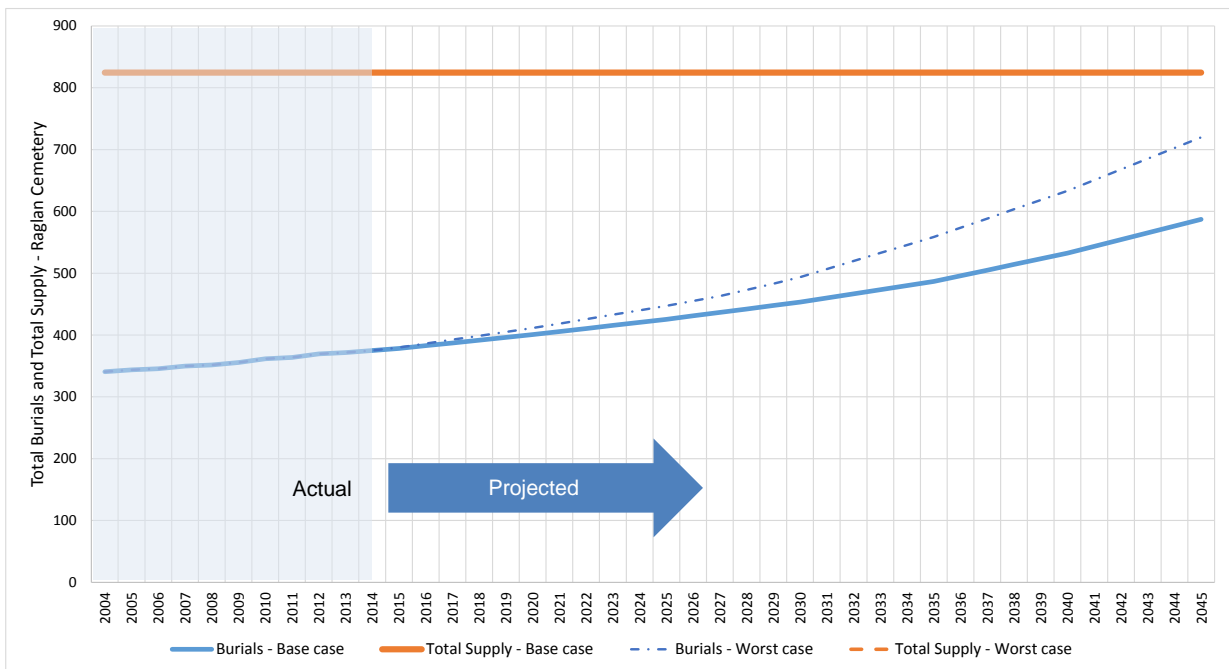


Table 16 : Raglan Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		450	Existing number of burials (2014)		375
Burials on additional land		0	Historical average burials per year (2004 to 2014)		3
Total available residual supply as at 2014		450	Projected burials (2015 to 2045)		212
Total Supply (Residual + existing burials)		825	Total burials at 2045		587
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2045+	2045+	237
Worst case			2045+	2045+	105

Rangiriri Cemetery

The Rangiriri Cemetery currently has around 560 burials. In the base case the burials per year are projected to increase over the next 30 years from around eight to over 25 burials per year. There is residual capacity on the actively maintained land for a further 58 burials. There is also additional land that can be developed to provide a further 800 burial plots.

The base case scenario projects that redevelopment of Rangiriri Cemetery will be required around 2017. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be nearly 320 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward one year 2016 and the Rangiriri Cemetery would reach total capacity around 2045.

Figure 20 : Rangiriri Cemetery - Summary graph

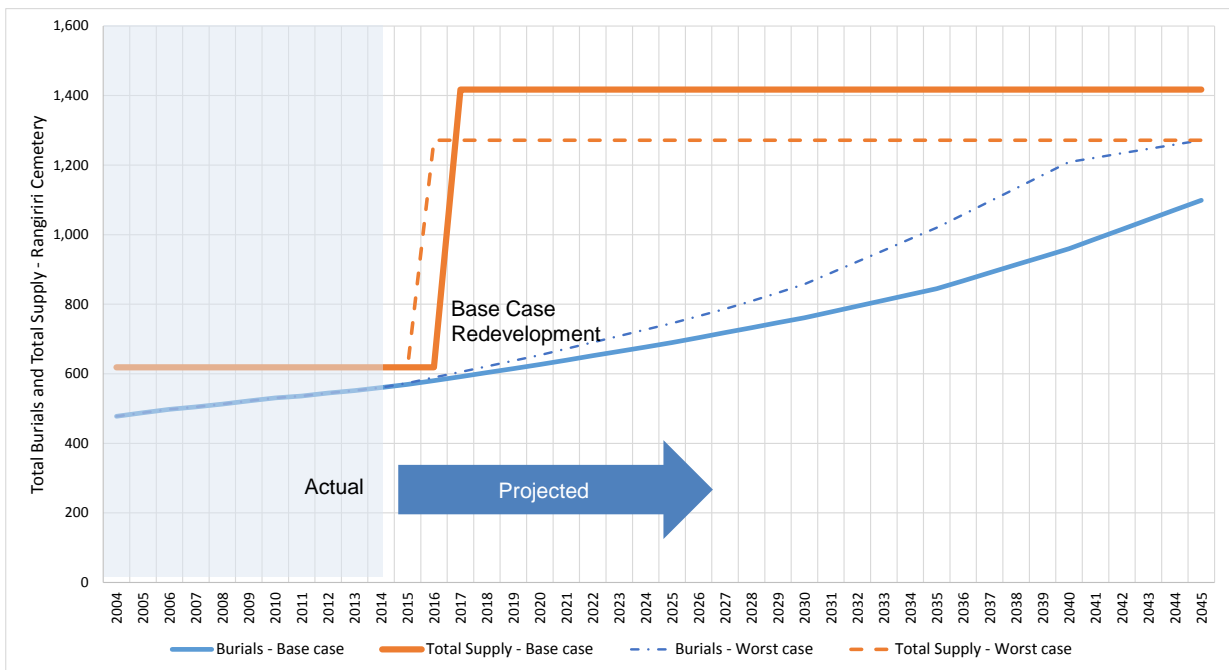


Table 17 : Rangiriri Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		58	Existing number of burials (2014)		560
Burials on additional land		799	Historical average burials per year (2004 to 2014)		8
Total available residual supply as at 2014		857	Projected burials (2015 to 2045)		539
Total Supply (Residual + existing burials)		1,417	Total burials at 2045		1,099
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2017	2045+	318	
Worst case		2016	2045	0	

Taupiri Cemetery

The Taupiri Cemetery currently has over 360 burials. In the base case the burials per year are projected to increase over the next 30 years from around three to nearly ten burials per year. There is residual capacity on the actively maintained land for a further 987 burials. There is also additional land that can be developed to provide a further 2,564 burial plots.

The base case scenario projects that redevelopment of Taupiri Cemetery will not be required before 2045. The residual capacity of the actively maintained land at this time will be over 780 burial lots, with the capacity of the additional land (2,564 burials plots) also still available.

The worst case scenario is much the same as the base case, with capacity projected to be available well past 2045.

Figure 21 : Taupiri Cemetery - Summary graph

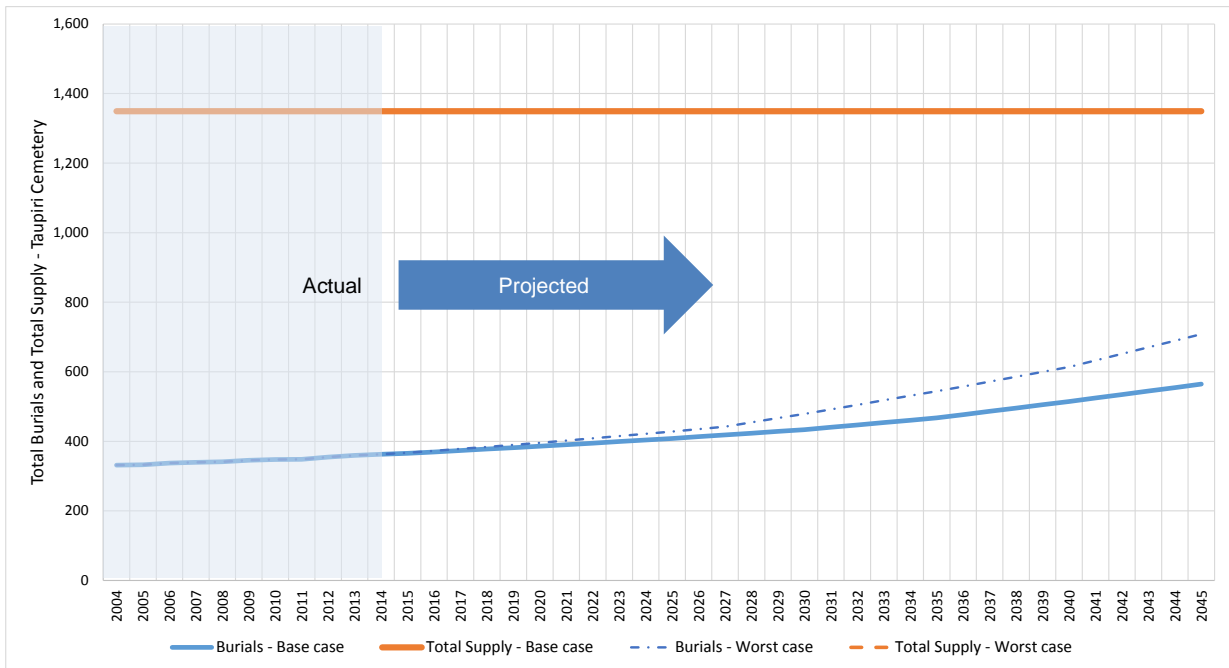


Table 18 : Taupiri Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		987	Existing number of burials (2014)		363
Burials on additional land		2,564	Historical average burials per year (2004 to 2014)		3
Total available residual supply as at 2014		3,551	Projected burials (2015 to 2045)		202
Total Supply (Residual + existing burials)		3,913	Total burials at 2045		565
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2045+	2045+	3,349
Worst case			2045+	2045+	2,739

Te Mata Cemetery

The Te Mata Cemetery currently has nearly 160 burials. In the base case the burials per year are projected to increase over the next 30 years from around two to over eight burials per year. There is residual capacity on the actively maintained land for only a further five burials. There is also additional land that can be developed to provide a further 334 burial plots.

The base case scenario projects that redevelopment of Te Mata Cemetery will be required within a year, by 2015. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be over 190 burial plots.

Under the worst case scenario the redevelopment of additional land would still be within the next year and the 2045 residual capacity would be reduced to around 40 burial plots.

Figure 22 : Te Mata Cemetery - Summary graph

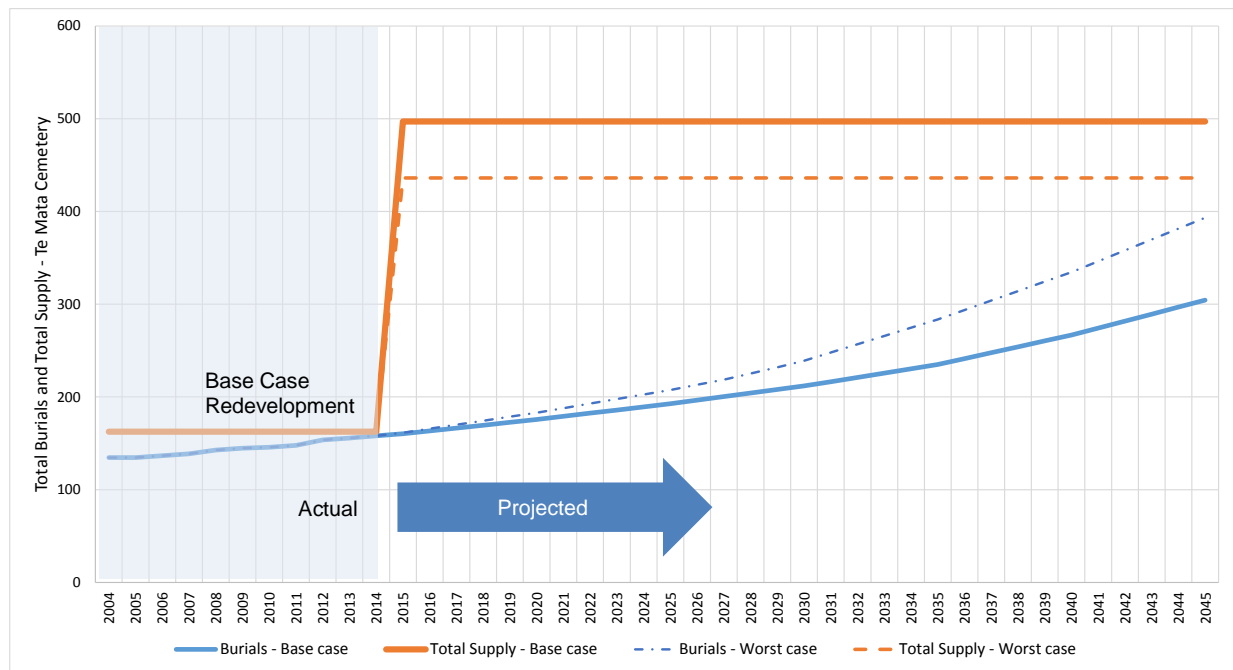


Table 19 : Te Mata Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		5	Existing number of burials (2014)		158
Burials on additional land		334	Historical average burials per year (2004 to 2014)		2
Total available residual supply as at 2014		339	Projected burials (2015 to 2045)		146
Total Supply (Residual + existing burials)		497	Total burials at 2045		304
CAPACITY DATE			Actively Maintained land	All available land	Residual Capacity at 2045
Base case			2015	2045+	193
Worst case			2015	2045+	43

Tuakau Cemetery

The Tuakau Cemetery currently has 1,735 burials. The historical demand has been, on average, 17 burials per year. There is residual capacity on the actively maintained land for only a further 24 burials. There is no additional land available.

The base case scenario projects that Tuakau Cemetery will reach the total capacity within the next two years. Under the worst case scenario the closure is projected to be brought forward a year to around 2016.

Figure 23 : Tuakau Cemetery - Summary graph

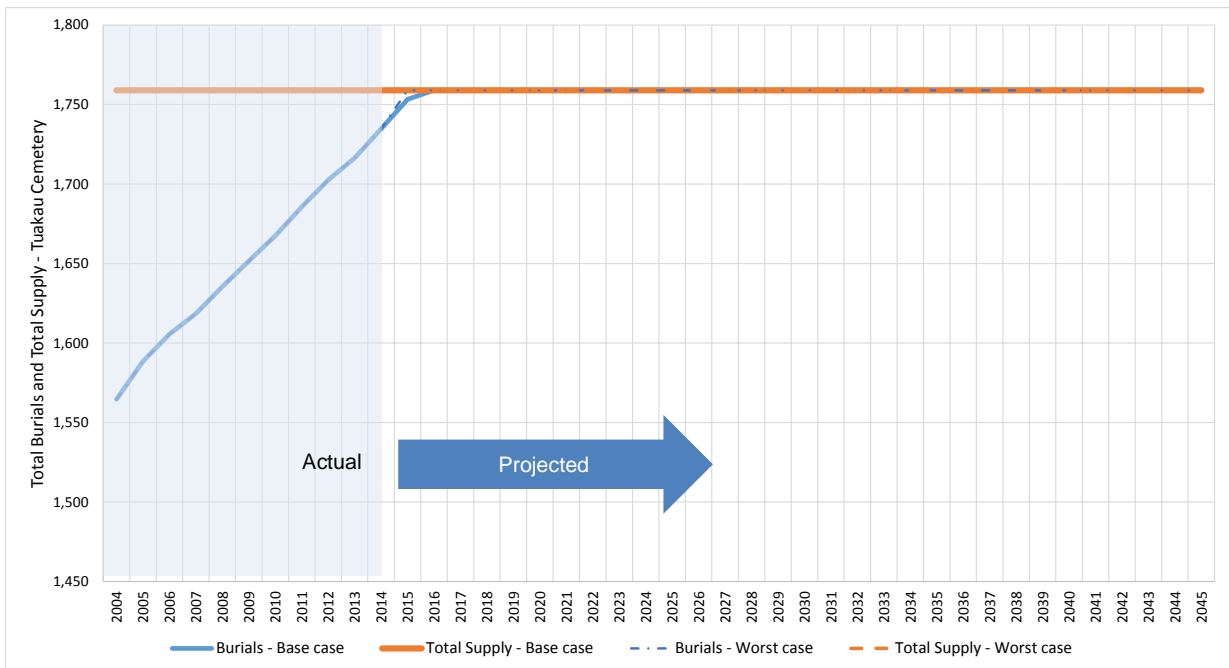


Table 20 : Tuakau Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		24	Existing number of burials (2014)		1,735
Burials on additional land		0	Historical average burials per year (2004 to 2014)		17
Total available residual supply as at 2014		24	Projected burials (2015 to 2045)		24
Total Supply (Residual + existing burials)		1,759	Total burials at 2045		1,759
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2016	2016	0	
Worst case		2015	2015	0	

Waerenga Cemetery

The Waerenga Cemetery currently has nearly 280 burials. In the base case the burials per year are projected to increase over the next 30 years from around two to nearly nine burials per year. There is residual capacity on the actively maintained land for a further 36 burials. There is also additional land that can be developed to provide a further 1,656 burial plots.

The base case scenario projects that redevelopment of Waerenga Cemetery will be required around 2024. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity is projected to be over 1,520 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward five years to 2019 and the 2045 residual capacity would be around 1,100 burial plots.

Figure 24 : Waerenga Cemetery - Summary graph

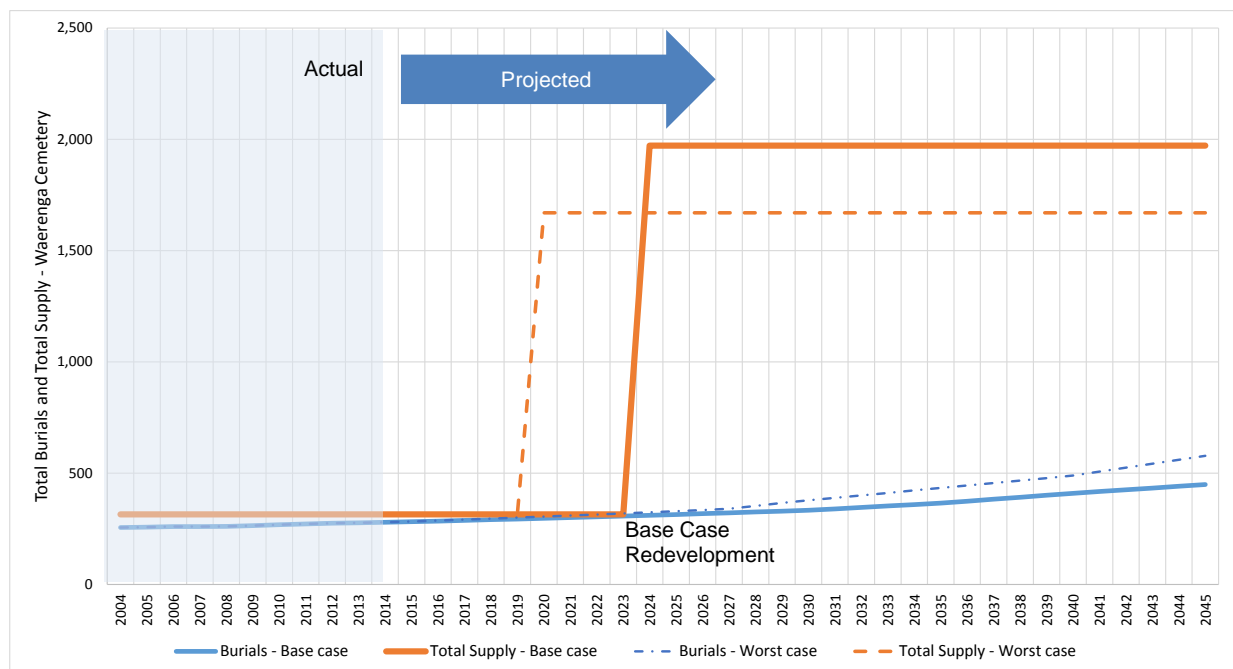


Table 21 : Waerenga Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		36	Existing number of burials (2014)		279
Burials on additional land		1,656	Historical average burials per year (2004 to 2014)		2
Total available residual supply as at 2014		1,692	Projected burials (2015 to 2045)		169
Total Supply (Residual + existing burials)		1,971	Total burials at 2045		449
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2024	2045+	1,523	
Worst case		2019	2045+	1,092	

Whatawhata Cemetery

The Whatawhata Cemetery currently has nearly 450 burials. In the base case the burials per year are projected to increase over the next 30 years from around eight to nearly 30 burials per year. There is residual capacity on the actively maintained land for a further 47 burials. There is also additional land that can be developed to provide a further 4,767 burial plots.

The base case scenario projects that redevelopment of Whatawhata Cemetery will be required around 2017. This would provide sufficient capacity to meet demand until at least 2045 when the residual capacity would be around over 4,220 burial plots.

Under the worst case scenario the redevelopment of additional land would need to be brought forward one year to 2016 and the 2045 residual capacity would still be nearly 3,000 burial plots.

Figure 25 : Whatawhata Cemetery - Summary graph

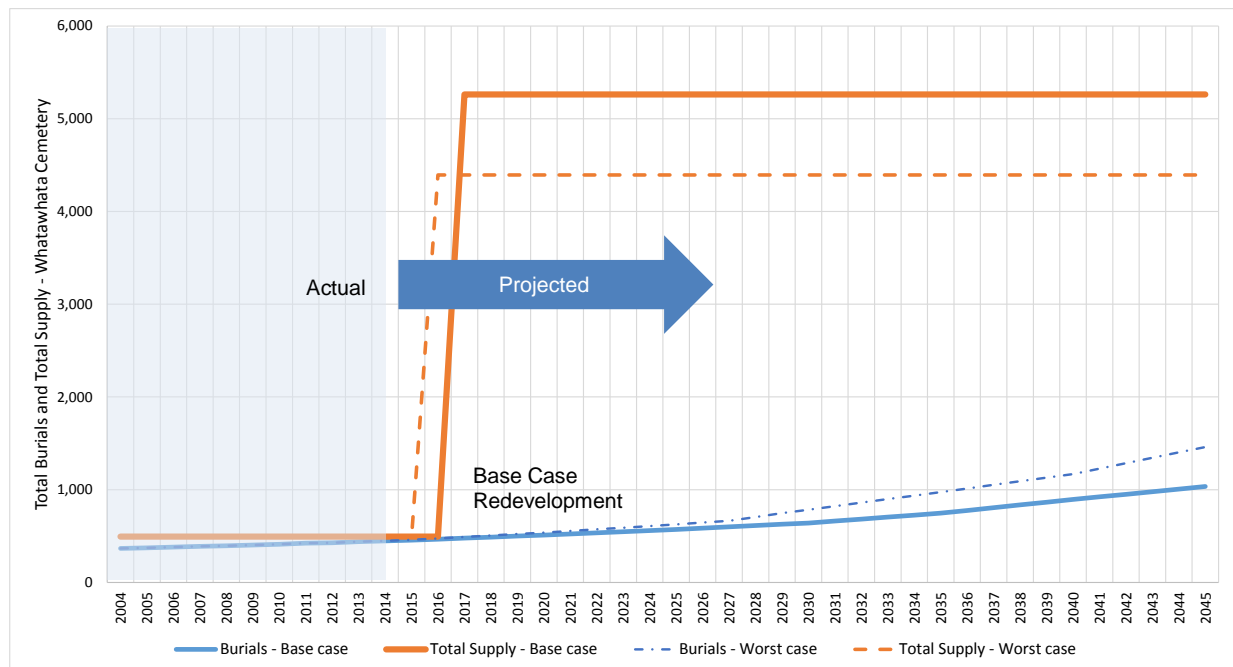


Table 22 : Whatawhata Cemetery - Summary table

Supply - Base Case		Burials	Demand - Base Case		Burials
Burials on remaining actively maintained land		47	Existing number of burials (2014)		447
Burials on additional land		4,767	Historical average burials per year (2004 to 2014)		8
Total available residual supply as at 2014		4,814	Projected burials (2015 to 2045)		586
Total Supply (Residual + existing burials)		5,261	Total burials at 2045		1,034
CAPACITY DATE		Actively Maintained land	All available land	Residual Capacity at 2045	
Base case		2017	2045+	4,227	
Worst case		2015	2045+	2,934	