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Economic and Social Value of Culture in Exeter

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SIMETRICA | **Jacobs**

Executive summary: overview

Cultural organisations deliver a wide range of benefits both to **society** and to the **economy**. Simetrica-Jacobs has been commissioned to estimate the value of these benefits, focusing on **seven organisations with different cultural offerings** within Exeter.

All work is consistent with best-practice methodologies such as those within the UK HM Treasury Green Book (2022) and DCMS Culture and Heritage Capital Programme. The aim is to provide robust evidence on the economic value of culture to the city of Exeter to inform decision-making around investment and priorities.

It is estimated that between the 1 April 2023 and 31 March 2024, the seven organisations generated a total **aggregate value to society of c.£11.8m**. This consists of c.£11.2m with respect to TEV and ticket revenue (where appropriate) and c.£0.6m with respect to additional wellbeing impacts.

Among those, RAMM had the highest TEV value (c.£2.3m) followed by Phoenix (c.£1.9m) and Northcott Theatre (c.£1.7m). For comparison purposes, within the ACE Guidance Notes (2021), Bristol Museum and Art Gallery had a value of c.£3m and Manchester Royal Exchange Theatre of £4.4m.

Within the same period, the seven organisations also contributed to the local economy by generating **a local GVA of £5.2m**.

It is worth noting that based on calculations undertaken by Exeter City Council using the AIM (Association of Independent Museums) toolkit, which estimates net additional visitor impacts, for local, day trippers and overnight visitors, RAMM has an additional economic impact of £2.5m, taking RAMM's total value of benefits to society and the economy to £6.8m.



It is worth noting that *these results are conservative and could likely underestimate the full value of these cultural organisations*.

Executive summary: results

	RAMM	Northcott	Phoenix	Library	City of Literature	Corn Exchange	Literature Works (Quay Words)
Total Economic Value (TEV)	c.£2.3m	c.£1.7m (additional c.£1.7m in ticket revenue)	c.£1.9m* (additional c.£1.1m in ticket revenue)	c.£1m	c£8k	c.£0.4m (additional c.£0.9m in ticket revenue)	c.£50k
Additional wellbeing impacts	c.£104k	c.£7k	c.£393k	c.£111k	c.£8k	c.£1k	c.£5k
Total benefits to society (incl. ticket revenue)	c.£2.4m	c.£3.5m	c.£3.4m	c.£1.1m	c£16k	c.£1.3m	c.£55k
Aggregate total benefits to society	c£11.8m value to society over the year, across the seven organisations* (c.£8.1m value to society over the year if exclude ticket revenue)						
Local Gross Value Added	c.£1.9m	c.£1.1m	c.£1.2m	c.£541k	c.£149k	c.£283k	c.£24k
Aggregate total benefits to the local economy	Total GVA which can be attributed to local area c.£5.2m Supported employment of 734 local people GP cost saving of c.£60k in relation to being a Library organisation user						
Total benefits to society and economy (incl. ticket revenue)	c.£4.3m	c.£4.6m	c.£4.6m	c.£1.7m	c.£0.2m	c.£1.5m	c.£0.1m

* It is worth noting there may be some degree of substitution effect between the cultural offering of the seven organisations. However, given the benefit transfer studies are also based in cities with a side cultural offering, we think it is suitable to aggregate the benefits to society. However, this forms one of our recommendations.

A results breakdown can be found in Appendix A. The results are based on visitor and participant data shared by Exter City Council, part of which can be found in Appendix F.

1. Project overview

2. Methodology

- a) Approach
- b) Values
- c) Suitability and assumptions

3. Results

4. Sensitivity analysis

5. Recommendations

Appendix

1. Project overview

This project aims to support Exeter City Council in **understanding the value of culture** in the city by focusing on seven organisations, with different cultural offerings:

- Exeter Northcott Theatre,
- the Royal Albert Memorial Museum & Art Gallery (RAMM),
- Phoenix (multi-arts venue),
- Corn Exchange,
- UNESCO City of Literature,
- Libraries Unlimited, and
- Literature Works (Quay Words).

The analysis in this report is based on the latest developments in cultural economics and applies them to Exeter's context as appropriate. All work is consistent with best-practice methodologies such as those set out in the **UK HM Treasury Green Book** (2022)¹ and **DCMS Culture and Heritage Capital Programme**².



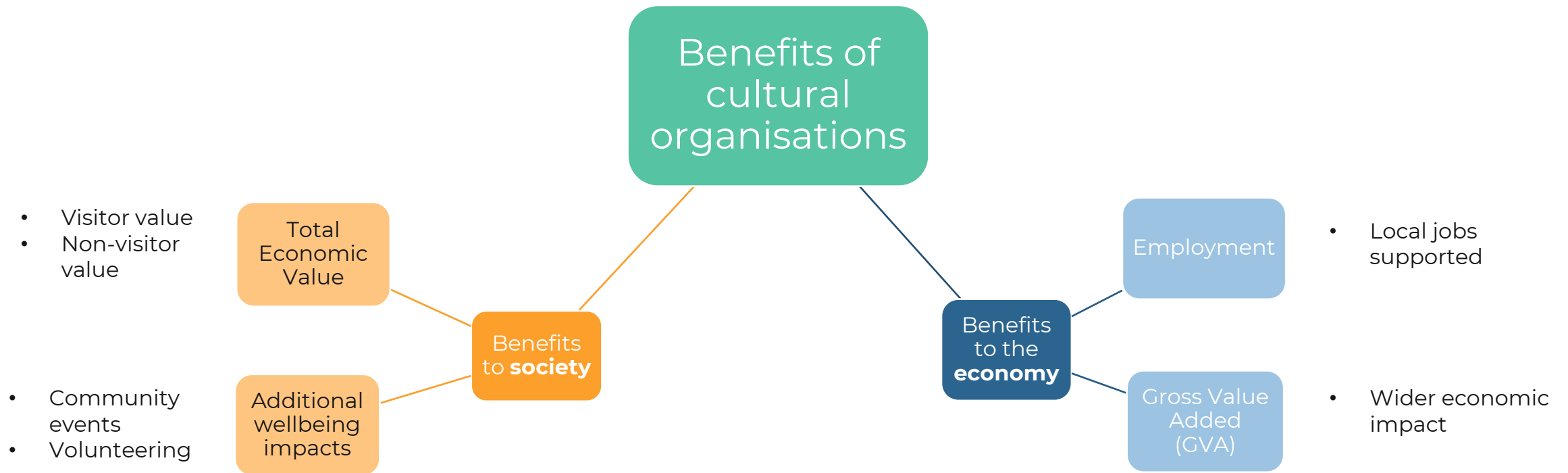
¹www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government

²www.gov.uk/guidance/culture-and-heritage-capital-portal

The key aim is to provide **robust evidence** on the **economic value of culture** to the city of Exeter **to inform decision-making around investment** and priorities

2. Methodology: Approach

Cultural organisations deliver both benefits to the economy and to society. The benefits to the economy are measurable through **market prices**, such as salaries and money spent on goods and services in the local economy. Conversely the benefits to society are not captured fully by market prices (particularly when free to access). As such, we rely on **non-market valuation** methods as per HM Treasury Green Book guidance.



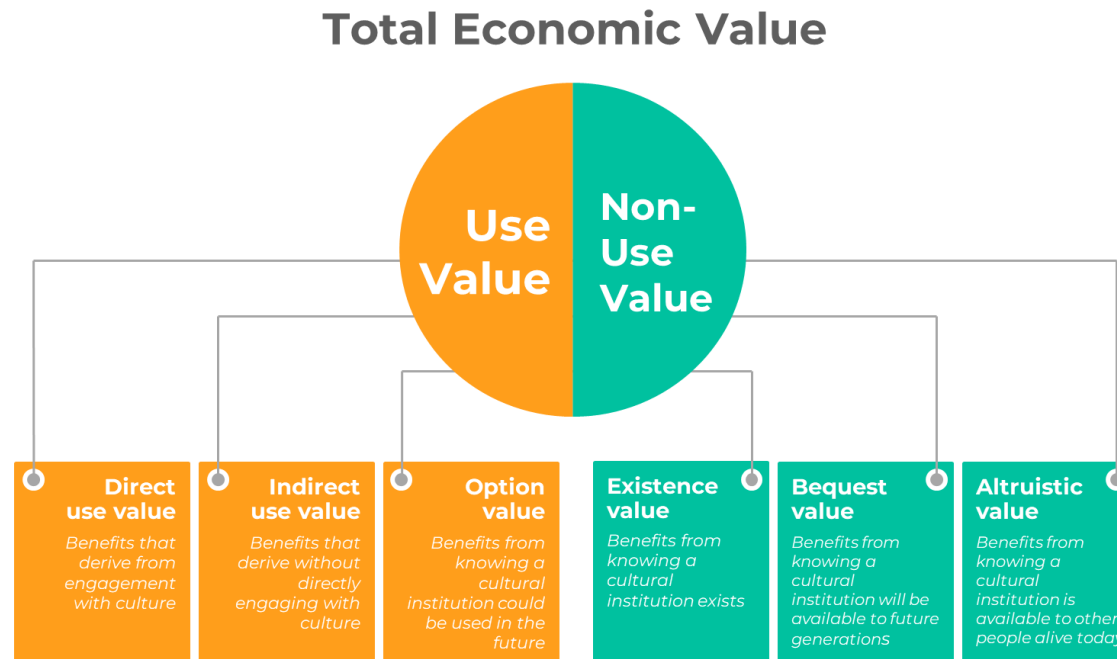
2. Methodology: Approach – Total Economic Value

Individuals can derive value through several different ways depending on how they use, interact with, or benefit from a cultural good or service.

A common approach for understanding this value in the arts and cultural sector is the **Total Economic Value (TEV) framework**.

Use value includes:

- **direct use** benefits to visitors, for instance recreational, leisure, and entertainment activities, as well as education, inspiration and knowledge.
- **indirect use** benefits could arise in the form of enhanced community image, and social interaction
- **option value** refers to benefits from a potential future use of the institution and its services.



However, cultural services can be valued even by those who do not directly use them.

Non-use values can come from simply knowing that others will benefit, either now, or in the future (**altruistic** and **bequest value**). Non-use value may also be derived from simply knowing that the cultural good exists (**existence value**).

Stated Preference surveys, in particular **Contingent Valuation** (CV) surveys, can ask respondents to report their use and non-use values through **willingness to pay** (WTP) values.

2. Methodology: Approach – TEV

The DCMS Culture and Heritage Capital research and guidance contains **WTP values for visitors** and **non-visitors**. These values have been applied to estimate the TEV of each of Exeter City Council’s organisations through benefit transfer.

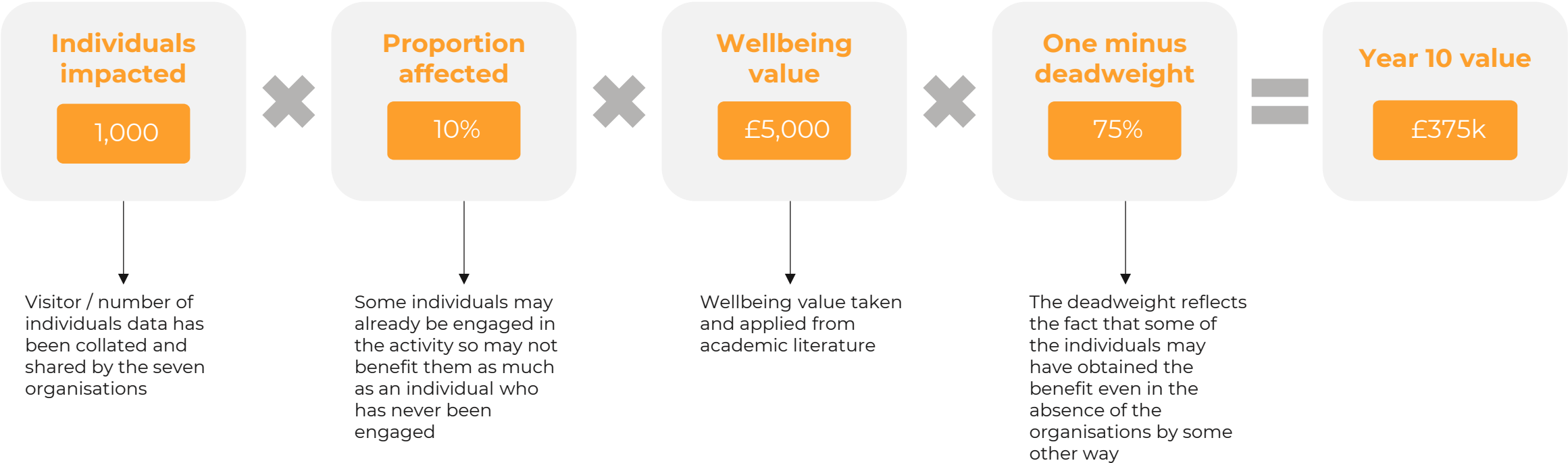
Step	Outline
1. Identify context for benefit transfer	Benefit transfer is the method of applying an estimated value of one or more sites to another site. In this case, we are applying values from the ACE Guidance Notes sites to the Exeter cultural organisations. Care has been taken to ensure the criteria for a regional museum, theatre and cinema venue in the guidance note are satisfied by Exeter’s organisations, respectively.
2. Calculate total visitor value	The total visitor value for the Exeter organisation has been calculated by multiplying the number of visitors to the organisation by the relevant visitor WTP value. Where the WTP value is per visit, it has been applied to the headcount number of unique visitors. Conversely, where the WTP value is per household, the number of visitors has been divided by the average Exeter household size . The WTP value from the guidance notes has been adjusted to reflect the difference in household income between the guidance note sites and Exeter. This has been done through Adjusted Unit Value Transfer (see Appendix C for the calculation and the adjusted WTP values).
3. Calculate total non-visitor value*	The total non-visitor value for the Exeter organisation has been calculated by multiplying the number of households within the organisation's local catchment area by the relevant non-visitor WTP value. To avoid double counting , visitor household numbers have been deducted from the catchment area numbers.
4. Aggregate for total non-market value	The total visitor and non-visitor values have been added.
5. Add ticket revenue (where appropriate)	Where the WTP value in the guidance note was expressed as a value beyond ticket prices , ticket revenue has been added to the total.

* If the non-visitor WTP value has been stated in the guidance as a one-off payment over the asset’s lifetime rather than an annual payment, an adjustment should be made. We would recommend annualising over a 30-year period to report a per year value. This has not been required for the local museums or theatre ACE guidance notes.

2. Methodology: Approach – Additional wellbeing impacts

Additional wellbeing impacts (e.g. volunteering and community events) not captured in the TEV, which focuses on the core function of those cultural organisations, have also been added. For that purpose, **wellbeing values** from the literature have been applied to estimate the benefits to society created by the organisations through those additional activities. The calculation is outlined below.

Wellbeing impact calculation



2. Methodology: Approach – GVA

The **Gross Value Added (GVA)** accounts for:

- **Direct** impact – the economic activity generated by the organisations, exclusive of the activity of suppliers of goods and services to these businesses,
- **Indirect** impact – the economic activity indirectly supported among suppliers of the organisations because of purchases of intermediate goods and services to support the delivery of services to organisation visitors,
- **Induced** impact – the economic activity created or supported by the organisations' employees directly and indirectly through the supply chain, spending their salaries in other sectors.

Local GVA impact calculation



¹ GVA Effect for 'Libraries, archives, museums and other cultural services' taken from United Kingdom Input-Output Analytical Tables, 2020
www.ons.gov.uk/economy/nationalaccounts/supplyandusetable/datasets/ukinputoutputanalyticaltablesindustrybyindustry/current

2. Methodology: Values

	RAMM	Northcott	Corn Exchange	Phoenix	Library	City of Literature	Literature Works (Quay Words)
Total Economic Value	Benefit transfer of Contingent Valuation ACE Guidance Note Regional Museum (2021) <ul style="list-style-type: none">Visitor - Lower bound WTP £6.01 per visitNon-visitor - Lower bound WTP per household per year £3.17	Benefit transfer of Contingent Valuation ACE Guidance Note Theatre (2021) <ul style="list-style-type: none">Visitor - Lower bound WTP £11.08 per person per year above ticket priceNon-visitor - Lower bound WTP per household per year £4.32	Benefit transfer of Contingent Valuation ACE Guidance Note Theatre (2021) and BFI Measuring economic value of cinema (2023) <ul style="list-style-type: none">Visitor - Lower bound WTP £18.04 per person per year above ticket price DCMS (2014) <ul style="list-style-type: none">Music audience value per person per year	Benefit transfer of Contingent Valuation ACE Health & Wellbeing benefits of public libraries (2015) <ul style="list-style-type: none">Visitor – Mean WTP £19.51 per household per year, reduction in GP cost of £1.32 per person per yearNon-visitor – Mean £10.31 WTP per household per year	Application of wellbeing value DCMS Valuing the Wellbeing Impacts of Culture and Sport (2014) <ul style="list-style-type: none">Frequent library use – wellbeing value of £1,359 per person per yearWriting value per person per year		
Wellbeing impact Community	Application of wellbeing value of ‘ <i>talking, chatting, socialising</i> ’ from Krekel and MacKerron ‘Back to Edgeworth? Estimating the value of time using hedonic experiences’ (2024), for informal events <ul style="list-style-type: none">£10.08 wellbeing value per person per engagement activity Application of wellbeing value of ‘ <i>crafts activities</i> ’ from DCMS Valuing the Wellbeing Impacts of Culture and Sport (2014) for structured workshop events						
Wellbeing impact Volunteer	Application of wellbeing value of ‘ <i>volunteering</i> ’ from Lawton et al. ‘Does volunteering make us happier or are happier people more likely to volunteer?’ (2020) <ul style="list-style-type: none">£911 wellbeing value per person per year for volunteering						
GVA	Application of GVA Effects for ‘Libraries, archives, museums and other cultural services’ taken from United Kingdom Input-Output Analytical Tables, 2020						

¹¹ Links to the literature used are provided in Appendix E.

2. Methodology: Suitability and assumptions

Given the catchment area and number of visitors to the RAMM, the application of the **regional museum values** (rather than local museum) is deemed suitable.

Given **Phoenix's multi-arts venue space**, a combined value (applying the values in relation to theatres cinema venues, music audience and socialising) rather than solely a theatre value, is deemed most suitable. Based on visitor split data shared by Phoenix, **15% of Phoenix's visitors (and non-visitors)** derives a value akin to a **theatre** WTP value, **23%** a value akin to a **cinema**, **57%** a value akin to **music audience** wellbeing value and **5%** akin to a **socialising** wellbeing value.

Wellbeing values rather than the benefit transfer of WTP values have been applied to **City of Literature and Literature Works (Quay Words)** visitor numbers. This is due to the special nature of the organisations and the programme nature of their activities. For example, Literature Works 'Quay Words Short poet's Journey Course' has a duration of 5 weeks. Literature Works is included because it produces a year-round programme at the Exeter Custom House and therefore the data relates solely to the Quay Words programme. It is worth noting that wellbeing values tend to generate higher results than WTP values, however given the context this is deemed suitable.

Two different wellbeing values have been applied to the community engagement activities reflecting the degree of involvement of the event. It has been assumed that **40% of community events are informal and 60% are structured** (e.g., crafts workshop). A higher wellbeing value has been assigned to the structured events. The events focus on the lower socio-economic status wards of the city which has the potential to generate additional wellbeing benefits not captured here.

Other assumptions made and their source can be found in Appendix B.

3. Results: 1 April 2023 to 31 March 2024 (in 2021 prices)

	RAMM	Northcott	Phoenix	Library	City of Literature	Corn Exchange	Literature Works (Quay Words)
Total Economic Value (TEV)	c.£2.3m	c.£1.7m (additional c.£1.7m in ticket revenue)	c.£1.9m* (additional c.£1.1m in ticket revenue)	c.£1m	c£8k	c.£0.4m (additional c.£0.9m in ticket revenue)	c.£50k
Additional wellbeing impacts	c.£104k	c.£7k	c.£393k	c.£111k	c.£8k	c.£1k	c.£5k
Total benefits to society (incl. ticket revenue)	c.£2.4m	c.£3.5m	c.£3.4m	c.£1.1m	c£16k	c.£1.3m	c.£55k
Aggregate total benefits to society	c£11.8m value to society over the year, across the seven organisations* (c.£8.1m value to society over the year if exclude ticket revenue)						
Local Gross Value Added	c.£1.9m	c.£1.1m	c.£1.2m	c.£541k	c.£149k	c.£283k	c.£24k
Aggregate total benefits to the local economy	Total GVA which can be attributed to local area c.£5.2m Supported employment of 734 local people GP cost saving of c.£60k in relation to being a Library organisation user						
Total benefits to society and economy (incl. ticket revenue)	c.£4.3m	c.£4.6m	c.£4.6m	c.£1.7m	c.£0.2m	c.£1.5m	c.£0.1m

3. Results: Summary

It is estimated that between 1 April 2023 and 31 March 2024, the seven organisations generated a total **aggregate value to society of c.£11.8m**. This consist of c.£11.2m with respect to TEV and ticket revenue (where appropriate) and c.£0.6m with respect to additional wellbeing impacts.

Among those, RAMM had the highest TEV value (c.£2.3m) followed by Phoenix (c.£1.9m) and Northcott Theatre (c.£1.7m).

For comparison purposes, within the ACE Guidance Notes (2021), Bristol Museum and Art Gallery had a value of c.£3m and Manchester Royal Exchange Theatre of £4.4m.

The lower values for City of Literature and Literature Works (Quay Words) are explained by their smaller visitor numbers.

Within the same period, the seven organisations also contributed to the local economy by generating **a local GVA of £5.2m**.

It is worth noting that based on calculations undertaken by Exeter City Council using the AIM (Association of Independent Museums) toolkit, which estimates net additional **visitor impacts**, for local, day trippers and overnight visitors, RAMM has an **additional economic impact of £2.5m, taking RAMM's total value of benefits to society and the economy to £6.8m**.

3. Results: discussion

It is worth noting that **these results are conservative and likely underestimate the full value of these cultural organisations.**

For example, in terms of community engagement, these organisation also provide meaningful learning activities for 43,271 **school children*** across all organisations, through school visits, home education visits and creative activities. This is not reflected in the total aggregate value to society figures presented.

Furthermore, some of the **community programme are targeted specifically at the lower socio-economic status wards of the city.** This has the potential to generate additional wellbeing benefits for two reasons. Firstly, those are most likely to start with lower wellbeing in the first place. Delivering wellbeing outcomes to those with lower wellbeing has been demonstrated to be most effective. Secondly, those are also less likely to participate in such activities in the first place as well so would get more benefits than someone who engages more regularly. These wellbeing benefits have not been captured as part of this analysis.

These limitations form part of our recommendations discussed in Section 5.

* Information provided by Exeter City Council and does not refer to unique number of school children.

4. Sensitivity analysis: approach

In line with best practice guidance, upper and lower bound estimates have been calculated and presented for sensitivity purposes. For the TEV we varied the **catchment area**, while for the wellbeing component we varied the **WELLBY**.

Organisation	Total Economic Value			Wellbeing impacts		
	Lower bound	Main analysis	Upper bound	Lower bound	Main analysis	Upper bound
RAMM	Exeter	Exeter travel for leisure radius	Devon	Lower bound WELLBY Value of £10,000*	Central WELLBY value of £13,000*	Upper bound WELLBY Value of £16,000*
Northcott	Exeter	Exeter travel for leisure radius	Devon			
Phoenix	Exeter	Exeter travel for leisure radius	Devon			
Library	Midpoint Exeter and visitors	Exeter	Exeter travel to work radius			
Corn Exchange	Midpoint Exeter and visitors	Exeter	Exeter travel to work radius			
City of literature	Lower bound WELLBY Value of £10,000*	Central WELLBY value of £13,000*	Upper bound WELLBY Value of £16,000*			
Literature Works (Quay Words)						

*Our main wellbeing results are based on the central WELLBY value (i.e., the central estimate of the equivalent monetary value to a 1-point change in life satisfaction for one year). The central WELLBY has value of £13,000 (in 2019 prices), this was uprated to 2021 prices. See Appendix D for more information on the WELLBY and the wellbeing valuation approach.

4. Sensitivity analysis: results

	RAMM	Northcott	Phoenix	Library	City of Literature	Corn Exchange	Literature works (Quay Words)
TEV (excl. ticket revenue)	£2,317,350 (£1,527,020 - £3,232,125)	£1,746,120 (£631,454 - £2,860,785)	£1,891,772 (£1,385,995 - £2,397,549)	£1,024,072 (£713,276 - £4,562,753)	£7,988 (£6,144 - £9,831)	£398,050 (£287,337 - £1,548,265)	£49,930 (£38,408 - £61,452)
Additional wellbeing impact (Volunteering)	£36,944 (£28,418 - £45,469)	£7,080 (£5,446 - £8,714)	£25,101 (£19,308 - £30,894)	£13,516 (£10,397 - £16,635)	£1,159 (£891 - £1,426)	£644 (£495 - £792)	£386 (£297 - £475)
Additional wellbeing impact (Community)	£66,540 (£54,103 - £78,977)	-	£368,168 (£299,352 - £436,984)	£97,057 (£78,916 - £115,198)	£6,719 (£5,463 - £7,975)	-	£4,338 (£3,527 - £5,149)
Total benefits to society (excl. ticket revenue)	£2,420,833 (£1,609,541 - £3,232,125)	£1,753,199 (£636,900 - £2,869,499)	£2,285,041 (£1,704,655 - £2,865,427)	£1,134,645 (£802,589 - £4,694,586)	£15,865 (£12,499 - £19,232)	£398,694 (£287,829 - £1,549,057)	£54,654 (£42,232 - £67,077)
Total benefits to society (excl. ticket revenue)	£8,062,932 value to society over the year, across the seven organisations (excluding ticket revenue) (£5,096,245 - £15,297,002)						

5. Recommendations

Below we have outlined a set of recommendations for Exeter City Council to adopt to finesse the analysis presented in this report.

We recommend the organisations **collect additional data** on:

- **Household income** of visitors / participants in event / volunteers.

We recommend the organisations **take the following steps** with regards to their wider activities:

- Ensure they are **targeted** at those individuals who would benefit the most. There is a wide range of literature outlining who benefits the most from community events and volunteering and those organisation should aim to deploy such findings.¹
- **Evaluate and evidence** the wellbeing impact of their specific activities. The wellbeing benefit of volunteering within a cultural institution presented in the Lawton et al. report was unfortunately not found statistically significantly different from 0. We would recommend therefore that a bespoke evaluation of organisations' volunteering programme is undertaken to help demonstrate and understand how their programme may or may not improve wellbeing.

We recommend **further research** is undertaken to:

- Explore the potential substitution effect between the seven different cultural organisations.
- Further explore the suitability of some of the values used. This is particularly the case for the 'writing' wellbeing value applied to Literature Works (Quay Words) (taken from DCMS, 2014), which is not statistically significant.

¹ For example:

<https://whatworkswellbeing.org/wp-content/uploads/2020/10/Volunteer-wellbeing-technical-report-Oct2020-a.pdf>

https://whatworkswellbeing.org/wp-content/uploads/2022/12/Briefing_-The-social-value-of-place-based-arts-and-culture-final.pdf

Caveats and Limitations

The following caveats and limitations of the analysis must be noted:

- All figures have been estimated based on data shared by Exeter City Council and the respective seven organisations. Part of this data is outlined in Appendix F.
- Arguably, a local theatre value (rather than regional) would be more suitable for the Corn Exchange based on the number of visitors. Additional research would be required to understand how this value would differ and its applicability to Corn exchange.
- There may be additional benefits to society and the local economy that have not been captured here due to lack of data, limited research on the topic or outside the scope of the project (e.g., impact on the wellbeing of children in relation to the organisations community events).
- There may be a very specific impact on wellbeing of volunteering with specific organisations, such a UNESCO City of Literature. This nuance has not been explored as part of this analysis.
- The cultural value in Exeter extends beyond these seven organisations. This has not been explored as part of this analysis. For example, Historic England has explored the heritage value of Exeter City Council Guildhall: www.historicengland.org.uk/content/docs/research/heritage-value-of-place. It is also worth noting this report has focused on Exeter Library specifically, however there are other libraries within the local area that bring societal benefits beyond those explored in this report.

Overall, further research and data is required in order to finesse the analysis and results from this project.

Appendix A: Detailed results

	RAMM	Northcott	Phoenix	Library	City of Literature	Corn Exchange	Literature Works (Quay Words)
TEV	£ 2,317,350	£ 1,746,120	£ 1, 891,772	£ 1,024,072	£ 7,988	£ 398,045	£ 49,930
Exeter visitor	£ 199,397	£ 233,968	£ 816,412	£ 280,035	£ 5,584	£ 76,530	£ 25,464
Devon visitor	£ 464,678	£ 230,101	£ 715,014	£ 112,475	£ 1,873	£ 77,564	-
Outside Devon visitor	£ 725,293	£ 19,336	£ 158,804	£ 9,972	£ 530	£ 22,523	£ 24,466
Non-visitor	£ 927,981	£ 1,262,715	£ 201,542	£ 621,591	-	£ 221,432	-
Ticket revenue		£ 1,731,159	£ 1,139,772			£ 868,000	
Added Wellbeing	£ 103,483	£ 7,080	£ 393,269	£ 110,573	£ 7,878	£ 644	£ 4,724
Community	£ 66,540	£ -	£ 368,168	£ 97,057	£ 6,719	£ -	£ 4,338
Volunteering	£ 36,944	£ 7,080	£ 25,101	£ 13,516	£ 1,159	£ 644	£ 386
GVA	£ 1,869,549	£ 1,109,478	£ 1,178,165	£ 540,868	£ 148,960	£ 282,883	£ 23,949
Exeter	£ 1,043,877	£ 1,109,478	£ 786,574	£ 396,509	£ 148,960	£ 196,777	£ 11,245
Devon	£ 825,672	-	£ 391,590	£ 144,359	-	£ 86,106	£ 12,704
GP cost saving				£ 59,213			
Exeter visitor				£ 41,199			
Devon visitor				£ 16,547			
Outside Devon visitor				£ 1,467			

Appendix B: Assumptions

It is important to note that the assumptions that underpin this analysis are relatively conservative

Assumption	Value	Source
Exeter average household size (2021)	2.5	Office for Nation Statistics (ONS)
Exeter average household income (2021)	£39,168	ONS (Census 2021)
Exeter household population (2021)	52,554	ONS (Census 2021)
Exeter travel for leisure radius household population (2021)	291,362 Midpoint between Exeter and Devon household population	Simetrica-Jacobs and Exter City Council based on analysis of visitor post codes
Devon household population (2021)	530,170	ONS (Census 2021)
Average yearly frequency of crafts activities per person	20 times per year	Understanding Society (USOC) panel dataset – wave 5
Average yearly frequency of concerts per person	3	USOC – wave 18
Average yearly frequency of library visits per person	12	The health and wellbeing benefits of public libraries' (2015)
Travel to work radius for TEV calculation	When adjusting the non-visitor figure to remove double counting, have assumed that half of the Devon visitors fall under the travel to work radius category	Simetrica-Jacobs

Appendix C: Adjusted unit value transfer

Adjusted unit value transfer has been used to adjust and control for the differences between the sites in the guidance notes and Exeter. We are focusing on the **differences in respondent's income*** as this could affect WTP estimates between the sites.

As per the ACE Guidance Notes, this has been calculated as:

$$\widehat{WTP}_{Exeter} = \left(\frac{\overline{Income}_{Exeter}}{\overline{Income}_{sites}} \right)^e \overline{WTP}_{sites}$$

where $\overline{Income}_{Exeter}$ and $\overline{Income}_{sites}$ is the average household income at Exeter and the study sites, respectively, and e is the elasticity of the marginal utility of income with respect to Willingness To Pay (WTP). As per the Green Book, e is assumed to equal 1.

Average household income in Exeter is in 2021 prices (Source: ONS).

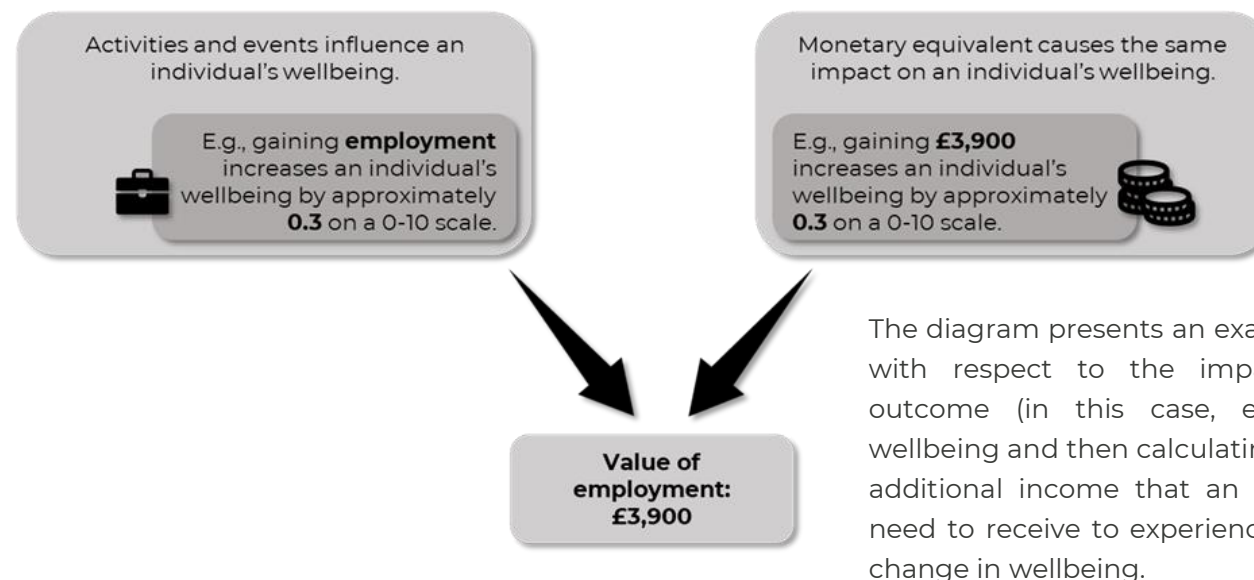
* Non-visitor household income with respect to regional museums was not reported, as such average UK household income in 2021 (ONS) was used instead.

Appendix C: Adjusted unit value transfer values

	RAMM	Northcott	Corn Exchange	Phoenix	Library
WTP value from report	<p>Benefit transfer of Contingent Valuation ACE Guidance Note Regional Museum (2021)</p> <ul style="list-style-type: none">• Visitor - Lower bound WTP £6.01 per visit• Non-visitor - Lower bound WTP per household per year £3.17	<p>Benefit transfer of Contingent Valuation ACE Guidance Note Theatre (2021)</p> <ul style="list-style-type: none">• Visitor - Lower bound WTP £11.08 per person per year above ticket price• Non-visitor - Lower bound WTP per household per year £4.32	<p>Benefit transfer of Contingent Valuation ACE Guidance Note Theatre (2021) and BFI Measuring economic value of cinema (2023)</p> <ul style="list-style-type: none">• Visitor - Lower bound WTP £18.04 per person per year above ticket price	<p>Benefit transfer of Contingent Valuation ACE Health & Wellbeing benefits of public libraries (2015)</p> <ul style="list-style-type: none">• Visitor – Mean WTP £19.51 per household per year, reduction in GP cost of £1.32 per person per year• Non-visitor – Mean £10.31 WTP per household per year	
Adjusted Unit transfer values used in this analysis (in 2021 prices)	<ul style="list-style-type: none">• Visitor - Lower bound WTP £5.83 per visit• Non-visitor - Lower bound WTP per household per year £3.55	<ul style="list-style-type: none">• Visitor - Lower bound WTP £10.50 per person per year above ticket price• Non-visitor - Lower bound WTP per household per year £4.89	<ul style="list-style-type: none">• Visitor - Lower bound WTP £14.13 per person per year above ticket price	<ul style="list-style-type: none">• Visitor – Mean WTP £25.47 per household per year• Non-visitor – Mean £14.96 WTP per household per year	

Appendix D: WELLBY and wellbeing valuation

The **wellbeing valuation** method estimates the impact of an outcome such as volunteering on an individual's wellbeing (measured as their life satisfaction) and then calculating the amount of money that would have the equivalent effect on wellbeing. This is then the estimate of wellbeing value associated with the outcome.



The diagram presents an example calculation with respect to the impact of a given outcome (in this case, employment) on wellbeing and then calculating the amount of additional income that an individual would need to receive to experience the equivalent change in wellbeing.

The HM Treasury Green Book and associated supplementary guidance¹ sets out a recommended approach to applying the wellbeing valuation approach. In particular, the guidance develops the concept of “**wellbeing adjusted life years**” (also called WELLBYs).

A WELLBY corresponds to the monetised value of a one-point change in life satisfaction (on a scale from 0 to 10), per person per year. The basis for the WELLBY concept is also set out in Frijters et al (2024)².

The UK uses a WELLBY value of £13,000 (in 2019 prices). This is the average value of a lower bound and an upper-bound value that are each based upon the relationship between health and life satisfaction and income and life satisfaction, respectively.

¹ www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing

² www.nature.com/articles/s41599-024-03229-5

Appendix E: Literature sources

- **Arts Council England (ACE) Guidance Notes (2021):** www.artscouncil.org.uk/culture-heritage-capital
 - Lawton, R., Fujiwara, D., Bakhshi, H., Mourato, S., Arber, M., Davies, J. 'How to quantify the public benefit of your Museum using Value estimates, A Resource for Understanding the **Value of Museums**'
 - Lawton, R., Fujiwara, D., Bakhshi, H., Mourato, S., Arber, M. 'How to quantify the public benefit of your Theatre using Value estimates, A Resource for Understanding the **Value of Theatres**'
- British Film Institute (**BFI**), Lawton, R. McSwiney, S., Byrne, A., Philips, J., Davey, A., Hignell, S., Chowdhary, B., Garling, O., 'Measuring the Economic Value of **Cinema Venues**' (2023): <https://www.bfi.org.uk/industry-data-insights/reports/measuring-economic-value-cinema-venues>
- **ACE**, Fujiwara, D., Lawton, R., Mourato, S. 'The health and wellbeing benefits of **public libraries**' (2015): www.artscouncil.org.uk/research-and-data/health-and-wellbeing-benefits-public-libraries
- Department for Culture Media and Sport (**DCMS**), Fujiwara, D., Kudrna, L., Dolan, D., 'Quantifying and Valuing the Wellbeing Impacts of **Culture** and Sport' (2014): www.gov.uk/government/publications/quantifying-and-valuing-the-wellbeing-impacts-of-culture-and-sport
- Krekel, C. and MacKerron, G. 'Back to Edgeworth? Estimating the value of time using hedonic experiences' (2024): <https://cep.lse.ac.uk/pubs/download/dp1932.pdf>
- Lawton, R., Gramatki, I., Watt, W., Fujiwara, D., 'Does Volunteering Make Us Happier, or Are Happier People More Likely to Volunteer? Addressing the Problem of Reverse Causality When Estimating the Wellbeing Impacts of Volunteering' (2020): <https://link.springer.com/article/10.1007/s10902-020-00242-8>

Appendix F: Exeter data

Data for period 1 April 2023 to 31 March 2024		RAMM	Northcott	Phoenix	Library	City of Literature	Corn Exchange	Literature Works (Quay Words)
Value to society	Number of visitors - Exeter postcodes	24,000	-	150,000	326,338	29	-	339
	Number of visitors - Devon postcodes	68,000	-	125,000	130,983	10	-	-
	Number of visitors - outside of Devon	122,000	-	25,000	9,300	3	-	326
	Number of tickets sold - Exeter postcodes	10,200	55,439	28,913	1,710	129	18,134	339
	Number of tickets sold - Devon postcodes	11,700	54,523	25,322	796	43	18,379	-
	Number of tickets sold - outside of Devon	2,400	4,582	5,624	2,383	12	5,337	326
	Number of participants in events/community engagement activities	10,200	-	56,437	14,878	1,030	-	665
	Number of school children who have participated in activities	18,000	8,134	4,500	12,637	-	-	-
	Number of volunteers	287	55	195	105	9	5	3
Value to economy	Number of artists/freelancers contracted	71	24	70	58	21	101	23
	Number of staff (including casuals)	84	97	91	51	3	37	3



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