



## Cemeteries and crematoria

### Cemeteries and Crematoria

This assessment considers the adequacy of the provision of cemeteries and crematoria in Christchurch City to meet future demands for disposal of the dead in a controlled, hygienic and dignified manner for the period 2004 to 2016.

#### Key findings are:

- There is sufficient capacity within existing cemeteries to meet predicted demand for the next 20 years.
- Current crematoria capacity is adequate to meet predicted demand well beyond a 20-year period.
- Because of community preference for locally accessible cemeteries, there is a requirement for a new cemetery site to service the northern part of the city and additional capacity is required at Avonhead Cemetery. (Sites have been acquired to meet this need but establishment as cemeteries is subject to resource consent and planning processes).
- A partnership with Selwyn District Council for the joint use of Shands Road Cemetery should be further explored, along with the establishment of a cemetery at Wigram to meet the future burial needs of the southern part of the city.
- Some form of limitation on the pre-purchase of cemetery plots is required to extend cemetery life spans and optimise cemetery use.
- Additional special areas will need to be set aside for Returned Services needs, for Russian Orthodox burials and to meet Pacific people's needs.
- Improved use of less popular cemeteries and ash areas is required.
- Current capacity at both cemeteries and crematoria is sufficient to deal with death rates from a civil emergency or pandemic. However, during the next 10 years, it would be prudent to investigate an area that could be used for both mass burial and as a future cemetery.
- No public health issues were identified by the Medical Officer of Health. The issues of groundwater contamination from cemeteries and air discharges from crematoria which were raised by other agencies are considered in the assessment.

### Asset Description

There are 12 cemeteries located within the Christchurch district which are managed by the Christchurch City Council (CCC). Six of the 12 Council cemeteries are either closed or have reached capacity with the only burials being a second burial in an existing plot or burial in a reserved plot. In addition to the Council cemeteries, a number of churches have their own burial grounds for members of their denomination. There are about 18 burial grounds in the district. These are typically small and the extent of their operation minor.

Cemeteries and crematoria are provided for the community and the provision of this activity does not significantly alter, based on the geography or demographic profile of different parts of a community. However, the Christchurch district differs from most others around New Zealand in that most districts have only one or two operational cemeteries whereas in Christchurch there are six. The effect is that there tends to be a localised community around each cemetery. Analysis of cemetery requirements in the district have now therefore been based on the six Christchurch ward boundaries.

The Christchurch City Council does not own or operate any crematoria. Cremation services within the Christchurch district are provided by two private companies. The Cremation Society of Canterbury has two facilities, one located at Linwood and the other at Harewood. The Garden City Crematory also has a cremator, and it is located at Sockburn. No defined catchment could be determined for each of the crematoria; therefore, the assessment considers the entire district of Christchurch as a single community for cremation services.

### Public Health Issues

Public health issues in cemeteries relate to work around graves, potential environmental effects such as contamination of ground water, and the ability of cemeteries and crematoria to cope with large numbers of dead following a natural disaster or pandemic. The few public health issues relating to cremation relate to air discharges, radiotherapy effects and devices, such as pacemakers.

Appropriate operating procedures are in place and documented for public health issues relating to both cemetery operations and cremations. The application of the procedures is audited as part of the ISO certification process.

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## Forecast of Deaths

The figure below shows that there will be a substantial increase in predicted deaths for the resident population over the next 20 years owing to a combination of an aging population and the large increase in population in the district.

Actual and predicted deaths

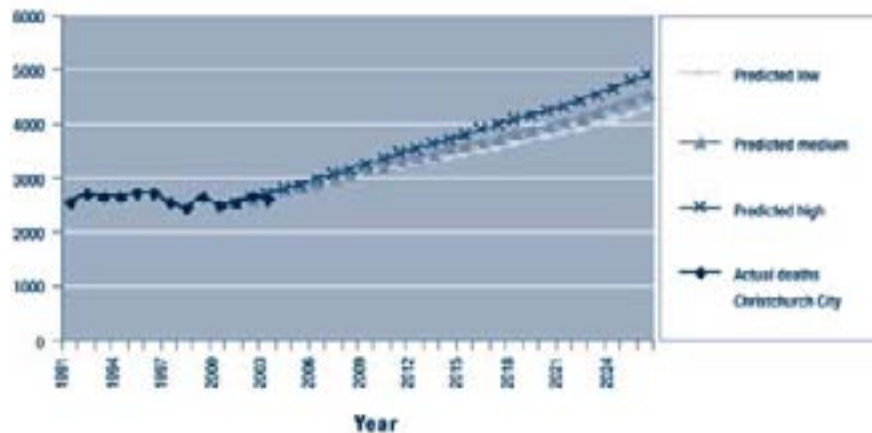


Figure: Actual (1991-2003) and Forecast (2001-2026) deaths for Christchurch City resident population

Low, medium and high projections for the number of grave and ash plots required are shown in the figure below. It should be noted that this only represents new plots – the calculations have taken into account second burials and trends for ashes to be buried in existing grave or ash plots.

Year	Total new grave plots			Total new ash plots		
	Low	Medium	High	Low	Medium	High
2001	401	402	403	96	97	98
2002	409	412	416	98	99	100
2003	418	423	429	100	101	103
2004	426	434	442	102	104	106
2005	435	445	456	104	107	110
2006	444	456	469	106	109	113
2007	454	469	484	108	112	116
2008	465	482	499	111	115	120
2009	476	495	515	114	118	124
2010	486	508	530	116	122	127
2011	497	521	545	119	125	131
2012	507	532	558	121	127	134
2013	516	544	572	123	130	137
2014	525	555	586	125	133	141
2015	534	567	600	128	136	144
2016	544	578	613	130	138	147
2017	553	589	627	132	141	151
2018	562	600	640	134	144	154
2019	571	611	653	136	146	157
2020	580	622	666	138	149	160
2021	589	633	680	141	152	163
2022	603	649	698	144	155	168
2023	617	665	716	147	159	172
2024	630	681	735	150	163	177
2025	644	697	753	154	167	181
2026	658	713	771	157	171	185
Total 2004 - 2026	12,316	13,049	13,808	2,939	3,124	3,318

Figure: Low, medium and high projections for grave and ash plots required

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### Current Capacity

The current capacity of cemeteries is calculated by considering both the current number of available plots both for burials and ashes and the future demand projections.

### Burial Plots

Christchurch City records provide information on the number of burial plots available. This excludes plots that have been pre-sold.

Cemetery	Burial	Quarter Plot	Still Born
Avonhead	1,578	91	32
Belfast	74		
Memorial Park	7,883	148	
Ruru Lawn	750		
Ruru Lawn - Returned Services Assn plots	228		
Sydenham	320		
Yaldhurst	3,101		
<b>Total</b>	<b>13,934</b>	<b>239</b>	<b>32</b>

Figure: Plots available for all Christchurch cemeteries as at September 2004

The projection of burial requirements and capacity includes all special burial plots (RSA, ethnic and religious) in the overall calculation.

Based on the high demand forecast for new burial plots, district-wide cemetery capacity will be reached in 2026 (all available plots used). Analysis of the medium and low forecasts predicts that capacity will be reached in 2027 or 2028. It is important to note that this forecast considers the total city-wide plot availability and does not take into the strong preference in the community for residents to be buried in their local cemetery rather than elsewhere in the city. There are exceptions to this, one being the Yaldhurst Cemetery which appears to have limited appeal, even with the local community. Others are Memorial Park and Sydenham Cemeteries. If the reasons for

the lack of appeal could be identified and addressed, this may delay the requirement to develop new cemeteries.

No new plots are available at Bromley, Linwood and Waimairi cemeteries although there are a number of pre-sold plots still remaining at these cemeteries. The first operational cemetery predicted to reach capacity is Belfast which will have no new plots available beyond 2004/05. This creates a significant gap in the cemetery distribution across the district, there being no operational cemetery in the northern part of the district.

Ruru Lawn is forecast to reach capacity in 2007. This is earlier than originally forecast as burial plots are being sold as ash plots, there being no dedicated ashes area at this cemetery.

Avonhead is likely to reach capacity in 2015/16. However, this date could be affected by the mix of burial plots provided. Upright memorials are allowed only in some sections – about 300 remaining – the balance of plots being in the lawn cemetery with only in-ground memorials permitted. These areas are not popular with plot purchasers. Although a change to the layout would provide an increased number of cemetery sections with upright memorials, there is significant resistance to any change to the cemetery layout, particularly from families of those who have already purchased in ground plots. The calculation of remaining capacity does not include the proposed 1.6 ha extension which has a capacity of about 1,000 additional plots. Early development of this area may be necessary to provide additional plots allowing upright memorials.

Sydenham is forecast to reach capacity in 2017/18 and the two remaining cemeteries, Memorial Park and Yaldhurst, will have a combined capacity until around 2026/27. Memorial Park is likely to reach capacity first. The development of the Wigram cemetery is not likely to be required until at least 2016, following the closure of Sydenham Cemetery.

Capacity to meet future demand could be further enhanced by exploring the possibility of a partnership with Selwyn District Council for the joint use of Shands Road Cemetery, located on the southern boundary of the city.

There is a significant number of pre-purchased burial plots in the Christchurch cemeteries, representing about 3 to 5 years of total burial capacity for the City. At present there is no restriction on the pre-purchase of plots, accelerating the need for additional burial plots. The impact is

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highlighted by the 457 plots sold but unoccupied at Belfast Cemetery. It now has only a few burial plots remaining and a new cemetery site for the northern part of the city is being sought.

### Ash Plots

Ash plots are easily accommodated as they take up minimal area. At present there are about 3,500 plots available in CCC cemeteries. It is possible that additional ash plots could be created if required. It is noted that of the available ash plots, 75% of the capacity is at Yaldhurst and Sydenham cemeteries. During the period 2000 to 2003, however, these accommodated only 5% respectively of the total ash burials. Unless the appeal of these two cemeteries can be improved, additional capacity will need to be developed at the other cemeteries, particularly Ruru Lawn Cemetery. Alternative options for the provision of ash plots could be considered to meet demand requirements and conserve space.

Based on the continuation of the high demand forecast for new ash plots, district wide cemetery capacity is reached in 2027 (all available plots used). Analysis of the medium and low forecasts predicts that capacity will be reached in 2028 or 2029. It should be noted that Christchurch City Council provides for only a small proportion of ash burials in the district. The majority are held or scattered by friends and relatives, interred in an ash plot or columbarium at one of the churches, or in the memorial gardens at one of the crematoria.

Pre-purchased ash plots represent a small proportion of total ash plot capacity for the City, in the order of one to two years. Although allowing pre-purchase has no effect on the long term net capacity of the city's cemeteries, except where they remain unused, they accelerate the need for new areas and additional infrastructure.

### Special Plots

Special burial plots available in CCC cemeteries include White Russian (35 plots, Belfast), Indian (13 plots, Sydenham), Muslim (6 plots, Ruru Lawn; 84 plots Memorial Park), non-local Maori (268 plots, Memorial Park) and Jewish (85 plots, Linwood). In addition, a request has been received through the consultation process for an area to be set aside at Memorial Park Cemetery for Russian Orthodox burials. It is recommended that this request receive further consideration

as required under Burial and Cremations Act 1964. Representatives of Pacific Island people have asked that a more culturally-sensitive approach be applied to their burial needs which could involve the designation of special areas to meet these requirements. It is recommended that this request is further investigated in consultation with Pacific Island representatives.

### Returned Services Association Plots

Returned Services Association (RSA) plots are provided in the Ruru Lawn cemetery. Analysis of the actual burial records and plot availability indicates that the RSA ash plots section will reach capacity within the next 2 to 5 years. RSA burial plots can be expected to reach capacity within the next 4 to 9 years. It is therefore recommended that additional RSA areas are dedicated in another cemetery. The current capacity of 8,000 per annum compares with a predicted capacity of 4,216 per annum in 2026.





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### Crematoria

There was a lack of detailed information provided by the crematorium operators, perhaps relating to commercial sensitivities. It was therefore difficult to accurately assess the provision for cremation. However, from the cremation information available and the Christchurch City burial records, assumptions could be made about the expected average annual resident and out-of-district cremations. Analysis showed that the total capacity of the operating crematoria in the district was well in excess of forecast demand.

### Options to Meet Demand

The assessment of cemeteries and crematoria has shown that the overall provision of land for cemeteries and total number of cremators is adequate to meet overall demand within the district for the 10-year planning period and beyond.

The assessment highlights a community preference for the provision of local cemeteries. In order to continue to meet this need the following actions are recommended:

- A new cemetery is provided in the northern part of the City as a replacement for Belfast Cemetery;
- Additional capacity for upright memorials is developed at Avonhead Cemetery;
- A denominational area for Russian Orthodox burials is developed at Memorial Park Cemetery;
- Investigate provision of designated burial areas to meet the needs of Pacific Island people;
- A new area is developed at Memorial Park Cemetery for RSA burials;
- A limitation on the pre-purchase of plots is established;
- Further explore the shared use of Shands Road Cemetery with Selwyn District Council and continue to investigate the provision of a new cemetery site at Wigram to meet the future needs of the southern part of the city;
- Options for improved use of plots are investigated, particularly ash plots;
- A public promotion plan for less popular cemetery sites is developed and implemented;

- Investigate future provision of an area that could be used for mass burial purposes and as a future cemetery site.

### Role of CCC

28. The Council owns and operates all of the operational cemeteries in the city, excluding the church cemeteries, and has purchased land for new cemeteries and extensions to several of the existing cemeteries. It provides a service for interment by burial and of ashes. The management, design, development and maintenance of both operational and closed cemeteries are also provided by Christchurch City Council.
29. In order to meet future demand, the Council will plan for and develop new areas for cemeteries. It will provide funding for cemetery infrastructure, such as landscape treatment, roads, footpaths, water supply and drainage. Appropriate funding provision for cemetery infrastructure will be made in the Christchurch City Council Long Term Council Community Plan.

### Identification of Issues

Discussions were held with the following persons/organisations in order to identify any issues relating to the provision of cemeteries and crematoria and/or any public health issues. It was considered important to ensure that any issues were identified and addressed through the assessment.

- The Medical Officer of Health did not identify any current public health concerns relating to cemeteries and crematoria in the Christchurch district.
- Environment Canterbury raised potential issues as being air discharges from crematoria and contamination of groundwater from cemeteries.
- Christchurch City Council Environmental Health raised a number of issues including high water tables in some cemeteries, potential hazards from unstable headstones and ensuring that burials are performed at correct depths. Measures have been taken to eliminate or manage all of these concerns to mitigate any public health risks.
- The Selwyn District Council raised the possibility of joint development with Christchurch City Council of the Shands Road cemetery, located close to the Christchurch City boundary. Further investigation into this option has been proposed.

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### Initial Consultation

Letters seeking identification of issues to be considered during the assessment were sent to religious denominations, ethnic groups, Maori and funeral directors. Discussions were held with specific agencies including the Medical Officer of Health, Environment Canterbury, Christchurch City Council Environmental Health, crematorium operators and Veterans Affairs. Comment from the general public was also sought by way of media release and public notice. A summary of responses from these other stakeholders has been included in the assessment report.

### Adequacy of Assessment

The assessment is considered to fully meet the requirements for a sanitary services assessment as set out in Part 7 Sub-part 1 of the Local Government Act 2002.

The information used in the assessment is considered to be adequate to provide an informed view about the adequacy of cemetery services and facilities in the Christchurch district. In preparing the assessment, a number of assumptions have been made relating to death rates, the ratio of burials to cremations, and the number of out-of-district burials. The information used in calculating future demand is based on statistical information provided by the Department of Statistics and burial and cremation records held by the Christchurch City Council. This information has been extrapolated to provide a comprehensive view of capacity and future demand.

There was a lack of detailed information provided by the crematorium operators, perhaps relating to commercial sensitivities that made it difficult to accurately assess the provision for cremation. However, enough information was gathered to determine that neither operator is operating at anywhere near capacity. Therefore, this is unlikely to become an issue within the assessment period. If capacity were to become an issue, it is likely that one of the operators would install an additional cremator or one of the larger funeral directors would consider purchase of a cremator.

The assessment has not been compromised by a lack of information or by cost of obtaining information and is considered to be a full and balanced assessment of cemeteries and crematoria.

