



# A landmark reborn

## The value of Christ Church Cathedral

NZIER report to Christ Church Cathedral Reinstatement Ltd

April 2024



## About NZIER

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NZIER is a specialist consulting firm that uses applied economic research and analysis to help our clients and members make better business and policy decisions and provide valuable insights and thought leadership on important public issues affecting our future. We operate across all sectors of the New Zealand economy and provide a full range of economic and policy consulting services.

As a not-for-profit organisation established in 1958, we reinvest our returns into our Public Good research programme, which informs and educates on the important economic and policy issues confronting Aotearoa New Zealand.

Our membership is open to all organisations and provides a range of benefits, including access to our long-established Quarterly Survey of Business Opinion and Quarterly Predictions documents.

We pride ourselves on our reputation for independence and our expertise and experience that ensures we deliver high quality, insightful analysis and pragmatic advice that we publicly stand behind, in the right form and at the right time.

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## Key points

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Christ Church Cathedral Reinstatement Limited (CCRL) commissioned NZIER to estimate the total economic value of reinstating Christ Church Cathedral and make the case for further investment. In this report, we identify, quantify and monetise the benefits of reinstating Christ Church Cathedral from the perspective of New Zealand society. We aim to help the government, the city council and other potential funders determine whether to provide further investment in the project.

### Why did we do this report?

CCRL was established as a result of the government's offer to support the Cathedral's reinstatement. It is responsible for the overall delivery of the project, including consenting, design, construction, and fundraising.

The Cathedral reinstatement is a complex project that requires stabilising and protecting a badly damaged and highly brittle heritage stone structure. The first phase of the reinstatement project, which took place between May 2020 and March 2023, involved stabilising the structure, obtaining resource consents, and developing a detailed design.

Now that the first phase is completed, CCRL is in a better position, with full discovery concluded, to understand the costs of completing the reinstatement. The total cost estimate is now \$248 million. The costs are largely driven by the need to stabilise and strengthen the current structure and protect it from future earthquake damage. \$85 million of funding is accessible of a total of \$134 million believed to be available, resulting in a gap of \$114 million to complete the reinstatement.

This report examines the benefits of reinstatement from a total economic value perspective to put the funding requirements in context for decision makers. It also provides an analysis of the rationale for investment by different groups, including central government, local government, the Anglican Church, tourism operators, and philanthropists.

### What was our approach?

We combined a range of data sources to produce our estimates. For benefits that enter markets, such as benefits from paid visitor activities, our estimates were derived from market prices. For non-market benefits, we drew on results from the literature on the value of culture and heritage. We also incorporated existing analysis provided by CCRL and insights from stakeholder interviews. We present our estimates as ranges to account for uncertainty in the data.

We took care to assess the additionality of the investment. Only some of the value associated with the reinstated Cathedral is truly additional, as some value will be accounted for by reduced benefits elsewhere (referred to as displacement), and some value will go to people outside of New Zealand (referred to as leakage). We did not include multiplier effects as their use has been widely criticised.

### What did we find?

The most important benefits arise from the building's non-use value. Non-use value mainly consists of the value people gain from knowing that the Cathedral has been reinstated, even if they do not visit it. The Cathedral is important not only to Christchurch residents but

also to people throughout the country because of its heritage value and what it symbolises about the city and its recovery. We estimate non-use value based on international stated preference surveys that estimate the value of Cathedrals and other cultural sites and obtain a value of \$8.9 million to \$30.6 million.

Another potential major source of benefits is the additional spending of tourists who decide to stay longer in New Zealand in order to visit the Cathedral. We estimate that the reinstated Cathedral could result in additional tourism spending of up to \$20.8 million per year.

Visitor activities account for only a small fraction of the benefits. Paid visitor activities such as climbing the tower or participating in a guided tour provide \$0.8 million to \$2.1 million per year in benefits, whereas unpaid visitor activities such as viewing the Cathedral interior or attending services or events provide \$0.9 million to \$3.7 million.

We identified other types of benefits but could not quantify them. There has been around \$1 billion of private and public sector investment in the streets around Cathedral Square since the earthquake, and a further \$1 billion is planned for the next 10 years. The Cathedral reinstatement will unlock the full value of these investments and support the wider regeneration of Christchurch. It will also strengthen social cohesion and contribute to New Zealand's earthquake engineering capability.

It is important to emphasise that although the Cathedral is a place of worship for the Anglican Church, it is also an important civic building or community space. As this report demonstrates, the Cathedral is a source of social, cultural and economic value for all New Zealanders.

### **What does this mean for reinstatement?**

Our analysis shows that the benefits of reinstatement outweigh the costs, indicating that the project should proceed. Comparing the benefits to outstanding costs results in net quantified benefits of \$1.4 million to \$31.7 million per year and a benefit/cost ratio (BCR) of 1.1 to 3.0, showing that reinstatement provides value for money compared to the counterfactual option of mothballing the Cathedral and preserving it in its current state.

The government should play a role in closing the funding gap. As many of the benefits are associated with public goods or positive externalities, there is a case for central and local government to contribute toward the costs of reinstatement alongside the Anglican Church, tourism operators and philanthropists.

### **What happens next?**

The next step is for CCRL to engage with central government, local government, the Anglican Church, tourism operators, and philanthropists to discuss and agree on how the funding gap will be closed.



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# 1 Introduction

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Christ Church Cathedral is a major attraction in the heart of Ōtautahi Christchurch that has been a central part of the city's identity for 150 years.

The Cathedral was severely damaged in the 2011 earthquakes. In 2017, the government's offer to reinstate the Cathedral was accepted by the Anglican Church. The government passed the Christ Church Reinstatement Act 2017 and established a joint venture, Christ Church Cathedral Reinstatement Limited (CCRL), to undertake the work.

The Act states that reinstatement is *“the culmination of a long period of facilitation, negotiation and investigations,”* and its purpose is to facilitate reinstatement and recognise the cathedral's *“contribution to cultural, social, and economic wellbeing in Christchurch, its importance to Christchurch's regeneration, and its heritage value”*.

The investigations into the reinstatement are now well advanced. With a clearer understanding of the reinstatement requirements, CCRL is now in a position to clarify what is required to fulfil the statutory purpose to:

- *“facilitate reinstatement in an expedited manner”*
- *“provide a cost-effective process for reinstatement”*
- *“achieve earlier or greater certainty for the owner of the Cathedral and the Christchurch community”*.

CCRL commissioned NZIER to estimate the total economic value of Christ Church Cathedral and make the case for further investment in reinstating the Cathedral.

## 1.1 Purpose

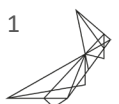
The purpose of this report is to assess the benefits of reinstating Christ Church Cathedral. It is intended to support the government and other potential funders to make a decision about whether to provide further investment in the reinstatement.

This report aims to answer the following research questions:

- What is the total economic value of the reinstated Christ Church Cathedral?
- What are the benefits of reinstatement to New Zealand society as a whole, and how do they compare to the costs?
- What is the rationale for investment by different groups, including central government, local government, the Anglican Church, tourism operators, and philanthropists?
- What commercial and management arrangements are in place to give confidence that the benefits will be delivered at the estimated cost?

## 1.2 Scope

The scope of our assessment is to:





- identify and (where possible) quantify and monetise the value of the reinstated Cathedral
- compare the benefits of reinstatement with the costs
- discuss the rationale for investment by different groups
- outline commercial and management arrangements to provide confidence that the benefits will be delivered at the expected costs.

The following activities are out of scope:

- assess the accuracy or efficiency of the cost estimate
- assess the suitability of the commercial and management arrangements.

### 1.3 Structure

The structure of this report is as follows:

- Section 2 describes the history of the Cathedral and summarises the case for reinstatement
- Section 3 outlines our approach to assessing the benefits
- Sections 4, 5 and 6 discuss the benefits for consumers, producers, and wider society
- Section 7 provides an overview of the benefits and compares them to the costs
- Section 8 discusses the rationale for investment
- Section 9 outlines the current delivery arrangements
- Section 10 concludes with a summary and next steps.



## 2 Case for reinstatement

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This section sets out the case for reinstatement. It covers the Cathedral's history, the reinstatement plans, the need for further funding, the investment objectives, and the intervention logic.

### 2.1 History of the Cathedral

Christ Church Cathedral is a major landmark in the heart of Christchurch. It is featured in the council logo, and the building is a widely recognised symbol of the city that bears its name.

The Cathedral was built between 1864 and 1904. It was damaged by earthquakes several times while it was being built and in the 20th century, resulting in strengthening work and repairs.

In 1983, the church was registered as a Category 1 historic place, recognising it in statute as having special or outstanding historical or cultural significance or value (Heritage New Zealand Pouhere Taonga 2021).

The Cathedral is the centre of the Anglican Diocese of Christchurch. Prior to the earthquake, it was used for worship and concerts and was a major tourist attraction. The building contains numerous memorial windows and tablets, providing a reminder of the city's history.

The Cathedral was severely damaged in the February 2011 earthquake. The upper half of the tower was destroyed, and the remainder had to be demolished. The west wall was also badly damaged and partially collapsed later in the year.

In its current state, the Cathedral serves as a prominent reminder of the earthquakes and their impact on Christchurch. As one of the city's few remaining identifiable landmarks, it will continue to provide a sense of identity and act as a symbol of resilience once reinstatement is complete.

### 2.2 Plans for reinstatement

Several options were considered for the future of the Cathedral. In 2017, the government made an offer to support the reinstatement of the Cathedral, which the Anglican Church accepted. Reinstatement was defined as:

*“a combination of repair, restoration, reconstruction/rebuild, seismic strengthening, deconstruction and partial demolition – largely reinstating the Cathedral to the extent that, for most people, it would be indistinguishable from the pre-earthquake building, but through different methodologies as required to address the various features of the damage.”* (Department of the Prime Minister and Cabinet 2017)

The government contributed \$10 million toward fundraising costs and provided an interest-free suspensory loan of \$15 million, and the city council contributed a further \$10 million heritage grant raised by levying ratepayers a specific cathedral rate from 2018-2028. CCRL was initially formed to be responsible for the reinstatement of the Cathedral, in tandem with the formation the Christ Church Reinstatement Trust (CCRT), an independent

fundraising trust, as 50% shareholder with Church Property Trustees (CPT) as the other 50% owner. A later restructure of arrangements means CCRL is now responsible for both construction and fundraising and is 100% owned by CPT.

A full concept design was developed in 2020 with an estimated cost of \$154 million. In addition, an Order in Council was made to modify the resource consent process to improve certainty, prevent delays, and reduce costs.

Meeting the building's seismic strengthening requirements has turned out to be more challenging and time consuming than originally envisaged. In addition, the masonry scope has now been able to be defined more fully. As a result, the funding requirements have increased. The new requirements cannot be met through fundraising alone. CCRL has slowed work on the site and is undertaking a detailed review to identify opportunities to save money and time.

## 2.3 Investment objectives

The objectives of the Cathedral reinstatement are to:

- enable worshippers and tourists to return to the Cathedral
- support the regeneration of Cathedral Square
- provide a symbol of resilience and recovery after the earthquakes
- preserve New Zealand's heritage and culture
- attract tourists to Christchurch.

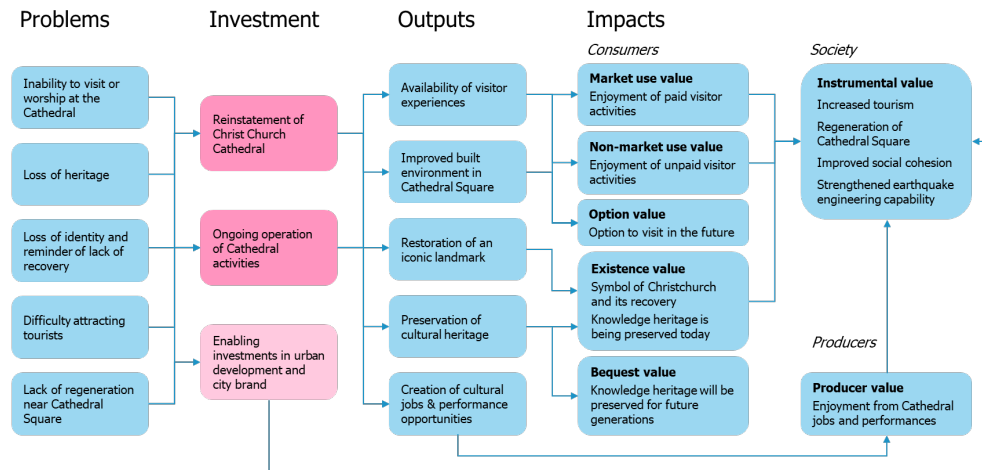
## 2.4 Intervention logic

Figure 1 provides an overview of the intervention logic for the Cathedral reinstatement. It lists the problems that the investment aims to address and shows how the outputs created by the investment produce impacts, which are sources of total economic value for consumers, producers and society.

Consumers gain value from the availability of visitor experiences, improvements to the surrounding square, the restoration of an iconic landmark, and the preservation of cultural heritage. Producers gain value from the creation of jobs and other cultural opportunities associated with reinstating the Cathedral, supporting its operations, or performing in services or events. These outputs and activities also have instrumental value for society as a whole by promoting social cohesion, attracting international tourists, and supporting the regeneration of Cathedral Square.



**Figure 1 Intervention logic**



Source: NZIER

## 3 Approach to assessing benefits

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This section describes our approach to assessing the benefits of reinstatement.

### 3.1 Options

This report considers two options for Christ Church Cathedral:

- **The proposed investment** – Reinstatement the Cathedral through a combination of repair, restoration, reconstruction and seismic strengthening so that it is indistinguishable from the pre-earthquake building for most people.
- **The counterfactual ('do minimum')** – Mothball the Cathedral, i.e. suspend work indefinitely and preserve the building in its current state.

We understand that if the Cathedral is mothballed, it will be hidden from view, and people will not be able to visit it, both to preserve it and because it will remain a construction site in suspension. This option has ongoing seismic risks, which could result in substantial costs and fabric degradation risk. As no definitive plan is in place to do this, these costs are not currently understood and we have not incorporated them into our analysis. We also have not quantified the disbenefits from a public eye-sore and the public safety issues associated with a partly-restored building.

Several alternative options for Christ Church Cathedral were considered prior to the Government intervention, including repairing or restoring the building without reconstruction or seismic strengthening and replacing the building with a traditional timber construction or a contemporary structure. It is possible that some options provide similar benefits to reinstatement at a lower cost.<sup>1</sup> However, there has already been substantial public debate around these options, and they were discounted in favour of the reinstatement project as currently defined and agreed between CPT and CCRT. For this reason, we do not consider alternative options in this report.

Public commentators frequently compare Christ Church Cathedral to other Cathedral restoration projects around the world, including the Notre Dame in Paris and the Kaiser Wilhelm Memorial Church in Berlin. While there are lessons learnt from these experiences, we caution against any direct comparison due to the differences between the projects.

### 3.2 Total economic value

In economics, the value of a good or service is the additional wellbeing or utility that arises from its use. This goes beyond its market value or the level of economic activity associated with it.

A cultural and heritage landmark such as the Cathedral creates value in several ways. We use the Manatū Taonga Ministry for Culture and Heritage framework (Allan, Grimes, and Kerr 2013) to identify sources of total economic value.<sup>2</sup>

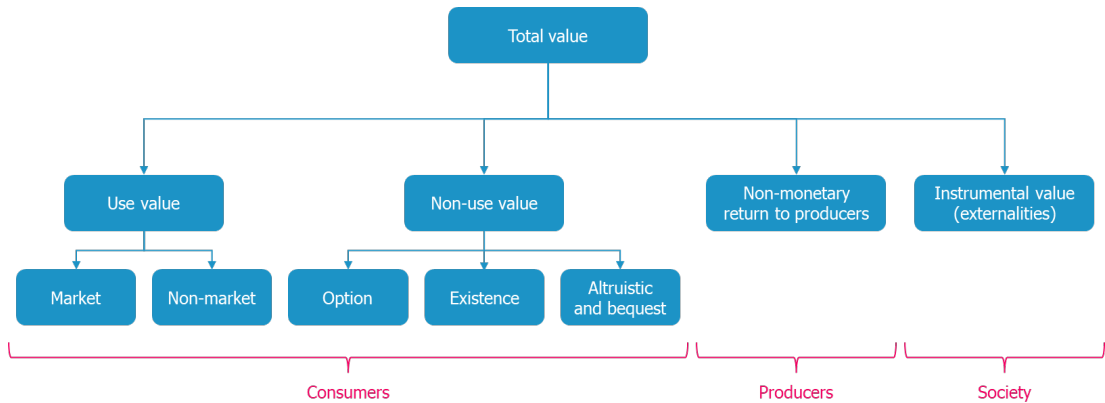
<sup>1</sup> For example, the building could be stabilised through seismic strengthening so that it is safe to visit, without being restored or reconstructed (Bennett 2024). This would enable the Cathedral ruins to attract tourists and other visitors and serve as a reminder of the city's history and heritage.

<sup>2</sup> For other applications of the total economic value framework to culture and heritage, see Ismail Serageldin (1999).

Total economic value captures the value from both market transactions and non-market sources. It includes benefits to consumers (use and non-use value), benefits to producers (non-monetary return to producers), and benefits to society from others' use (instrumental value or externalities).<sup>3</sup>

Figure 2 provides an overview of the total economic value framework. In general, values to the left are more tangible than values to the right. Each source of value is described in more detail in sections 4, 5 and 6.

**Figure 2 Sources of total value for cultural projects**



Source: NZIER, adapted from Corey Allan, Arthur Grimes, and Suzi Kerr (2023)

### 3.3 Monetisation

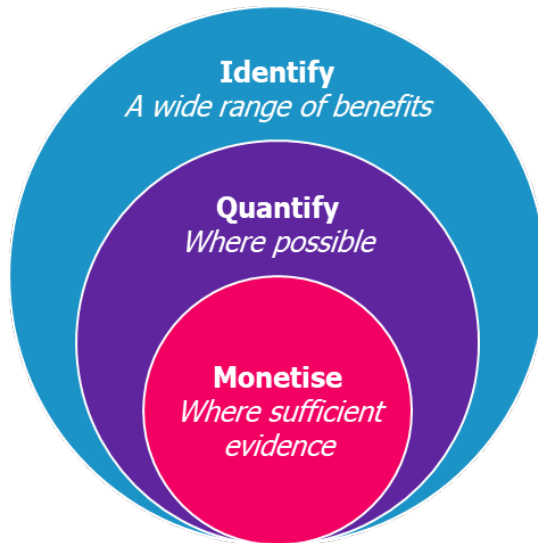
Economic assessments typically attempt to evaluate projects using social cost-benefit analysis (CBA), which compares total benefits to society with the total costs. To compare benefits with costs using a common metric, CBA aims to monetise benefits by expressing them in dollar values.

We use the IQM framework (see Figure 3) to provide a full view of the investment's benefits. IQM means that we first seek to *identify* a wide range of benefits, *quantify* impacts where possible, and *monetise* impacts where there is sufficient evidence to do so reliably. This framework helps us identify a broad range of impacts and think through which impacts can be quantified or monetised.

Non-monetised and non-quantified impacts are just as important as monetised impacts and should be considered alongside them in the CBA.

<sup>3</sup> Different authors classify different sources of total economic value in different ways. For example, some authors see option value and non-monetary return to producers as types of use value. We define instrumental value as the benefits accruing to society from the results of cultural activities, whereas it is sometimes defined as a broad category of value contrasted with intrinsic value.

Figure 3 IQM framework



Source: The Treasury (2019)

A range of methods are available to quantify and monetise benefits. For benefits that enter markets, the value can be determined from market prices. Other methods need to be used for non-market benefits. These include stated preference methods such as contingent valuation and choice modelling, which use surveys to estimate people's willingness to pay for different sources of value, and revealed preference methods such as travel cost analysis and hedonic pricing, which infer values from choices in other markets.<sup>4</sup>

Due to the time and budget available for this report, it is not possible to undertake new primary research to measure the value of non-market benefits provided by the Cathedral. Instead, we combine evidence from existing studies on other cultural and heritage sites. We assume that the benefits from the Cathedral are similar in value to those from similar sites elsewhere in the world. As these sites have unique characteristics and benefit different groups of people, the estimates should be considered as providing only a rough indication of the magnitude of the benefits.<sup>5</sup>

### 3.4 Displacement and leakage

After identifying, quantifying, or monetising the value of the reinstated Cathedral, the next step is to determine what proportion of the change in value should be counted as a benefit of investment. This is known as the *additionality* of the investment.

There are two main factors that should be considered when assessing additionality:

- **Displacement** refers to benefits that are accounted for by reduced benefits elsewhere. For example, people who visit the Cathedral might otherwise visit other attractions if the Cathedral is not able to be visited.
- **Leakage** refers to benefits that go to people outside of the target group. As this report considers the benefits for New Zealand as a whole, leakage refers to benefits that go

<sup>4</sup> For more detail on non-market valuation methods, see Allan, Grimes, and Kerr (2013) and NZIER (2018).

<sup>5</sup> For more information on the limitations of using results from existing studies to infer non-values, see NZIER (2018).

to people in other countries. For example, people living overseas may gain value from knowing that the Cathedral is being preserved.

We account for displacement and leakage by applying an adjustment to convert the total value into the benefit.

### 3.5 Multiplier effects

Some studies of the economic impact of an investment include multiplier effects. Multiplier effects seek to account for the indirect and induced spending generated by the Cathedral reinstatement:

- **Indirect spending** refers to the increase in revenue from suppliers to the Cathedral during reinstatement or operations. For example, if a contractor buys building materials from a supplier, then the revenue from the supplier is the indirect spending caused by the reinstatement.
- **Induced spending** refers to the increase in spending in the local economy caused by the Cathedral. For example, suppose visitors spend more time at hotels, restaurants and shops, causing these businesses to hire staff who would otherwise be unemployed. These staff spend their wages in the local economy, and their spending is the induced spending caused by the reinstatement.

There have been several prominent critiques of the use of multipliers in economic analysis,<sup>6</sup> and Treasury's (2015) guidance says that multiplier effects should generally be ignored. Multiplier effects are difficult to estimate, and their size depends on the economic cycle and the level of underused resources in the economy. Despite showing signs of loosening, the New Zealand labour market remains tight (NZIER 2024), which means that the level of underused resources is currently relatively low, and multiplier effects are likely to be relatively small. While we acknowledge the potential existence of multiplier effects, we do not attempt to quantify them in this report.

### 3.6 Uncertainty

There is a high level of uncertainty around both the number of people who will benefit from the reinstated Cathedral and the value of the benefit.

To provide an indication of this uncertainty, we present estimates as ranges that reflect 90% confidence intervals based on our professional judgement. This means that if we made a large number of similar estimates, we would expect the true value to fall within the range at least 90% of the time.

In our calculations, we sometimes generate new estimates by adding or multiplying existing estimates. When we do this, we use Monte Carlo analysis to arrive at the distribution of the new estimate. Monte Carlo analysis involves assuming a probability distribution for the estimates, repeatedly drawing random values from the probability distribution, performing calculations using the values, and aggregating the results to form the probability distribution of the new estimate. For simplicity, we assume that the estimates are normally distributed around the true values and that estimates for different variables are uncorrelated.

<sup>6</sup> See for example Greton (2013).





### 3.7 Information sources

The information used in this report is sourced from:

- existing analysis provided by CCRL
- literature on the value of culture and heritage
- interviews with key stakeholders (see Appendix A for a list of interviewees).



## 4 Benefits to consumers

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This section outlines the benefits of the Cathedral reinstatement for consumers. Consumer benefits arise from a range of sources of value, including:

- **Use value** – the value consumers gain from visiting the Cathedral:
  - **Market use value** – the enjoyment people gain from paid visitor activities, including climbing the tower and participating in a guided tour
  - **Non-market use value** – the enjoyment people gain from unpaid visitor activities, including viewing the Cathedral architecture, attending church services and participating in civic or community events.
- **Non-use value** – the value consumers gain from the Cathedral even if they never visit it:
  - **Option value** – the enjoyment people gain from having the option to visit the Cathedral, even if they do not do so
  - **Existence value** – the enjoyment people gain from knowing the Cathedral exists, even if they never plan to visit it, because of what it symbolises about Christchurch or because of its heritage value
  - **Altruistic value** – the enjoyment people gain from knowing that other people are visiting the Cathedral
  - **Bequest value** – the enjoyment people gain from knowing the Cathedral is being preserved for future generations.

### 4.1 Market use value

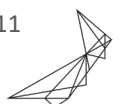
Market use value refers to the value of a good or service that is purchased in the market.

The market use value of the reinstated Cathedral is the enjoyment visitors gain from paid visitor activities. The enjoyment could come from activities such as connecting with the Cathedral's history (historical value), enjoying a musical performance (cultural value), appreciating the beauty of the Cathedral architecture (aesthetic value), or feeling inspired and spiritually connected (spiritual value).<sup>7</sup> Paid visitor activities include:

- Climbing the tower
- Participating in a guided tour
- Shopping at the gift shop
- Eating at the café.

Table 1 quantifies the market use value from each activity in year 1.

<sup>7</sup> A 2006 visitor survey found that the most popular reasons for visiting Christ Church Cathedral were interest (34%), architecture (19%), history (15%), and religion (12%) (ChristChurch Cathedral 2006). Similarly, an English survey found that the main reasons for visiting cathedrals are historic attraction (53%), to see architecture or works of art (39%) and for a moment of reflection (21%) (Ecorys 2021).



**Table 1 Market use value**

Estimated annual averages for year 1

Activity	Beneficiaries	Value per beneficiary (\$)	Total value (\$m)	Displacement and leakage	Total benefit (\$m)
Tower climb	144,077–189,575	8.75–16.25	1.4–2.8	25–75%	0.5–1.7
Guided tour	11,375–18,958	15.00–22.50	0.2–0.4	25–75%	0.1–0.2
Gift shop	22,749–37,915	10.00–20.00	0.3–0.7	80–100%	0.0–0.1
Café	72,800–109,200	10.00–20.00	0.9–1.9	80–100%	0.0–0.3
<b>Total</b>			<b>3.3–5.1</b>		<b>0.8–2.1</b>

Source: NZIER

### 4.1.1 Beneficiary numbers

The beneficiary numbers are based on the following assumptions, sourced from the Stage 2 Cathedral Activities Business Case (Gemelli Consulting 2021):

- The Cathedral will have 758,300 visitors per year<sup>8</sup> (based on pre-earthquake visitor numbers)
- 19–25% of visitors will climb the tower<sup>9</sup>
- 1.5–2.5% of visitors will participate in a guided tour
- 3.0–5.0% of visitors will shop at the gift shop
- 200–300 visitors will eat at the café per day (amounting to 72,800–109,200 per year).

The Cathedral is surrounded by Te Pae, the Christchurch Convention Centre, overlooked by Tūranga central library, and adjacent to the Arts Precinct, all of which have significant visitor numbers.

### 4.1.2 Value per beneficiary

The value an individual gets from each activity is at least as large as the price they pay, so the price paid is a measure of the market use value.

We used the following assumptions about prices, sourced from the Stage 2 Cathedral Activities Business Case (Gemelli Consulting 2021):

- 50% of people who climb the tower or participate in a guided tour will be adults
- Climbing the tower will cost \$10–\$20 for adults and \$7.50–\$12.50 for children<sup>10</sup>
- The guided tour will cost \$20–\$30 for adults and \$10–\$15 for children
- Shoppers at the gift shop will spend an average of \$10–\$20
- People who eat at the café will spend an average of \$10–\$20.

<sup>8</sup> By comparison, an average cathedral in England had 227,000 visitors in 2019. Among large international cathedrals, the average was 540,000 visitors.

<sup>9</sup> The central price estimates of \$15 for adults and \$10 for children were provided by CCRL, and are slightly higher than the estimates of \$12 and \$6 in the Stage 2 Cathedral Activities Business Case.

<sup>10</sup> The central price estimates of \$15 for adults and \$10 for children were provided by CCRL, and are slightly higher than the estimates of \$12 and \$6 in the Stage 2 Cathedral Activities Business Case.



We sense-checked the assumptions from the Stage 2 Cathedral Activities Business Case (Gemelli Consulting 2021) by comparing them to Cathedral revenue from before the earthquake. In 2010, the Cathedral earned \$0.20 million in tower fees, \$0.70 million in shop sales, and \$0.07 million in café income (all values in 2024 dollars) (Christchurch Cathedral Chapter 2011). The assumptions imply that after reinstatement, revenue from the tower climb will be around 5–15 times higher than before the earthquake and revenue from the gift shop and café will be around 1–3 times higher. We consider these assumptions to be optimistic but plausible.

### 4.1.3 Displacement and leakage

There is potential for displacement as some people who visit the Cathedral may otherwise visit other attractions. At one extreme, people are indifferent between visiting the cathedral and other attractions, so they receive very little additional benefit from the reinstatement of the Cathedral. At the other extreme, people will gain no value from alternative attractions, perhaps because the value they gain from the Cathedral is tied to its central location, its unique history, its status as an iconic landmark, or the sense of continuity that people get from the continuity of worship and prayer over 150 years. Without further information, we assume that people are roughly uniformly distributed between these two possibilities, which implies that around 25–75% of the total value can be attributed to reinstatement.

Displacement will likely be much more significant for the gift shop and café. It is likely that most people who visit the shop or café would otherwise take their custom elsewhere. However, it seems likely that people are willing to pay extra to shop or eat in the Cathedral. We assume 80–100% displacement, which is equivalent to assuming that people who shop in the gift shop and eat at the café are willing to spend 0–20% more than other locations.

From the perspective of New Zealand society, the enjoyment that tourists feel is not a benefit, but the revenue from tourist spending on paid visitor activities is a benefit. For this reason, although a large proportion of paid visitors are likely to be tourists, we assume no leakage for market use benefits.

## 4.2 Non-market use value

Non-market use value refers to the value of a good or service that is not purchased in the market. The non-market use value of the reinstated Cathedral includes:

- The enjoyment visitors gain from unpaid visitor experiences, including viewing the Cathedral interior and visiting the museum or visitor centre<sup>11</sup>
- The enjoyment passers-by gain from viewing the Cathedral exterior
- The enjoyment worshippers gain from attending church services
- The enjoyment people gain from ceremonial or musical events.<sup>12</sup>

Table 2 quantifies the market use value from each activity in year 1.

<sup>11</sup> There is the potential to charge an entrance fee for the museum or visitor centre (Gemelli Consulting 2021), in which case this would be a source of market rather than non-market use value.

<sup>12</sup> We assume ceremonial or musical events held in the Cathedral are unpaid.



**Table 2 Non-market use value**

Estimated annual averages for year 1

Activity	Beneficiaries	Value per beneficiary (\$)	Total value (\$m)	Displacement and leakage	Benefit (\$m)
Interior view	500,000–600,000	5.00–10.00	2.7–5.6	69–92%	0.3–1.4
Museum visit	113,745–159,243	10.00–20.00	1.3–2.8	69–92%	0.1– 0.7
Exterior view	873,600–1,747,200	0.00–5.00	0.0–7.0	69–92%	0.0–1.5
Regular service	30,000–45,000	5.00–10.00	0.2–0.4	33– 78%	0.1–0.2
Special service	2,000–3,000	10.00–20.00	0.0–0.1	33–78%	0.0–0.0
School service	5,000–10,000	10.00–20.00	0.1–0.2	33–78%	0.0–0.1
Ceremonial event	5,000–8,000	10.00–20.00	0.1–0.1	33–78%	0.0–0.1
Musical event	10,000–15,000	10.00–20.00	0.1–0.3	33–78%	0.0–0.1
Community event	<i>Not quantified</i>	<i>Not quantified</i>			
<b>Total</b>			<b>6.5–14.2</b>		<b>0.9–3.7</b>

Source: NZIER

#### 4.2.1 Beneficiary numbers

The beneficiary numbers are based on the following assumptions, informed by the Stage 2 Cathedral Activities Business Case (Gemelli Consulting 2021) and event attendance estimates provided by CCRL:

- 500,000–600,000 people will view the Cathedral's interior<sup>13</sup>
- 15–21% of visitors will visit the museum or visitor centre
- 100–200 people will walk past the cathedral per hour (amounting to 873,600–1,747,200 per year)<sup>14</sup>
- 19 regular services a week with a total of 30,000–45,000 attendees a year, or 30–45 per service<sup>15</sup>
- 11 special services a year (e.g. Easter and Christmas) with a total of 2,000–3,000 attendees, or 182–273 per service
- 8 school services a year with a total of 5,000–10,000 attendees, or 625–1,250 per service
- 18 ceremonial events a year (e.g. ordinations, weddings and funerals) with a total of 5,000–8,000 attendees a year, or 278–444 per event<sup>16</sup>

<sup>13</sup> Roughly obtained by taking the total number of visitors and subtracting the number who visit the museum or attend services or events.

<sup>14</sup> In the year ending March 2023, the average number of pedestrians per hour walking in Cathedral square ranged from 73 in August to 189 in January (Christchurch City Council, n.d.). These figures are likely to increase as the city centre continues to regenerate.

<sup>15</sup> In 2006, Christ Church Cathedral held 15 services a week (ChristChurch Cathedral 2006). In 2017, the transitional cathedral held 17 services a week with an average of 22 attendees for weekday services and 103 for Sunday services, or 36 attendees overall (Keith Paterson, private communication, 2 February 2024). By comparison, an average cathedral in England provided 21 services per week in 2019, with an average attendance of 98 children and 362 adults (Ecorys 2021).

<sup>16</sup> By comparison, an average cathedral in England provided 18 baptisms, 6 weddings, 6 funerals, and 4 memorial services in 2019 (Ecorys 2021).



- 15 musical events a year (e.g. organ, choir, or orchestral events) with a total of 10,000–15,000 attendees, or 667–1,000 per event.<sup>17</sup>

As there is no information available on the number or size of other types of community events that will be held at the Cathedral, we cannot quantify the non-market use value of these events. These events could include art exhibitions, floral displays, charity auctions, school visits, social gatherings, talks, and conferences. In addition, the reinstatement of the Cathedral will support the full use of Cathedral Square as the site of major civic events, such as the Anzac Day dawn service.

#### 4.2.2 Value per beneficiary

International studies provide evidence of people’s willingness to pay to visit cultural and heritage sites, indicating non-market use value. Based on a 2013 survey of the UK population, people value visiting heritage sites in general at GBP 1,646 per year, and historical places of worship in particular at GBP 972 (Fujiwara, Cornwall, and Dolan 2014). Similarly, a 2014 study found that the value of arts attendance (being a member of film, exhibition, music, play or dance) is GBP 935 per year or GBP 47 per activity over and above the price of entry (Fujiwara, Kudrna, and Dolan 2014). While these studies provide evidence on the overall value of heritage and culture, they provide limited information on the value of visiting specific sites.

There are several studies that focus specifically on visits to Cathedrals. Using the contingent valuation method, Willis (1994) (cited in eftec 2005 and Lawton et al. 2018) finds that visitors to Durham Cathedral are willing to pay an entry fee of GBP 0.78 (around \$4 in 2024 prices) in addition to an average donation of GBP 0.44 (\$2). Using travel cost analysis, Bedate, Herrero, and Sanz (2004) estimate that the willingness to pay to visit Palencia Cathedral is EUR 3.75 (around \$10 in 2024 prices). Together, these studies imply that the average non-market use value could be around \$5–\$10 per visit.

A second source of evidence on non-market use values is visitor donations prior to the earthquake. In 2010, the Cathedral earned \$0.22 million in donations and a further \$0.19 million through offertories at services (in 2024 dollars) (Christchurch Cathedral Chapter 2011), implying an average donation of \$0.40 per visitor and \$3.30–\$5.10 per service attendee. As some visitors will choose not to give a donation or donate less than their experience is worth, the true non-market use value could be significantly higher than these figures suggest.

A third source of evidence for non-market use values is market substitutes. A market substitute for visiting the Cathedral could be visiting another cathedral with an entry fee. While cathedrals do not charge for entry in New Zealand, international comparisons provide a useful indication. In the UK, large international cathedrals that charge entry fees typically charge GBP 10–25 (\$20–\$50) for adults,<sup>18</sup> whereas medium historic cathedrals that charge entry fees charge GBP 7.5–20 (\$15–\$40).<sup>19</sup> Other cathedrals commonly ask for a donation of GBP 5 (\$10). We consider Christ Church Cathedral similar to what Ecorys (2021)

<sup>17</sup> By comparison, an average cathedral in England provided 40 concerts (318 attendees on average), 20 lectures or talks (251 attendees), 5 exhibitions (6,983 attendees), 54 conferences (316 attendees), and 8 ceremonies (1,310 attendees) in 2019 (Ecorys 2021).

<sup>18</sup> At the time of writing, an adult entry ticket costs GBP 25 at St Paul’s, GBP 17 at Canterbury, GBP 12.50 at Winchester, and GBP 11 at Salisbury.

<sup>19</sup> At the time of writing, an adult entry ticket costs GBP 20 at Christ Church Cathedral in Oxford, 11 GBP at Lincoln Cathedral, and GBP 7.50 at Exeter.



describe as an 'urban' cathedral; however, none of the UK cathedrals in this category charge entry fees.

A market substitute for visiting the Cathedral visitor centre could be visiting a museum or art gallery. The museums and art galleries that charge entry fees in New Zealand typically charge between \$20–\$30 for adults and \$10–\$15 for children.<sup>20</sup> Gemelli Consulting (2021) assume that if the visitor centre charged for entry, the ticket price would be \$20 for adults and \$5 for children.

A market substitute for attending a ceremonial event or music performance could be attending a classical music concert, which typically costs around \$30–\$80.

The true market use value is likely to be lower than market substitutes suggest. Visiting the Cathedral provides a different experience from museums, galleries, and cathedrals in other countries. In addition, if the Cathedral charged an entry fee, the number of visitors would fall, indicating that the average value across all visitors is lower than what the entry fee would be.

Based on these three sources of evidence, we assume that viewing the Cathedral interior or attending a regular or school service is worth \$5–\$10 per visit. We assume that visiting the museum or visitor centre and attending special services or events is worth a larger amount of \$10–\$20 per visit. We also assume that simply viewing the Cathedral exterior is worth \$0–\$5 on average.

#### 4.2.3 Displacement and leakage

We assume displacement of 25–75% for all unpaid visitor activities and events, consistent with our approach for paid visitor activities (see section 4.1).

A large proportion of paid visitors are likely to be tourists. As discussed previously, the enjoyment that tourists feel from visiting the Cathedral is not a benefit from the perspective of New Zealand society. As tourists do not spend money when they participate in unpaid activities, there is no direct benefit from unpaid tourist visits (although there are indirect benefits from tourist spending on accommodation and food, as discussed in section 6.1)

A visitor survey undertaken prior to 2006 (ChristChurch Cathedral 2006) found that 63% of visitors come from overseas, indicating leakage of 50–75% for visitor activities. We assume leakage of 0–25% for services and events.

Combining these estimates using Monte Carlo analysis results in overall displacement and leakage of 69–92% for unpaid visitor activities and 33–78% for unpaid events.

### 4.3 Non-use value

Non-use values, also called passive use values, are values to people who do not directly consume the good or service but gain value from it being available to use by themselves or others.

<sup>20</sup> At the time of writing, Auckland Museum Charges \$28 for adults and \$14 for children, and MOTAT charges \$19 and \$10. Before international admission charges were suspended, Auckland Art Gallery charged an entry fee of \$20 for adults. The Auckland War Memorial Museum charges \$30 for adults and \$15 for Children. Entry to the current Te Papa exhibition is also \$30 for adults and \$15 for children. The international Antarctic centre charges \$69.



Table 3 quantifies the total non-use value for Christchurch and other New Zealand residents.

**Table 3 Non-use value**

Beneficiary	Number of beneficiaries	Value per beneficiary	Total value (\$m)	Displacement and leakage	Total benefit (\$m)
Christchurch residents	397,700–436,800	2.00–20.00	0.8–8.3	0%	0.8–8.3
Other New Zealand residents	4,762,900–5,333,900	1.00–5.00	5.0–25.3	0%	5.0–25.3
International residents	<i>Not quantified</i>	<i>Not quantified</i>		100%	0
<b>Total</b>			<b>8.9–30.6</b>		<b>8.9–30.6</b>

Source: NZIER

### 4.3.1 Sources of non-use value

This section discusses four sources of non-use value: option value, existence value, altruistic value, and bequest value.

As willingness to pay studies generally do not distinguish between different types of non-use value, we have not been able to quantify the non-use value arising from each source.

#### Option value

Option value refers to the enjoyment people feel from knowing they have the option to consume a good or service at some point in the future if the provision in the future depends on the provision in the present.<sup>21</sup> It can be considered an insurance policy that protects people from the risk of not being able to consume the good or service in the future.

The option value of the reinstated Cathedral includes the enjoyment people feel from knowing they have the choice to visit the Cathedral in the future, even if they never actually do so. If the Cathedral is lost, it cannot be replaced, so the option to visit it is lost. However, under the counterfactual, the Cathedral will be preserved and may be restored one day. We assume that if the Cathedral is mothballed, work will be suspended for at least a few years. This means that the option value of reinstating the Cathedral comes from having the option to visit it in the first few years following restoration.

#### Existence value

Existence value is the value people derive from knowing that a good exists, even if they never intend to use it. The existence value of the reinstated Cathedral includes:

- the satisfaction people feel from knowing that New Zealand’s heritage is being preserved today

<sup>21</sup> In some frameworks, option value is classified as a use value rather than a non-use value as it concerns the possibility of future use. We have classified option value as a non-use value because evidence on willingness to pay generally does not distinguish option value from other non-use values.





- the enjoyment Christchurch residents experience from knowing the Cathedral has been restored because of what it symbolises about the city and its recovery.

As a Category 1 historic place, Christ Church Cathedral is recognised in statute as having special historical and cultural significance (Heritage New Zealand Pouhere Taonga 2021). From the establishment of the Canterbury Association in 1848, the city of Christchurch was always envisaged as having an Anglican Cathedral at its centre. The building was originally designed in the Gothic Revival style by the distinguished British architect Sir George Gilbert Scott. Today, the Cathedral stands as a monument to the ideals of Canterbury's European settlers and the spread of the Anglican Church. Following reinstatement, the Cathedral has the potential to gain National Historic Landmark status, giving it further recognition as a place of outstanding national heritage.

Many of Christchurch's heritage sites were destroyed by the 2011 earthquakes, making the few that remain especially important to Christchurch residents. Several of these buildings, including the Cathedral, museum, arts centre, and town hall, are located in close proximity and form a unique precinct of historical stone buildings.

A 2022 survey of Christchurch residents indicates the value people place on the Cathedral as a symbol of the city and a part of its heritage. 74% of residents believe Christ Church Cathedral is an essential part of the Christchurch story (Research First Ltd 2022). 57% of residents say the city is not the same without it, and 45% say that reinstating the Cathedral is the last piece of the puzzle of rebuilding the city.

These results reflect a 2014 poll which found that 86% of residents believe the Cathedral has always been a vital part of the city's history and heritage, and 68% think it would boost their morale to know the cathedral would be restored (Colmar Brunton 2014). 58% said they personally felt a close tie to the Cathedral and would be very sad to see it demolished.

Not everyone values the existence of the cathedral. Whereas 62% want to have Christ Church Cathedral back, 32% say it isn't part of the future direction of Christchurch, and 29% say they don't care what happens to it (Research First Ltd 2022).

These surveys do not capture the existence value of the Cathedral for people outside of Christchurch, such as New Zealanders who grew up in Christchurch or have friends and relatives in the city.

### **Altruistic and bequest values**

Altruistic value is the value people derive from knowing that a good is available for others to use in the current generation. Similarly, bequest value is the value people derive from knowing that a good is available for others to use in future generations. Altruistic value can be seen as an option held for others, and bequest value can be seen as an option held for future people.

It is plausible that even people who have no interest in ever visiting the Cathedral nonetheless gain value from knowing that it is there to be enjoyed by those who do now and it is available for future generations.

### **4.3.2 Beneficiary numbers**

Any New Zealander has the potential to benefit from the non-use value of the Cathedral. It is likely that Christchurch residents will benefit more from the Cathedral's option and existence value than other New Zealanders because it is easier for them to visit and



because it is more connected with their sense of identity and heritage. However, many New Zealanders feel a close connection to the city and its heritage sites, such as people who grew up there or have friends and relatives in Christchurch.

We use different average values for Christchurch residents and non-Christchurch residents. We source population data from Stats NZ's 'low' and 'high' subnational population projections for 2028 (Stats NZ 2021).

### 4.3.3 Value per beneficiary

Non-use values are more difficult to estimate than use values as they do not enter markets, and there are no market substitutes. This means we must rely on results from stated preference and revealed preference methods.

Evidence shows that people in Christchurch are willing to pay to preserve the Cathedral. In a 2012 poll, 37% said they were prepared to pay a levy or tax to fund restoration (Gates 2012). It is likely that people outside of Christchurch are also willing to pay. However, there is no Christchurch-specific evidence on the amount people are willing to pay.

Several international papers use contingent valuation to assess the non-use value of other cultural and heritage sites, including Cathedrals. This literature has several limitations which should be kept in mind when applying the results to Christ Church Cathedral:<sup>22</sup>

- **Insensitivity to scope** – People tend to express similar values for protecting a single site as for all cultural and historical sites in a city or country (also known as part-whole bias). This can be mitigated through careful wording of the survey questions.
- **Insensitivity to payment term** – Respondents tend to express similar values for one-off payments as for recurring annual payments (Kim and Haab 2009). While one-off payments may be too conservative as an estimate of the continued flow of benefits, respondents may not be able to think realistically about their willingness to pay for recurring annual payments over a long period.
- **Lack of New Zealand results** – The values presented in the literature are based on international surveys (predominantly the UK), and they may not reflect the values of New Zealanders. In particular, it is possible that Māori define and value culture and heritage differently from non-Māori.
- **Difficulty separating non-use values** – Many studies cannot perfectly separate non-use values from use values, which could lead to double counting when estimating total use and non-use values. When respondents are asked about the value of preserving a site, they might consider both non-use and use value in their answers. This can be addressed by excluding people who have visited the site in recent years.

We consider two strands of evidence on non-use values for cultural and heritage sites.

First, we consider non-use values for museums and galleries. Bakhshi et al. (2015) use contingent valuation to estimate how much UK residents are willing to pay as an annual donation toward the work of the Natural Heritage Museum and Tate Liverpool and find a non-use value of GBP 8.29 and GBP 6.10 per year, respectively in 2014 prices (around \$20 and \$15 in 2024 prices).

<sup>22</sup> For more on the limitations of applying international non-use values, see (NZIER 2018).



Fujiwara et al. (2018) assess how much people who have not visited one of four UK museums in the past three years are willing to pay for conservation, maintenance, and displays and obtain an average value of GBP 3.48 (around \$8 in 2024 prices).

Focusing on four regional art galleries, Lawton, Fujiwara, Arber, et al. (2021) find that people who have not visited the galleries in the past year are willing to pay a one-off donation of GBP 3.72 (around \$8 in 2024 prices) for the continued existence of one of the galleries.

Together, the museum and gallery studies indicate a non-use value ranging from a one-off amount of \$8 to a recurring amount of \$20 per year.

Second, we consider non-use values, specifically for cathedrals and other historical religious buildings. Mourato et al. (2002) (cited in eftec 2005 and Lawton et al. 2018) find that Bulgarians were willing to pay USD 0.6–1 per year in 1996 prices (around \$3 in 2024 prices) through a tax increase to preserve the country's 164 Christian Orthodox monasteries.

Freyer and Behrens (2013) (cited in Lawton et al. 2018) find that visitors to Dresden and Freiberg Cathedral are willing to pay an average donation of EUR 2.18 and EUR 2.92, respectively (around \$5 and \$6 in 2024 prices) to preserve the building, over and above the entry fee.

Navrud and Strand (2002) (cited in eftec 2005 and Lawton et al. 2018) report results from a 1991 study of the value of protecting Nidaros Cathedral in Norway from air pollution. They find that visitors are willing to pay NOK 318 (around \$200 in 2024 prices) per year through a donation or tax increase to reduce pollution in the surrounding area or NOK 278 (around \$180) for maintenance and restoration to address pollution damage.

In the UK, Pollicino and Maddison (2001) (cited in eftec 2005 and Lawton et al. 2018) study willingness to pay to improve the appearance of Lincoln Cathedral by increasing the frequency of cleaning from 40 years to 10 years and found an average result of GBP 49.80 (around \$175 in 2024) per year among Lincoln residents and GBP 27.7 (\$100) for people in surrounding towns and villages.

Most recently, Lawton et al. (2018) study the willingness to pay of UK residents to “reduce the damage caused by climate change, improve the maintenance and conservation of the respective cathedral, and reduce the risk of irreparable damage and closure” for four historic English cathedrals. They found that those who visited the cathedral within the last three years were willing to pay a one-off donation of GBP 7.42 (around \$18 in 2024 prices) on average, whereas those who had not visited were willing to pay GBP 3.75 (\$9). The values are consistent across the four cathedrals, supporting the idea that they can be transferred to similar sites in the UK.

Overall, the Cathedral studies present vastly different estimates, ranging from a one-off amount of \$5 to a recurring amount of \$200 per year. Visitors and local residents appear to assign higher values than non-locals. We consider the lower-end estimates to be more plausible.

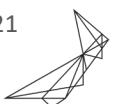
Based on the two strands of evidence and the limitations highlighted above, we assume an average annual non-use value of \$2–\$20 for Christchurch residents and \$1–\$5 for other New Zealand residents.



#### 4.3.4 Displacement and leakage

There is no potential for displacement as the satisfaction from having the option to visit the cathedral or knowing that the Cathedral exists does not take away from the satisfaction from other sites.

There is potential for leakage as people outside New Zealand may gain non-use value from the Cathedral. We have not quantified the direct non-use value gained by international residents as it does not benefit New Zealand society.



## 5 Benefits to producers

This section outlines the benefits of the Cathedral's reinstatement to producers.

### 5.1 Non-monetary return to producers

Producer benefits arise from the non-monetary return to producers, which refers to the enjoyment that workers receive from working on or in the Cathedral, over and above their earnings ((Allan, Grimes, and Kerr 2013). The enjoyment could come from receiving recognition from visitors, spiritual fulfilment, the sense of making a contribution to others' lives, the satisfaction of making a contribution to culture and heritage, and the prestige associated with working on a major landmark.

The non-monetary return to producers associated with the reinstated Cathedral includes:

- the satisfaction construction workers, managers and directors feel from reinstating the Cathedral
- the satisfaction clergy, lay staff and volunteers feel from working in the Cathedral during operations
- the enjoyment cultural performers gain from performing in the Cathedral (e.g. choir singers, organ players, orchestra members, and bell-ringers).

Table 4 quantifies the non-monetary return to producers.

**Table 4 Non-monetary return to producers**

Beneficiary	Beneficiaries	Value per beneficiary	Total value	Displacement and leakage	Total benefit
<b>Construction</b>					
Workers	75–125	1,167–3,111	0.1–0.3	0–25%	0.1–0.3
Managers	15–25	2,131–5,722	0.0–0.1	0–25%	0.0– 0.1
Directors	6–10	2,500–3,000	0.0–0.0	0–25%	0.0–0.0
<b>Operations</b>					
Clergy	1–3	1,167–3,107	0.0–0.0	25–75%	0.0–0.0
Staff	10–20	1,170–3,107	0.0–0.1	25–75%	0.0–0.0
Volunteers	200–400	2,500–3,000	0.5–1.1	25–75%	0.2–0.7
Performers	30–50	3,500–4,000	0.1–0.2	25–75%	0.0–0.1
<b>Total</b>			<b>1.0–1.7</b>		<b>0.51.1</b>

Source: NZIER

#### 5.1.1 Beneficiary numbers

The number of workers during construction was provided by CCRL (Keith Paterson, private communication, 2 February 2024).

Data prior to the earthquake states that the Cathedral had nine full-time staff, 11 part-time staff, and 350 volunteers (ChristChurch Cathedral 2006), and the Stage 2 Cathedral



Activities Business Case states that 11 staff are required for paid visitor activities (Gemelli Consulting 2021). The Transitional Cathedral currently has 5 full-time staff and 100–150 volunteers. By comparison, an average cathedral in England employed 56 full-time staff in 2019, consisting of 3 clergy, 44 lay staff and 8 contractors, and had 366 volunteers (Ecorys 2021). Based on this evidence, we estimated that the Cathedral would employ 10–20 staff and 200–400 volunteers during operations.

The choir at the Transitional Cathedral currently consists of around 6–8 adults, 18–20 boy choristers, and 8–14 girl choristers. We assume 30–50 regular performers, including organ players and other performers. We do not include irregular performers as numbers are difficult to estimate, and the total value is likely negligible.

### 5.1.2 Value per beneficiary

For paid roles, the non-monetary return to producers can be thought of as the difference between the willingness of a worker to do work associated with the cathedral and the opportunity cost, i.e. what they could earn in another occupation. Put differently, it is the reduction in income a worker would be willing to accept to do work associated with the cathedral (this is known as a negative compensating differential).

There is evidence of a negative compensating differential in arts and cultural occupations. A recent New Zealand study found that arts workers earn about 20% less than non-arts workers, and about a third to a half of this gap cannot be explained by observed characteristics (Benison, Le, and Grimes 2023). This indicates a negative wage differential of around 7–10%.

We could not find evidence on compensating wage differentials for heritage or religious occupations. It seems reasonable to expect that they would be similar to wage differentials for arts and cultural occupations, and we assume a more conservative wage differential of 2–5%. Interviewees suggest that the opportunity to work on the Cathedral is a source of pride and prestige for those involved in the reinstatement, so apply this wage differential to both construction and operations roles.

Based on publicly available salary information, we assume that (before accounting for the wage differential) restoration workers earn an average of \$60,000, restoration managers earn an average of \$110,000, and operational clergy and staff earn an average of \$60,000. We multiply these figures by the assumed wage differential to determine the average value per beneficiary.

For directors and other volunteer roles, we measure the non-monetary return to producers by applying the government's estimate of the value of being a member of a volunteer group, which is \$2,873 in 2024 dollars (The Treasury 2023).<sup>23</sup> Volunteering is valuable because of its benefits for a person's health and wellbeing, personal growth, employability, and social life. Many of the Cathedral volunteers are elderly, and volunteering is a way of maintaining social connections and countering loneliness. This indicates that the value of volunteering could be even higher for this group – the government estimates that the value of a one-point decrease in loneliness, measuring on a 0–5 scale, is \$3,155. We apply a range of \$2,500–\$3,000 for the value of volunteering at the Cathedral.

<sup>23</sup> To reflect the uncertainty around this estimate, we assign a range of \$2,500–\$3,000. We interpret this as the net benefit that volunteers gain from their involvement, after accounting for the opportunity cost of their time.



For performers, we apply the government's estimate of the value of a one-point increase in cultural expression, using a 0–5 scale, which is \$3,977 (The Treasury 2023). The cultural activities in the Cathedral benefit the wider city as performers go on to use the skills and experience they have gained in other ways. We apply a range of \$3,500–\$4,000 for the value of performing at the Cathedral.

### 5.1.3 Displacement and leakage

There is potential for displacement. In the context of the non-monetary return to producers, displacement occurs when opportunities created by the Cathedral replace opportunities that would otherwise be available at other locations. For example, if the Cathedral is not reinstated, some choir members would likely sing at other churches.

We assume that displacement accounts for 0–25% of the non-monetary return to producers from restoration work because if the Cathedral was not reinstated, there would be few opportunities to work on similar projects. We assume that displacement accounts for 25–75% of the non-monetary return to producers from Cathedral operations and performances. If the Cathedral was not reinstated, there would be increased demand for these roles at other locations. However, the demand would probably be smaller, and producers would probably gain more value from working in the Cathedral than in other buildings.

Performers are likely to get more value from performing in Christ Church Cathedral both because of its central location and because of its full pipe organ and acoustically rich environment, which enable them to attract a larger audience and develop higher levels of expertise. The Cathedral provides a value for top performances, and the venue's history imparts a sense of prestige.

There is no potential for leakage as all roles will be held by New Zealand residents.



## 6 Benefits to society

This section outlines the benefits of reinstatement to the wider society. Societal benefits come from the instrumental value of the Cathedral. Instrumental value refers to the benefits to people other than the consumer or producer from a cultural good or service. In economics, sources of instrumental value are often referred to as positive externalities.

The instrumental value of the reinstated Cathedral includes:

- additional tourism spending to Christchurch
- regeneration of Cathedral Square
- increased social cohesion and civic engagement
- the development and exhibition of New Zealand’s earthquake engineering capability.

### 6.1 Tourism spending

The Cathedral will attract more international visitors to Christchurch and encourage them to stay longer in the city and spend more time and money in New Zealand. The direct benefits from international visitor spending on Cathedral activities are discussed and quantified in section 4.1. This section focuses on the indirect benefits: additional spending from visitors who extend their stay in New Zealand because of the Cathedral. This source of indirect value arises as an externality from the market and non-market use of the Cathedral by international visitors.

Table 5 quantifies additional tourism spending associated with the reinstated Cathedral.

**Table 5 Instrumental value – Tourism spending**

International visitors	Additional spending per visitor	Total value	Displacement and leakage	Total benefit
400,000–500,000	24.5–129.4	11.0–58.7	25–75%	4.2–33.6

Source: NZIER

#### 6.1.1 Attracting tourism

The Cathedral will attract more tourism spending to Christchurch by:

- strengthening the Christchurch brand
- contributing to a critical mass of attractions.

One way the Cathedral attracts tourism spending is by strengthening the city’s brand and giving it a greater profile. Many cities around the world can be identified by their iconic tourist attractions, such as Sydney (Opera House) and New York (Statue of Liberty). In New Zealand, examples include Auckland (Sky Tower) and Wellington (Te Papa). These iconic attractions are often cathedrals, such as in Barcelona (Sagrada Familia), Cologne (Cologne Cathedral), Paris (Notre Dame), Milan (Duomo di Milano), Salisbury (Salisbury Cathedral), and London (Westminster Abbey and St Paul’s).





Since the earthquakes, commentators have argued for the need for Christchurch to have a major attraction with iconic status to grow the overall New Zealand tourist market and re-direct tourist flows to Christchurch (Simmons and Sleeman 2012). The reinstated Christ Church Cathedral is the ideal attraction to play this role, as it is already a key part of the city's identity, recognised in the city's name and the council's logo.

Another way the Cathedral attracts tourism is by forming part of a critical mass of attractions. The reinstated Cathedral will be one of a number of attractions in the central city, including the Botanic Gardens, Arts Centre, Canterbury Museum, Te Pae, Tūranga, the new Court Theatre, and Christchurch Square. It will act as a magnet destination, bringing more tourists to the city centre.

Interviewees described the Cathedral as part of Christchurch's offering to attract high-net-worth visitors who spend more in the local economy. They said reinstating the Cathedral is required to attract more passenger cruises to the new Lyttleton cruise terminal.

Before the earthquake, Christchurch's amenities – its general environment, including the streetscape, landscape, parks and gardens – were the most common attributes people mentioned when asked what they liked most about Christchurch (The Tourism & Leisure Group Limited 2001). The Cathedral Square and the Cathedral formed key parts of the city landscape.

Cultural and heritage sites often form part of tourists' itineraries. Prior to the pandemic, 41% of international visitors visited a public museum or art gallery, 31% visited a place significant to Māori, and 22% visited another important building or site (Stats NZ 2020). Cathedrals are often a key attraction. In an English visitor survey, 47% said that visiting the cathedral was the main reason for their visit (Ecorys 2021). In a 2001 survey of Christchurch visitors, 80% visited or intended to visit Cathedral Square, making it the most visited attraction in Christchurch, and 47% visited or intended to visit the Cathedral (The Tourism & Leisure Group Limited 2001).

Visitors are attracted to the city centre, but the area falls short of its potential. 39% of the rooms and units available for tourist accommodation within the area bounded by the four avenues ("Four Avenues") are located in the area immediately surrounding the Cathedral, and occupancy rates are around 20% higher in the four avenues compared with Christchurch city as a whole (Price 2022). Before the earthquake (1997–2010), 46% of accommodation guest nights in Christchurch were in the Four Avenues, compared to only 33% in the years prior to the pandemic (2018–2019).

The Cathedral's architecture and history give it a unique value proposition that other attractions cannot match. Interviewees suggest that Asian tourists are particularly interested in experiencing authentic stone masonry and learning about New Zealand's European heritage. The Cathedral is expected to become a 'Tohu Whenua' site for the Canterbury region, recognising it as a place that has shaped Aotearoa New Zealand and one of the country's best heritage experiences.

Many tourists currently see Christchurch as a 'gateway' to the South Island, but it can potentially be repositioned as a destination in its own right (Simmons and Sleeman 2012). Christchurch Airport is the second busiest airport in New Zealand in terms of annual passenger and aircraft movements, and it has direct flights to 10 international destinations. By contributing to a greater mass of attractions, the reinstated Cathedral will encourage more tourists passing through Christchurch to spend time in the city.



Reinstating the Cathedral will contribute to the Government Tourism Strategy (MBIE and DOC 2019) by ensuring that “visitors enjoy world-class, authentic and safe experiences that showcase New Zealand-Aotearoa’s nature, culture and history” and “stories about the protection of the land, people and history are at the heart of New Zealand-Aotearoa’s tourism industry”.

### 6.1.2 International visitor numbers

We use two approaches to estimate international visitor numbers.

The first approach looks at the proportion of Cathedral visitors who are international tourists. A visitor survey undertaken in or prior to 2006 (ChristChurch Cathedral 2006) found that 63% of visitors come from overseas. Assuming that the proportion of Cathedral visitors who are international tourists will be the same as in 2005, and the Cathedral will have 758,300 visitors per year in year 1 (based on pre-earthquake visitor numbers), this implies 477,729 visits from international tourists.

The second approach looks at the proportion of international tourists who visit the Cathedral. In 2019, Christchurch City had 915,547 international visitors (Stats NZ 2020). A study from 2001 found that 47% of international tourists visited or intended to visit Christchurch Cathedral (The Tourism & Leisure Group Limited 2001). Assuming that the proportion of international tourists who visit the Cathedral will be the same as in 2001, this implies 430,307 international tourist visits.

The two approaches use different data sources but reach similar results, providing a reasonable level of confidence. Based on this evidence, we assume that 400,000–500,000 international tourists will visit the Cathedral per year.

### 6.1.3 Spending per visitor

Visiting a Cathedral is likely to take between half an hour and three hours. Assuming that tourists spend six hours of visitor activities per night, this implies visiting the Cathedral is associated with 0.1–0.5 extra nights in Christchurch.

In 2019, international visitors stayed in New Zealand for an average of 18 nights and spent \$193 per night, or \$235 in 2024 dollars (Stats NZ 2020). Based on this, we assume tourists who stay an extra night in Christchurch to visit the Cathedral will spend an extra \$200–\$300.

### 6.1.4 Displacement and leakage

There is potential for displacement. Tourists who visit the Cathedral may decide not to visit other attractions. In addition, tourists who choose to visit Christchurch or extend their stay in the city because of the Cathedral may spend less time visiting other regions or lengthen their stay in New Zealand. When tourists who visit Christchurch spend less time in other regions, they generally benefit Christchurch but not New Zealand as a whole.<sup>24</sup> When visiting Christchurch causes tourists to lengthen their stay in New Zealand, they bring benefits to the whole country. As the overall length of tourist stay in New Zealand is likely to be fairly inflexible and depend on annual leave and airline schedules, we consider the potential for displacement to be high. We assume displacement of 50–100%.

<sup>24</sup> A possible exception to this is if tourists are attracted away from regions where tourism pressure is leading to large social costs, such as Queenstown.



## 6.2 Regeneration

A second way the Cathedral will benefit the wider society is by supporting the regeneration of Christchurch. We cannot quantify the extent to which the Cathedral will contribute to regeneration or estimate the monetary value of this contribution.

The overall story of Christchurch's post-earthquake rebuild is a positive one. We recently published an Insight paper showing that the Canterbury region has been able to rebuild itself from the significant destruction of 2011 and largely avoid the housing shortages experienced by the rest of New Zealand (Huang, Katz, and Dunn 2024). However, there is still a need for regeneration in the city centre.

Christchurch's recovery and development plans have consistently emphasised the importance of Cathedral Square to the city's development. After the earthquakes, Christchurch City Council set out a vision for a city centre with a more compact core, strengthened heritage buildings, and an urban fabric that speaks to the city's identity and shared cultural heritage (Christchurch City Council 2012). Cathedral Square formed a key part of this vision, with the objective that "The Square will once again be the civic heart of central Christchurch".

The current state of the Cathedral is holding back the regeneration of Cathedral Square. The presence of a large construction site in the centre of the Square prevents the regeneration of the surrounding area. 59% of Christchurch residents said the redevelopment of Cathedral Square will not be completed until Christ Church Cathedral is reinstated, and 43% said they would visit the square more often after reinstatement (Research First Ltd 2022). Central city business and community leaders have suggested that a lack of action on the Cathedral has "paralysed development" in the area (Department of the Prime Minister and Cabinet 2017). In 2021, employment in the streets surrounding Cathedral Square was only 18% of the pre-earthquake figure (Price 2022).

As a result, there is a perception that the city is missing its heart, with 67% of residents believing that Christchurch currently lacks a clearly identified centre (Research First Ltd 2022). People in Christchurch have a negative perception of the city centre, with only 47% of residents feeling pride in the city centre and only 41% feeling safe there after dark (Price 2022). As the Mayor of Christchurch stated in 2017, the Cathedral is critical to allow "the heart of the city to flourish once more" (Department of the Prime Minister and Cabinet 2017).

The Cathedral reinstatement is needed to realise the benefits of completed investments and unlock new investments in the area. There has been around \$1 billion of private and public sector investment in the streets around Cathedral Square since the earthquake, and a further \$1 billion is planned for the next 10 years (Price 2022). Completed crown-funded projects include the Te Pae Convention Centre (\$450 million), and completed council-funded projects include the Town Hall rebuild (\$167 million), Avon River precinct (\$120 million), and Tūranga library (\$93 million). Planned projects include the North of the Square development (\$500 million), a five-star hotel, retail building and carpark funded by the Carter group, and the Rydges Hotel rebuilt (\$190 million). Achieving the full benefits of completed investments depends on the Cathedral reinstatement, and the planned investments may not go ahead if the reinstatement is put on hold.

Enabling regeneration in the heart of Christchurch will help the city increase density. Higher density is associated with a range of benefits, from higher productivity and innovation to better access to goods and services and lower travel and energy use (Duranton and Puga



2020). Density improves productivity through three mechanisms: sharing, matching and learning. It allows firms to share infrastructure, suppliers and workers, facilitates better matching between firms and workers or buyers and suppliers, and facilitates learning by making it easier to share new ideas.

The reinstatement of the Cathedral will also support regeneration across Christchurch through its effect on business and investor confidence. Interviewees described a high level of frustration around the state of the Cathedral and a general desire for it to be finished so that people could move on. There is a perception that the city will not have recovered from the earthquakes until the Cathedral is complete.

### 6.3 Social cohesion

A third way the Cathedral will benefit the wider society is by strengthening social cohesion. We are not able to quantify the extent to which the Cathedral will contribute to social cohesion or estimate the monetary value of this contribution.

The Treasury (2021) defines social cohesion as “the willingness of diverse individuals and groups to trust and cooperate with each other in the interests of all, supported by shared intercultural norms and values”. Social cohesion is related to the concept of social capital. Researchers often distinguish between two types of social capital:

- **Bonding social capital** – having good relationships with people like you or part of the same institutions or communities.
- **Bridging social capital** – having relationships with people different from you or in other institutions or communities.

The Cathedral will strengthen both of these sources of social capital. It will provide a focal point for the Anglican community, strengthening bonding social capital within the Church of England. More importantly, it will strengthen bridging social capital by creating relationships between different groups. Bridging social capital is particularly important for social cohesion.

Social capital has significant social and economic benefits. It is associated with more effective government institutions and better crime, education, health, and employment outcomes (Allan, Grimes, and Kerr 2013). Social cohesion can prevent the development of harmful radicalising ideologies and violent extremism (Royal Commission of Inquiry into the terrorist attack on Christchurch masjidain on 15 March 2019 2020).

The Cathedral will contribute to social cohesion in the wider community by:

- providing a venue for major cultural and civic events
- providing a symbol of local identity and building a shared understanding of Christchurch’s history and heritage
- providing interfaith dialogue, outreach and community support.

The first way in which the Cathedral will contribute to social cohesion is by providing a venue for major cultural and civic events. While these events have direct benefits for attendees, discussed in section 4.2, they also indirectly benefit the wider society because of their role in strengthening social cohesion.

In a survey of UK residents, 54% said that cathedrals are venues for significant events in the lives of cities and the country (Theos and The Grubb Institute 2012). Among those living



near a cathedral, this number rose to 93%. 62% of locals saw the cathedral as a hub to engage the life of the wider community, and 56% said that the role the cathedral plays in providing space for local events and activities gives them a sense of community. This shows that Cathedrals do not merely express a sense of community but actively develop it.

In the interviews, interviewees said that Christ Church Cathedral used to be a site for social and political action, such as protests. The Cathedral provides a venue for top performances, facilitating the development and display of cultural excellence. The Cathedral building may impart a sense of prestige that cannot be obtained at other venues.

The second way the Cathedral will contribute to social cohesion is by providing a symbol of local identity and building a shared understanding of Christchurch's history and heritage. This directly benefits Christchurch residents by giving them a sense of belonging, as discussed in section 4.3, but it also indirectly benefits all New Zealanders by fostering social cohesion.

There is evidence that communities tend to have a sense of ownership over the local cathedral. In a UK survey, 59% of residents agree that cathedrals belong to the whole community, not just the Church of England (Theos and The Grubb Institute 2012). This rises to 83% in a sample of cathedral locals.

At present, the damaged state of the Cathedral stands as a reminder of the earthquake and the difficulties faced by the Christchurch community. Restoration will turn it from a symbol of destruction and division to one of regeneration and unity. It will help people in Christchurch remember and connect with their past, including the earthquakes and the city's recovery. Interviewees suggested that including a museum or visitor centre in the reinstated Cathedral is particularly important for this.

The third way the Cathedral will contribute to social cohesion is through interfaith dialogue, outreach and community support. In a UK survey, nearly half of the residents (48%) felt that "cathedrals reach out to the general public, not just those who are part of the Church of England", and 64% of cathedral locals saw the cathedral as a place for interfaith dialogue (Theos and The Grubb Institute 2012). Cathedrals typically undertake activities to support the wider community, such as supporting refugees or people experiencing homelessness (Ecorys 2021).

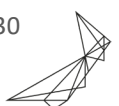
While Christ Church Cathedral will remain an Anglican-owned building, interviewees say it will be a place of welcome, unity and connection for people from different churches. It will provide a meeting place for multid denominational groups such as the Te Raranga network.

The Diocese of Christchurch employs an Inner City Chaplain, who works closely with the Transitional Cathedral, the City Mission, central city businesses, and local government. Because of its central location, the Cathedral is well placed to provide a welcome to people who are homeless and to connect them with agencies that offer long-term support. There is an opportunity to run the café as a social enterprise, providing training and work experience for people connected to the City Mission.

## 6.4 Earthquake engineering

The final source of value of Christ Church Cathedral's reinstatement is its role in developing and exhibiting New Zealand's earthquake engineering capability. This benefits society by:

- strengthening the capability and capacity to deliver future projects



- enhancing New Zealand's brand and creating valuable export opportunities.

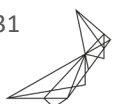
We are not able to quantify this benefit.

Interviewees have described the Cathedral reinstatement as a world-leading seismic retrofit involving several innovations, including using base isolator technology to protect a damaged stone building, inserting invisible structural elements, and re-using existing building fabric. It is pioneering innovative parametric modelling techniques that could be used in other structural design projects (Sconeczna, Charman, and Whittaker 2023) and is contributing to the development of seismic isolation and supplemental damping technologies (Whittaker 2024).

Although it is currently a severely damaged 160-year-old stone building, the Cathedral will be strengthened to a point where it is as safe and resilient as a new building. New skills and approaches are being developed through the reinstatement, which can be applied in future earthquake-strengthening projects anywhere in the country. This will reduce the cost of making New Zealand's cities earthquake-safe and make the country more resilient. New Zealand has over 7,000 buildings that have been identified as earthquake-prone and require strengthening or demolition (MBIE, n.d.).

New Zealand's worldwide reputation as a leader in earthquake engineering enhances its brand and creates valuable export opportunities. The Cathedral reinstatement is strengthening this reputation by providing an example of what New Zealand engineers can achieve. The same technology that is being employed in the Cathedral reinstatement is being applied by New Zealand engineers overseas. For example, engineers at Beca and Holmes Group are applying similar digital modelling and work methods in the Netherlands to perform seismic assessments of brick houses. As an innovative, high-profile project, the reinstatement of the Cathedral may create more opportunities to bring New Zealand's earthquake engineering capability to the world.

This work will gain international recognition in heritage protection and retention circles and demonstrate that heritage can be retained and protected in seismic areas.



## 7 Cost-benefit analysis

### 7.1 Approach

#### 7.1.1 Evaluation period and discount rate

We use a 40-year evaluation period and a discount rate of 5%. We present the results as annualised values in 2024 dollars, discounted to the first year of operations. They can be interpreted as the annual costs and benefits for the first year of operations. We do not consider how the costs and benefits will change over time due to visitor and population growth.

#### 7.1.2 Cost assumptions

The total projected cost of the Cathedral restoration is \$248 million. \$80 million has been spent on consenting, design, planning, construction, management and fundraising, leaving an outstanding project cost of \$168 million.

We assume that the owner's costs and construction costs incurred today are sunk costs, which means they have no value under the counterfactual. These costs are excluded from the CBA. We also assume reinstatement will take a further six years, and an equal share of the remaining costs will be incurred each year (\$28 million per year).

Prior to the earthquake, the Cathedral's operations and maintenance costs were \$1.7 million in 2024 dollars (Christchurch Cathedral Chapter 2011). We assume that operations and maintenance costs will be the same after the Cathedral is reinstated. We also assume a capital value of \$200 million and straight line depreciation of 1.5%, which implies a depreciation of \$3 million per year.

It is important to note that there are also likely to be significant costs associated with the counterfactual option of mothballing the Cathedral. These costs have not been quantified or included in the CBA.

### 7.2 Results

Table 6 reports the results of the cost-benefit analysis.

**Table 6 Summary cost-benefit analysis**

\$m annualised values in 2024 dollars, discounted to the first year of operations

Item	90% confidence interval	Point estimate	Reliability
<b>Quantified benefits</b>			
Market use value	0.8–2.1	1.4	Medium
Non-market use value	0.9–3.7	2.1	Medium
Non-use value	8.9–30.6	19.7	Low
Non-monetary return to producers	0.5–1.1	0.8	Low
Tourism spending	0.0–20.8	8.4	Medium
<b>Total quantified benefits</b>	<b>17.1–47.4</b>	<b>32.4</b>	



Item	90% confidence interval	Point estimate	Reliability
<b><u>Quantified costs</u></b>			
Construction	-	11.2	
Operations and maintenance	-	1.6	
Depreciation	-	2.9	
<b>Total quantified costs</b>	<b>-</b>	<b>15.7</b>	
<b><u>Results</u></b>			
<b>Net quantified benefits</b>	<b>1.4–31.7</b>	<b>16.7</b>	
<b>Benefit/cost ratio</b>	<b>1.1–3.0</b>	<b>2.1</b>	
<b><u>Unquantified benefits</u></b>			
Regeneration	-	-	
Social cohesion	-	-	
Earthquake engineering	-	-	

Source: NZIER

### 7.3 Discussion

This report shows that the Cathedral reinstatement brings about a wide range of benefits. The direct commercial or market value associated with using the Cathedral is only a small fraction of the total benefits. The largest quantified benefits are:

- the non-use value that people get from knowing that the Cathedral exists and is available for others and future generations to enjoy (\$8.9–\$30.6 million)
- the additional spending by tourists who decide to visit Christchurch or spend longer in the city in order to see the Cathedral (\$0.0m–\$20.8 million).

The cost-benefit analysis shows that the total quantified benefits of reinstatement exceed the costs, with net quantified benefits of \$1.4–\$31.7 million per year of operations and a benefit/cost ratio (BCR) of 1.1–3.0. These results show that the reinstatement provides value for money compared to the counterfactual option of mothballing the Cathedral.

It is important to emphasise that the monetary value of the benefits is highly uncertain. This uncertainty results from data limitations and issues associated with transferring results from international studies. We have attempted to quantify this uncertainty by presenting benefits using 90% confidence intervals. The low end of the ranges results in a BCR above 1, providing confidence in the overall conclusions.

We have not assessed the accuracy or efficiency of the cost estimates provided by CCRL. CCRL is undertaking a detailed review to identify opportunities to save money and time, which may result in lower costs and better value for money.

There are a range of benefits that were identified but could not be quantified. These include the role the reinstatement will play in supporting the city's regeneration, strengthening social cohesion, and developing and exhibiting New Zealand's earthquake engineering capability. Quantifying these benefits would result in a higher BCR, providing further confidence that the benefits outweigh the costs.





We have not assessed the costs or disbenefits associated with the counterfactual. There could be significant mothballing costs associated with a construction delay. No work has yet been done on preserving the Cathedral as a partially restored ruin as CCRL has no mandate to undertake such a project.

For this study, we have assumed that the site would remain an eye-sore fenced off from the public that would detract from the visitor experience, devalue current investments and act as a headwind to future development in Cathedral Square.



## 8 Rationale for investment

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This section explores the rationale for investment from different groups, including central government, local government, the Anglican Church, tourism operators, and philanthropists.

### 8.1 Reasons for private provision

Private organisations and individuals may directly benefit from the Cathedral to some extent. For example:

- Cathedral visitors benefit from enjoying paid or unpaid visitor activities (market and non-market use value)
- Cathedral workers, volunteers and performers benefit from the satisfaction they feel toward their contribution to the Cathedral (non-monetary return to producers)
- The Anglican Church benefits from having the Cathedral available as a place of worship and the role that it plays in promoting Anglicanism
- Tourism operators benefit from additional tourism spending induced by the Cathedral
- Philanthropists benefit from knowing they are contributing to the Christchurch community and being recognised for that contribution.

Some of these benefits are captured through visitor fees, lower wages, and unpaid work. They explain why the Anglican Church and philanthropists have agreed to make substantial contributions toward the costs of the Cathedral's reinstatement. However, some benefits cannot be captured through fees or donations or go to the wider society, which provides a rationale for government intervention.

### 8.2 Reasons for government intervention

Private organisations and individuals may not provide cultural and heritage goods such as the Cathedral at the optimal level, providing an important rationale for government intervention. There are three main reasons why private provision may not be sufficient:

- public goods
- positive externalities
- distributional effects.

#### 8.2.1 Public goods

A public good is a good that is both non-rival and non-excludable. That is, one person using it does not prevent others from using it, and it is not possible to prevent individuals from using it.

A number of the benefits provided by the Cathedral have public good aspects. For example, enjoying the Cathedral architecture does not diminish the enjoyment of others, and it is not possible to exclude individuals on the street from viewing it. This means viewing the



Cathedral exterior (a source of non-market use value) as a public good.<sup>25</sup> Similarly, gaining satisfaction from knowing that New Zealand's heritage is being preserved does not diminish the satisfaction that others gain, and it is not possible to exclude others from getting this satisfaction. So, knowing that New Zealand's heritage is being preserved (a source of non-use value) is also a public good.

Public goods are generally under-supplied because of the free-rider problem. People who do not pay for the goods can continue to access them, which means they have no incentive to pay. Addressing this market failure by funding public goods is one of the key roles of government.

### 8.2.2 Externalities

An externality is a cost or benefit of an activity that affects people who are not directly involved in that activity.

The benefits to society from the Cathedral reinstatement, discussed in section 6, arise as positive externalities from Cathedral activities. For example, participating in Cathedral activities (a source of market or non-market use value) strengthens social cohesion, which has benefits for the wider society, such as reductions in crime.

Goods with positive externalities are generally under-supplied because people do not consider the benefits to others when deciding how much to produce or consume. This means that people might decide not to pay for the goods, even when the total benefits to society justify the purchase. Government can address this market failure by contributing to goods with positive externalities. Correcting for externalities (for example, by contributing to the funding of goods with positive externalities) is another key role of government.

### 8.2.3 Distributional issues

A third reason for the government to intervene in the provision of culture and heritage is to improve access to disadvantaged groups. Ensuring the optimal distribution of goods and services is also a key role of government.

The Cathedral has benefits not just for visitors but also for workers and volunteers, Christchurch residents and New Zealand as a whole. However, there is limited evidence on how these benefits are distributed across different socioeconomic groups. Further research is required to understand how the Cathedral reinstatement will affect access to culture and heritage for disadvantaged groups, but this would be a core undertaking of the operational reinstated Cathedral.

## 8.3 Funding implications

The discussion above indicates that central government, local government, the Anglican Church, tourism operators, philanthropists, and private individuals all have a role in funding the Cathedral's reinstatement.

Where appropriate, visitors should be charged to participate in Cathedral activities. However, the positive externalities associated with Cathedral activities (as well as any distributional implications) should be taken into account by setting visitor charges below

<sup>25</sup> To the extent that there is a freely functioning real estate market, the amenity value of the Cathedral will be capitalised in urban land and real estate prices.



the market price. It is not considered appropriate to charge for viewing the Cathedral interior or attending church services, but visitors could be asked to make a donation toward the Cathedral in recognition of the non-market use and non-use value that it provides.

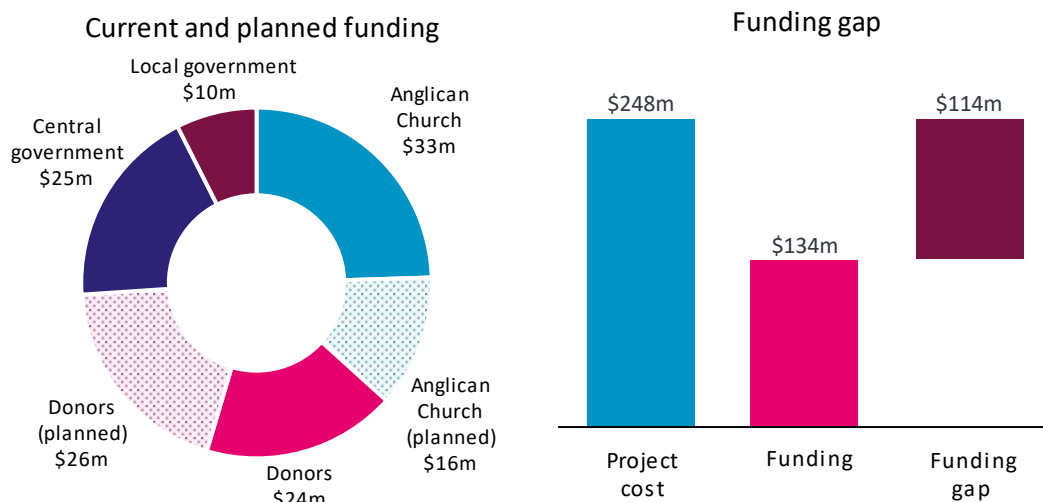
Because philanthropists and the Anglican Church benefit from the reinstatement, it may be possible to source more funding from these groups. However, interviews indicate that the Anglican Church – although willing to contribute – has limited available capacity to provide further funding, and alternative fundraising has been exhausted.

Given that the social benefits of the investment likely outweigh the costs, there is a rationale for government intervention to provide the remaining funds. This has been recognised by the previous support provided by the government.

All New Zealanders have the potential to benefit from the non-use and instrumental value of the Cathedral, providing a justification for central government support. However, as Christchurch residents likely benefit more than other New Zealanders, they should arguably make an additional contribution through local government funding or a further local or regional levy.

Figure 4 presents the current funding and the funding gap.

**Figure 4 Current and planned funding and funding gap**



Source: CCRL

## 8.4 Options for closing the gap

While it is not the purpose of this research to make specific recommendations on ‘who pays’, economic theory and our findings covered in the discussion above do suggest some scenarios for consideration:

- **Scenario 1: Equal shares** – Each party contributes equally toward closing the funding gap. This neutral scenario could provide a useful starting point for discussion.
- **Scenario 2: Ability to pay** – Shares are determined based on the financial resources that each party has available. This focuses on where the resource pool may be deepest but does not consider all the competing calls each funder may face. Central government would most likely provide the largest share of funding.

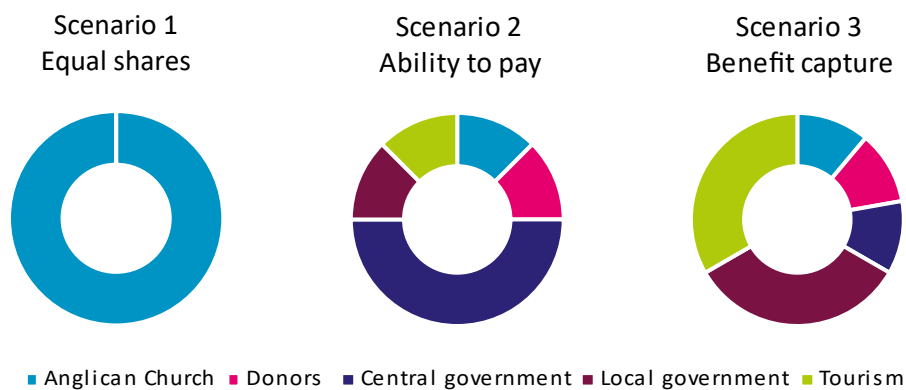


- **Scenario 3: Benefit capture** – Each party contributes an amount proportional to the size of the benefits that they receive or capture. As the largest benefits go to Christchurch residents and the tourism market, local government and tourism operators would most likely provide the largest share of funding.

Figure 5 presents stylised depictions of each scenario. We offer these stylised scenarios in the spirit of facilitating a favourable outcome.

These options do not include the future ongoing operating costs of the cathedral that would be borne by the Anglican Church as owner, including any other funding, parishioner or volunteer support it may raise.

**Figure 5 Stylised funding scenarios**



Source: NZIER

This discussion focuses on funding sources rather than collection methods. There are a range of different mechanisms that could be considered to raise funds for the Cathedral reinstatement, including local levies, tourism levies, and general taxation. Financing mechanisms are not covered by this report and a separate analysis is required to assess the efficiency and fairness of each mechanism.



## 9 Confidence in delivery

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Funders need to feel secure in CCRL's ability to deliver the project on time, on specification and on budget. This section sets out the management and commercial arrangements that are in place to complete the project.

The information in this section has been provided by CCRL.

### 9.1 Current progress

The project is currently about 40% of the way through strengthening of the superstructure. A key milestone is to finish the wall strengthening and reinstate the roof structure. Once the superstructure is strengthened, the foundation replacement can commence. At this stage, opportunities to refine aspects of the project that reduce risk, time and cost will be evaluated and incorporated where beneficial. Design work can then be completed for the Visitor Centre and Cathedral Centre and the remaining building consents will be obtained.

### 9.2 Project management and governance

#### 9.2.1 Governance

CCRL is governed by a board of directors selected by the shareholder CPT. The board composition addresses the key competencies required of project delivery, fundraising and communications and engagement. The board is focused on governing the project and supporting management to:

- validate the cost and time to complete the project while maintaining construction momentum
- obtain funding solution to keep the project moving forward while continuing with fundraising
- communicate and engage with key stakeholders.

CCRL is a charity and continues to operate in compliance with the Charities Commission.

#### 9.2.2 Project management

CCRL has a project management office consisting of the Project Director (who is the chief executive of the company), one senior project manager, a commercial and project manager, and administration support. IT and finance functions are outsourced. The project management resources are sufficient given the project monthly spend.

### 9.3 Risk management

#### 9.3.1 Current risk areas

The greatest risk to CCRL's ability to deliver the project to specification and programme is lack of funds.



Most of the residual risk remains in the balance of strengthening and reinstating the main cathedral building. CCRL has identified the major ongoing risks and has mitigation plans in place.

Another area of risk is workforce capacity risk for stone masonry. This is being mitigated by minimising the amount of reinstated masonry and using machine technology for carving. Substituting modern materials is being considered as a solution subject to cost and time constraints, but not at the expense of the heritage integrity of the completed project.

### 9.3.2 Risk transfer arrangements

Due to the nature of the project, it has not been possible to share risk with project counterparties so far. This is because it has not been possible to define the scope of work for contractors and consultants in a way that would create opportunities for risk sharing, except for the design and construction of new buildings.

The reinstatement of the main cathedral building – a key part of the project which is driving the overall work programme – is largely defined by contractor’s methods and associated temporary work. As a result, this work cannot be procured through competitive processes and collaborative methods have been used from early in the project.

As the project progresses and methods, timeframes and costs are confirmed, more risk transfer may be possible. This will be a feature of the next few years of project management effort.

CCRL is exploring using fixed price contracts for agreed sections of the work with the tower construction team. Competitive tendering could be used where feasible, including areas such as building services, final finishes, and roof replacement.

## 9.4 Project review

CCRL is undertaking a detailed project review. The project review has focused on risk areas, time consuming and expensive activities, and design decisions that were made early in the design process and have had a detrimental impact on the construction programme. It is a valuable process that highlights opportunities to better manage time, cost and risk. For example, Computer Numerical Control (CNC) machines could be used for stone preparation, reducing the manual labour required. Bespoke supply chain modifications are required to achieve these improvements.



## 10 Conclusion

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This section provides a summary of the report and sets out the next steps.

### 10.1 Summary

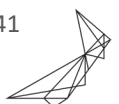
This report identifies and (where possible) quantifies and monetises a wide range of benefits from the Christ Church Cathedral reinstatement project. These benefits include:

- **Market use value** – benefits from paid visitor activities, including climbing the tower and participating in a guided tour (\$0.8 million to \$2.1 million per year)
- **Non-market use value** – benefits from unpaid visitor activities, including viewing the cathedral architecture, attending church services and participating in civic or community events (\$0.9 million to \$3.7 million per year)
- **Non-use value** – benefits that people gain from the Cathedral even if they never visit it because of what it symbolises about Christchurch, because it preserves the city’s heritage, or because it is available for use by themselves, others and future generations (\$8.9 million to \$30.6 million per year)
- **Non-monetary return to producers** – benefits that workers, volunteers and performers gain from their involvement with the Cathedral, over and above any earnings (\$0.5 million to \$1.1 million per year)
- **Tourism spending** – additional spending by tourists who stay longer in New Zealand because they visit the Cathedral (\$0.0 million to \$20.8 million per year)
- **Regeneration** – benefits from supporting urban regeneration, including unlocking the value of substantial private and public sector investment in Cathedral Square (unquantified)
- **Social cohesion** – benefits from supporting social cohesion through Cathedral activities (unquantified)
- **Earthquake capability** – benefits from developing and exhibiting New Zealand’s earthquake engineering capability (unquantified).

The results show that the direct commercial or market value associated with the use of the Cathedral is only a small fraction of the total benefits, and the largest benefits arise from non-use value and tourism spending. In total, the reinstatement is expected to bring about \$17.1 million to \$47.4 million in quantified benefits.

The construction of the reinstated Cathedral is expected to cost \$248 million, \$168 million of which has not yet been incurred. Including operations, maintenance and depreciation, this results in an annualised cost of \$15.7 million per year over the 40-year evaluation period. A comparison of costs and benefits results in net quantified benefits of \$1.4 million to \$31.7 million and a BCR of 1.1 to 3.0. This shows that the Cathedral reinstatement provides value for money compared to the counterfactual option.

Although there is a high level of uncertainty in the benefits, even the lowest estimates result in benefits that outweigh the costs. Considering the unquantified benefit provides further confidence in this conclusion.





A key area of uncertainty is the application of non-market values from international studies to the New Zealand context. This uncertainty could be reduced by undertaking primary research using contingent valuation or choice modelling techniques to determine how much people would be willing to pay for the Cathedral reinstatement. These techniques are complex to apply and were not feasible in the timeframes for this report.

Under the counterfactual, the Cathedral would be preserved as a partially restored ruin, and the site would provide a public eye-sore with safety risks. Due to a lack of suitable information, we have not assessed the costs and disbenefits associated with this option.

Some benefits from the use of the Cathedral can be captured by the Anglican Church in the form of visitor fees, reduced staff costs and donations. However, many of the most significant benefits have public good aspects or arise as positive externalities, which means private individuals or organisations do not fully account for them. This results in under-supply and market failure, providing a rationale for government intervention.

As there is a range of benefits for different groups, central government, local government, the Anglican Church, tourism operators, and philanthropists all have a role in providing the funding required to complete the reinstatement. The amount of funding each group provides could be informed by their ability to pay or the share of the benefits they can capture.

## 10.2 Next steps

The next steps are for CCRL to:

- complete the detailed review and provide confidence in the accuracy of the cost estimates and the efficiency of reinstatement spending
- engage with the government and other stakeholders to agree on how the outstanding costs will be funded.



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## Appendix A Interviewees

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Name	Role	Organisation
Loren Aberhart	General Manager	ChristchurchNZ
Marty Byrne	Chief Executive	Christchurch Attractions
Peter Carrell	Bishop of Christchurch	Anglican Church
Philip Carter (email only)	Owner	Carter Group
Andrew Coleman	Chief Executive	Heritage NZ
John Hare	Chief Executive	Holmes Group
Alan Parker	Chief Executive	Robinson Seismic
Mark Stewart	Board Chair	CCRL
Sue Sullivan	former Chief Executive	Christchurch Attractions
Ben Truman	Dean of Christ Church Cathedral	Anglican Church
David Whittaker	Senior Technical Director	Beca

