The heritage sector in England and its impact on the economy

A report for Historic England

October 2018

Cebr

Disclaimer

Authorship and acknowledgements

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Executive summary

This is a summary of the Centre for Economics and Business Research's 2018 study for Historic England, which seeks to assess the economic contributions and impacts of England's heritage sector in the UK.

Scope and methodological overview

The research presented herein provides an examination of the role that England's heritage plays in the UK economy. A range of statistical data is generated to demonstrate different aspects of the value brought to the economy through heritage including:

- **The direct contribution** made to Gross Domestic Product (GDP) and employment through all segments of the heritage sector in the UK.
- **The indirect multiplier impacts** that arise through the activities stimulated in the supply chains of those engaged directly in the heritage sector.
- **The induced multiplier impacts** that arise through the activities stimulated in the wider economy when the employees associated with the direct and indirect heritage activities spend their earnings on domestic goods and services.

In addition, the study examines the ancillary contributions made by the heritage sector in the form of spillover impacts through tourism, regeneration, community-wellbeing and the role of the heritage sector in developing skills, nurturing innovation and fostering growth in other sectors.

The study combines desk and primary research. The analysis of the direct contributions and macroeconomic impacts of the heritage sector draws upon official data provided by the Office for National Statistics (ONS). Economic indicators including revenues, costs of production and value-added are provided for hundreds of disaggregated industries. These are broken down according to the Standard Industrial Classification (SIC) framework which provides the underlying data collection framework for much of the economic data produced by the ONS.

However, a large share of the activities in the heritage sector either cross the boundaries of the SIC framework or are relatively niche and therefore buried within broader categories of economic activity. For this reason, we use the Standard Occupational Classification (SOC), a common classification of occupational information for the UK, to map occupations in the heritage sector to the corresponding SIC industries.

Through this SIC-SOC mapping, the economic characteristics of the heritage sector and its direct macroeconomic impacts upon the economy, at a national and regional level, are estimated. The wider multiplier impacts of the heritage sector are quantified using our in-house UK and regional input-output models which trace the sector`s economic footprint through its supply chain relationships.

The spillover impacts of England's heritage sector are captured through qualitative intelligence gleaned from a programme of primary research in which organisations in England's heritage sector were surveyed and some interviews were conducted.

Direct economic contributions of England's heritage sector

Aggregating all activities of England's heritage sector yields the following macroeconomic contributions:

- Total estimated **GVA contribution to the UK's GDP of £13.1 billion in 2016**, equivalent to 0.75 per cent of UK`s total GVA.

- The heritage sector in London generated the largest GVA contribution of £3.7 billion in 2016, accounting for 28 per cent of the total heritage sector in England. The South East accounted for the second largest GVA contribution with £2.2 billion. While the heritage sector in the North East had the lowest GVA contribution of £444 million in 2016.

- Total estimated **employment of 196,000 in 2016**, equivalent to 0.67 per cent of the workforce of the entire UK. London alone accounted for 41,000 workers in the heritage sector in 2016, followed by South East with 32,000 workers. The North East had the lowest employment with 8,000 heritage workers in 2016.

Macroeconomic impacts of England's heritage sector

Based on our analysis of England's heritage sector within the ONS national accounting framework, specifically the supply-use tables and Cebr's input-output models, we conclude that:

- **For every £1 of GVA generated by the heritage sector in England, an additional £1.21 of GVA is supported in the wider economy through indirect and induced multiplier impacts of the sector.** Indirect impacts are generated in the supply chains supporting the heritage sector, whilst induced impacts are generated when the direct and indirect (supply chain) employees spend their earnings on domestic goods and services.

- Once these impacts are taken into account**, England's heritage sector had an estimated aggregate GVA impact of £29 billion in 2016.**

- The same logic applies to the heritage sector`s estimated employment multiplier of 2.34, so that for every job created in the heritage sector, an additional 1.34 jobs are supported in the wider economy, again through these indirect and induced multiplier impacts.

- Accounting for these wider multiplier impacts and adding them to the direct employment contribution, produces an **aggregate employment impact of the heritage sector of approximately 458,640 jobs in 2016.**

- In terms of the regional breakdown, the heritage sector in London alone supported a total of £7.7 billion in GVA through direct, indirect and induced impacts. While the North East had the lowest 'in-region' multiplier impacts in England suggesting the region's economy is relatively less able to provide for all of the intermediate input needs of the heritage sector within the region.

- The picture is similar for employment. The heritage sector in London supported the largest numbers of workers, 88,000, through direct, indirect and induced impacts in 2016. The North East with 15,000 workers had the lowest multiplier impact in terms of total employment supported.

Spillover impacts of heritage though tourism

- England's heritage creates additional spending through tourism in two ways. Some tourists visit the UK primarily to visit heritage attractions, while others take part in heritage activities during trips that are made for other purposes, potentially extending trips and generating additional spending as a result.

- The total domestic overnight heritage-related trips in England decreased from 16.2 million to 14.9 million trips in 2016, an 8 per cent fall. In 2016, the South West accounted for the highest number of trips with 3.1 million. While the North East accounted for the fewest trips with 0.5 million heritage-related domestic overnight trips.

- The total heritage-related domestic overnight spend in England increased by 24 per cent between 2014 and 2015, from £2.736 billion in 2014 to £3.397 billion in 2015. This was followed by a fall of 5 per cent to £3.2 billion between 2015 and 2016.

- Considering the regions in England, the South West is estimated to have generated £754 million in heritage-related domestic overnight spend in 2016, the largest spending amount in England. This was followed by the South East which is estimated to have generated £490 million in heritage-related domestic overnight spend in the same year, a 9 per cent increase from £448 million in 2015.

- London went from having the second largest heritage-related spending in 2015 of £536 million to the third highest spending of £482 million in 2016.

- While a large share of heritage-related activities and spending is generated domestically, England's heritage sector also draws visitors from much further afield.

- For England as a whole, heritage-related inbound visits steadily increased between 2012 and 2016. A large share of the inbound visits are made to London, accounting for 51 per cent of all inbound visits to England.

- In line with the increasing visitor numbers, heritage-related inbound spending by international visitors steadily increased between 2012 and 2016.

Wider spillover impacts of heritage: evidence from primary research

- The evidence from our primary research demonstrates the importance of volunteering in the heritage sector and the role of heritage in improving community wellbeing and regeneration.
- Volunteering, in addition to the well-being effects, can help in skills development and support future employability. The number of heritage volunteers has been increasing since 2012, reaching 616,000 in 2016. Heritage volunteering has also gradually increased as a proportion of all volunteering, accounting for 5.7 per cent in 2016.
- Volunteers in the heritage sector perform various tasks including running temporary events and exhibitions, regular “front of house” duties, research activities and administrative duties.
- Anecdotal evidence from our primary research indicates that volunteers in the heritage sector play a key role in facilitating the operation of the sector. For example, some of the organisations that we surveyed reported that without the time and effort given freely by volunteers, the effectiveness of their activities and engagements would significantly decline.
- Given the vital role played by volunteers, a considerable share of the organisations in the heritage sector offers schemes aimed directly at attracting and nurturing the skill set of volunteers. Of the organisations that we encountered through our survey, 29 per cent offered volunteer management programmes, while 65 per cent provided volunteer training.
- In terms of numbers employed, 53 per cent of the organisations reported that they employ more than 50 volunteers on a regular basis. This suggests that a considerable proportion of the workforce of these organisations are made up of volunteers.
- The evidence from our primary research demonstrates the apparent breadth of the links between organisations in the heritage sector and the local economies. For instance, 82 per cent of the organisations surveyed reported that they provide support or employ local commercial businesses. 86 per cent of the organisations surveyed support local community groups. While 67 per cent indicated that they support or employ local artists and artisans.
- Further evidence collected during our primary research found that organisations in the heritage sector play an important role in their community, through outreach work, partnerships with local schools and support for local heritage sites and assets.
- Heritage-led regeneration initiatives identify and make use of heritage assets and reinforce the qualities that make them significant to help stimulate environmental, economic and community regeneration.
- This includes historic buildings, landscape features and views. Evidence from our primary research suggests that the benefits of heritage-led regeneration can be large when this is related to place. Approximately 63 per cent of the organisations surveyed reported that they were currently involved in heritage-led regeneration initiatives.
- This anecdotal evidence suggests that the heritage sector is indirectly a significant source of support for jobs in the local economies.

1 Introduction

This is a report by the Centre for Economics and Business Research (Cebr), on behalf of Historic England, detailing the economic contribution of the heritage sector to the UK economy.

1.1 Background and aims of the study

As part of the Heritage Counts publication, each year Historic England publishes key socio-economic indicators which demonstrate the scale, scope and value of heritage. The data are collected from numerous sources and presented in Excel spreadsheets on the Heritage Counts website.

The research presented herein seeks to produce new estimates using the latest statistical releases and estimates from the past years. Our analysis considers the direct contribution of the heritage sector, measured by macroeconomic indicators such as gross value added (GVA), a measure of economic output, and employment.

However, we also examine the indirect contributions made by the heritage sector to the wider economy through its supply chain relationships with other sectors as well as wider spillover impacts of heritage.

The overall aim is to provide individuals and organisations involved in England's heritage sector with a clear, robust and evidence-based understanding of the ongoing economic contributions of the heritage sector to regional and national economies as well as to gather essential insight into the nature of these contributions to inform policy.

1.2 Structure of the report

The report is structured as follows:

- Section 2 explains how the heritage sector is defined and the scope of the study. It also gives an overview of our methodology.
- Section 3 assesses the direct contribution of the heritage sector to the 'business economy'. We consider this in terms of value-added contributions and employment.
- Section 4 sets out our findings on the macroeconomic impact of England's heritage sector. This includes indirect and induced multiplier impacts. This section firstly estimates the contributions to GVA, and employment in England. It then examines the impacts across the English regions.
- Section 5 presents our analysis of the spillover impacts of the heritage sector through domestic and inbound tourism from overseas.
- Section 6 examines the role of the heritage sector in supporting economic regeneration, community well-being, skills development and supporting creative industries. This section draws on a variety of data sources. Specifically, we use existing research and support this with case studies drawn from the survey and in-depth interviews carried out as part of this study.
- Appendix I provides some context for the trend in employment by the constituent occupations of England's heritage sector.
- Appendix II details some technical issues related to approach and methodology used in the study.
- Appendix III provides lists of the contributors to Cebr's primary research exercises.

2 Scope and methodology

The scope of the study is consistent with the previous Heritage Counts produced by Historic England. A major difference in the present study is the use of Cebr`s in-house input-output models to calculate bespoke multiplier impacts for the heritage sector. Additionally, we have robustly applied a SIC-SOC mapping process in which occupations are mapped to specific industries.

The scope of the research was also extended to examine wider spillover impacts of the heritage sector. This section recaps the definition and methodology used, and the scope of the study. Technical details related to approach and methodology used in the study are presented in the technical notes of **Appendix II.**

2.1 Scope of the study

Despite its importance, isolating the added value or net impact of heritage from the activities related to it or embedded within it presents many challenges. This is largely due to the fragmented market structure of the heritage sector and its economic value stemming from a variety of sectors and sub-sectors, ranging from conservation and preservation of historic buildings to activities in the natural environment.

In recent years, progress has been made in applying innovative ways to explore and measure the value of the historic environment. Historic England has commissioned fact sheets and reports demonstrating the interdependencies between heritage and economic activity. Some of these studies apply models of economic impacts that make distinctions between the direct (output and employment); the indirect (impacts of the heritage supply chain); and the induced impacts (employment and expenditure due to consumer spending out of staff wages).

In addition to these collated indicators, in 2016 Historic England commissioned research to produce its first Heritage Economic Impact Indicators Workbook and an updated version was produced for 2017.

Historic England commissioned the Centre for Economics and Business Research (Cebr) to provide an update on the ongoing contribution of the heritage sector in England For 2018. Our research examines the heritage sector based on the definition and the scope formulated in the previous work streams and considers the breadth of the sector within the set framework.

Our examination spans the period from 2011 to 2016 (inclusive), with the latter being the latest year for which full data are available, and endeavours to capture the full economic 'footprint' of the heritage sector. As such, the study is not confined to direct ongoing contributions to GDP and employment through the heritage sector's operations and activities in the UK. It also provides assessments of the associated indirect and induced multiplier impacts.

To complement the economic impact assessment, the study draws on a programme of primary research, the results of which have been employed in assessing the spillover contributions of the heritage sector. This consisted of two phases: an online survey of organisations in the heritage sector and a selective programme of in-depth interviews with representative organisations of the heritage sector.

2.2 Overview of approach and methodology

In line with the framework developed in the previous Heritage Counts and the DCMS Creative Industries Economic Estimates methodology in which both embedded workers and organisational workers are considered.

The overarching methodology used to estimate the economic contributions of the heritage sector in terms of employment and GVA can be summarised as follows:

- For constituent heritage industries fully captured by the relevant Standard Industrial Classification (SIC) codes, employment figures are obtained from the Office for National Statistics` (ONS) Business Register & Employment Survey (BRES).
- For constituent industries for which occupations rather than the industries are well defined, employment estimates are derived by combining the Annual Population Survey (APS) with the BRES data. These official datasets are used to triangulate an estimate for heritage activities with no apparent industry SIC codes but with defined occupations.
- For heritage activities neither captured by the SIC nor the Standard Occupational Classification (SOC) codes, secondary data sources are used to establish estimated heritage employment figures or the employment share that could be applied to the relevant SIC or SOC codes.
- The GVA figures are derived from the Regional GVA Estimates published by the ONS by apportioning the regional estimates by employment estimates and earnings data from the Annual Survey of Hours & Earnings (ASHE).

Since standalone SIC and SOC codes are limited in their ability to define heritage, estimates of the activities of the heritage sector rely on cross extracting SIC codes through SOC codes, sometimes combined with secondary data sources or in some cases relying on secondary data sources alone. For example, since some heritage occupations in the APS or ASHE are buried within wider occupation categories, the use of secondary data sources is unavoidable.

To isolate specific activities in the heritage sector, coefficients are calculated from secondary data sources and applied to apportion the data. In cases where the data sources relate wholly to heritage, the data are not refined at all.

Through the aforementioned process, explicit roles for heritage activities are established within the ONS supply-use tables (based on the SIC system) that facilitate the estimation of direct contributions to the national and regional economies in terms of output, GVA and national employment.

The multiplier impacts are thereby estimated using Cebr`s in-house input-output models, which draw on the ONS' national accounting framework. The input-output models identify the industries from which the heritage sector purchases its inputs and trace the sector's economic footprint through its supply chain relationships with other sectors. This, in turn, generates output and employment in those sectors and increases earnings and employee spending in the wider economy.

Data that would be useful in quantifying the value of spillovers from heritage to the wider economy is more difficult to obtain. For that reason, the results and conclusions of the later sections of the report (Section 5 and 6) are based more on a mixture of qualitative intelligence gleaned from secondary research and from our primary research, consisting of responses to a survey and a limited set of in-depth interviews.

3 Direct economic contributions of England's heritage sector

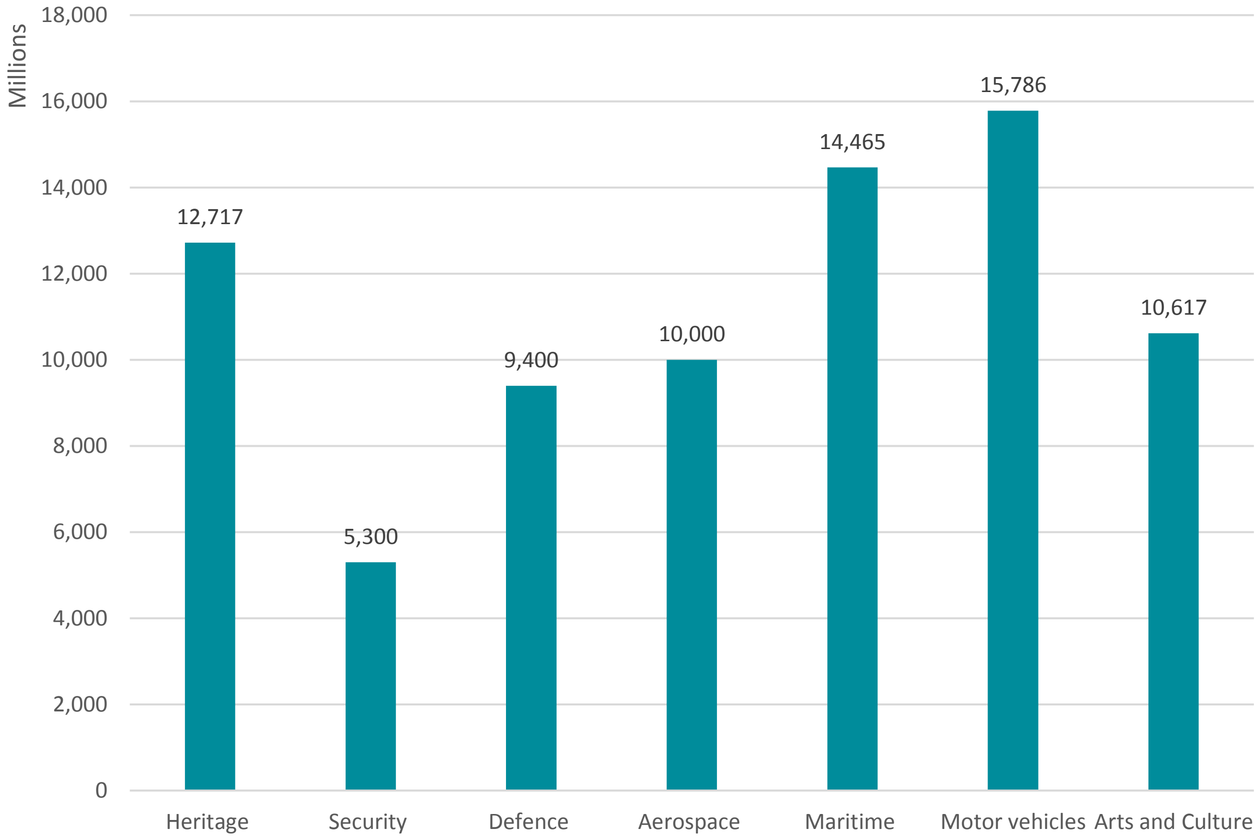
This section provides an assessment of the importance of heritage to the economy in terms of GVA and employment. We examine the performance of these indicators over the period 2011–16.

We first outline the estimated contributions made by the heritage sector to GVA using the national accounting data. We then look at the contributions made to employment using the Business Register and Employment Survey (BRES) and other data sources, examining the impacts first for England and then across the English regions.

3.1 The direct economic impact through Gross Value Added (GVA)

This subsection illustrates the contributions in terms of the GVA from the heritage sector to UK GDP. Figure 1 below compares the GVA contribution of England's heritage sector to the GVA contributions of a selection of UK`s industries. It is estimated that in 2015, England's heritage sector generated a larger GVA than the whole of the security industry, defence industry, aerospace industry and the arts and culture industry in the UK.

Figure 1: Estimated GVA of England's heritage sector against GVA figures of selected UK industries in 2015, £ million



Source: ONS` Annual Business Survey 2015, Cebr analysis

Table 1 provides some context for the magnitude in GVA generated by the constituent industries of the heritage sector in 2016. Construction occupies the largest share, around 51 per cent of the total GVA, and generated approximately £6.6 billion in GVA in 2016. This is followed by Libraries, Archived, Museums and Other Cultural Activities which accounted for £2.5 billion in GVA and stood for 19.3 per cent of the total GVA. While Architectural and engineering activities generated 13.2 per cent of the total heritage GVA with approximately £1.7 billion generated in 2016.

Table 1: GVA generated by constituent industries of the heritage sector, 2016

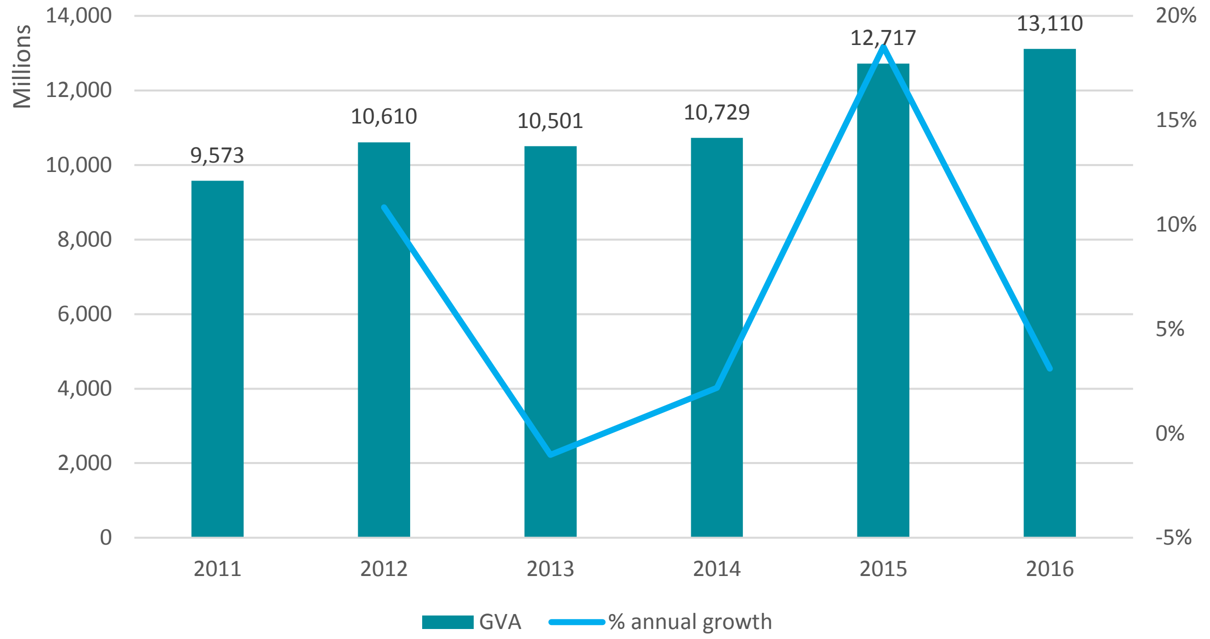
Constituent industries of the heritage sector	GVA £ million	% of total heritage GVA
Construction	6,644	50.7
Libraries, Archives, Museums And Other Cultural Activities	2,536	19.3
Architectural And Engineering Activities; Technical Testing And Analysis	1,734	13.2
Public Administration And Defence; Compulsory Social Security	680	5.2
Activities Of Membership Organisations	439	3.3
Real estate activities on a fee or contract basis	185	1.4
Other Professional, Scientific And Technical Activities	148	1.1
Scientific Research And Development	143	1.1
Education	114	0.9
Sports Activities And Amusement And Recreation Activities	82	0.6
Owner-Occupiers' Housing	39	0.3
Services To Buildings And Landscape Activities	22	0.2
Activities Of Head Offices; Management Consultancy Activities	15	0.1
All other industries	328	2.5

Source: ONS Annual Business Survey, 2016, Cebr analysis

Considering the GVA contributions of the heritage sector over time, Figure 2 shows this direct impact, in the years 2011 to 2016. England's heritage sector is estimated to have directly generated a total of £13.1 billion in GVA in 2016, an increase from £12.7 billion in 2015. The large spike of 18.5 percent in GVA between 2014 and 2015 was largely due to a significant growth in heritage-related construction, which accounts for almost half of the GVA of the heritage sector.

This trend was driven by the wider construction industry in the UK which saw a phased recovery between 2011 and 2016. As a whole, 2011 and 2012 saw the industry recover slowly, followed by contraction in 2013 and partial recovery through 2014. Since then the UK construction industry has largely remained on an upward trajectory with rising construction output in 2015 and 2016.

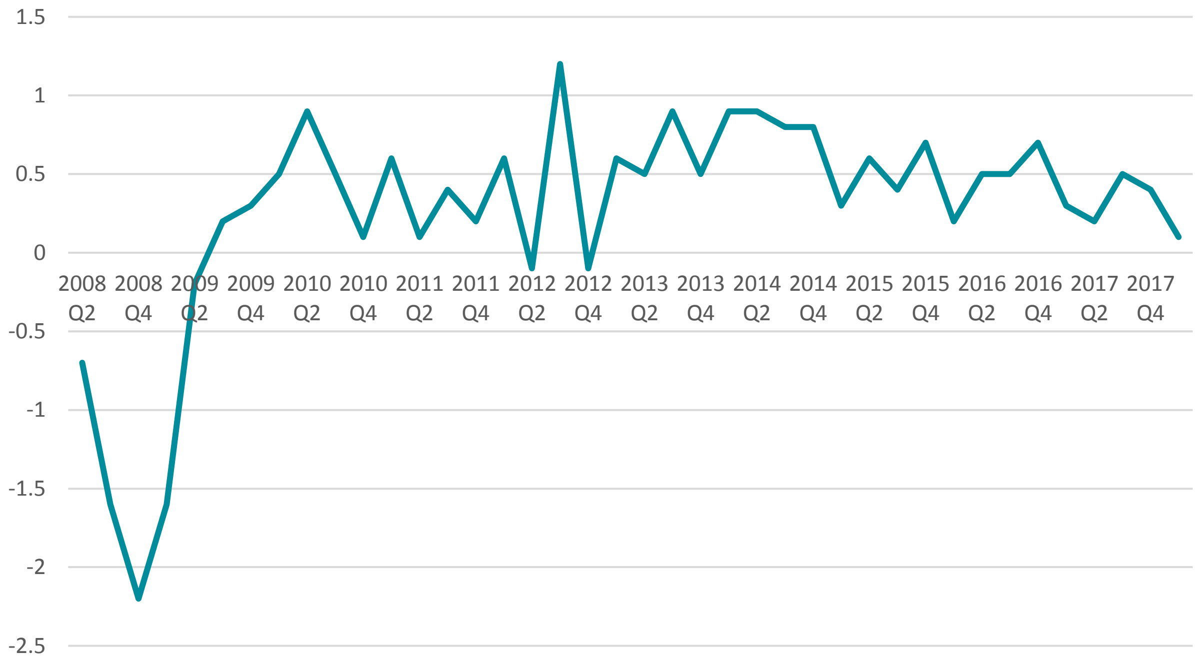
Figure 2: Estimated GVA in the heritage sector, 2011-16, £ million.



Source: ONS Annual Business Survey, 2011-16, Cebr analysis

The construction industry is inherently volatile and is responsive to fluctuation in both confidence and key economic variables. The trend in the UK`s construction industry is thus linked to GDP growth. As illustrated in Figure 33, UK`s GDP has returned to positive territory since the sharp contraction in 2008.

Figure 3: UK quarterly GDP growth, 2008-17



Source: ONS UK`s GDP growth, Cebr analysis

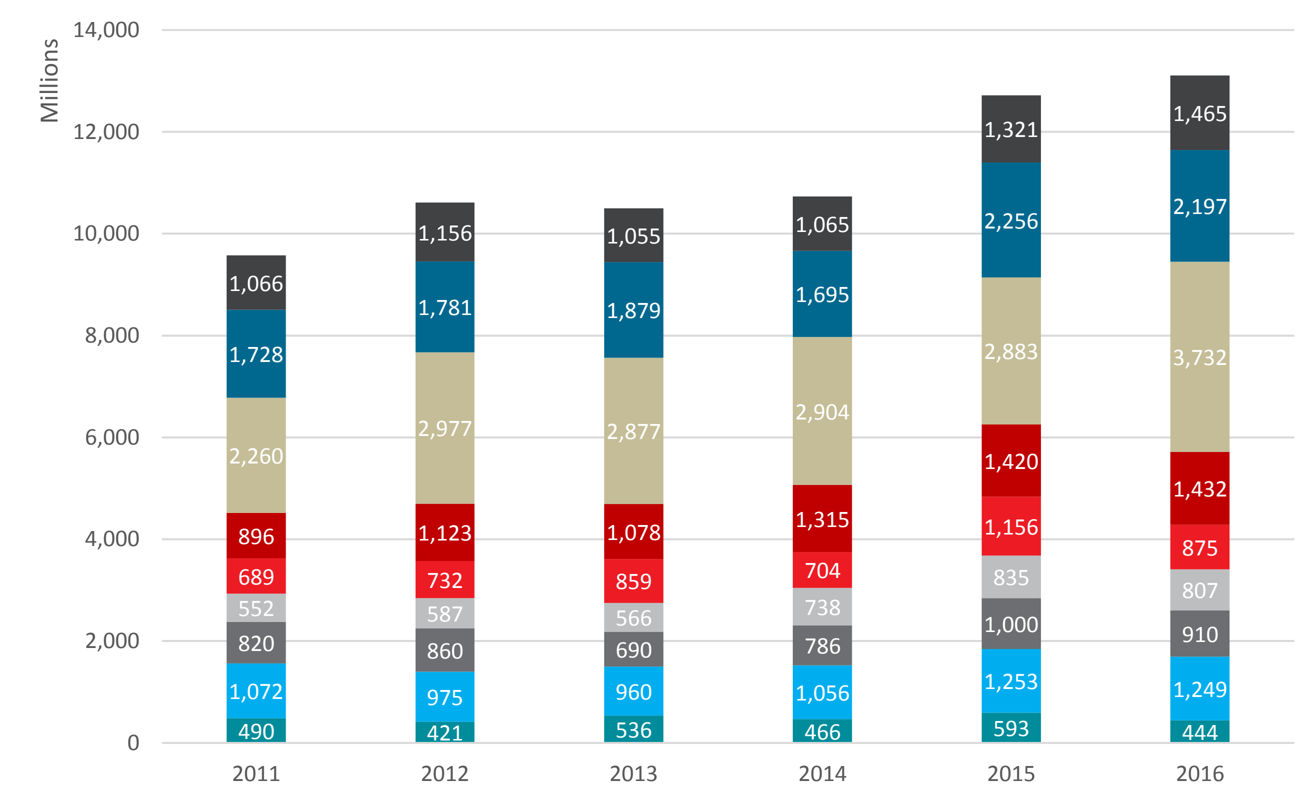
Figure 4 shows the direct impact of heritage through GVA, disaggregated by the regions in England in the years 2011 to 2016. At a macro level, across England, the heritage sector contributes, on average, 0.88 per cent of the total GVA in England. This ranges from a high of 1.13 per cent of GVA in the South West to a low of 0.68 per cent of GVA in the West Midlands.

The heritage sector in London alone generated the largest GVA contribution of £3.7 billion in 2016, accounting for 28 per cent of the total heritage sector in England. The South East accounted for the second largest GVA contribution with £2.2 billion. While the heritage sector in the North East had the lowest GVA contribution of £444 million in 2016. Between 2011 and 2016, London and the East of England experienced the highest growth in GVA, 65 per cent and 60 per cent, respectively. During the same period, the heritage sector in the North East decreased by 9 per cent.

These differences in GVA were mainly driven by large regional variations across constructions output. For example, between 2007 and 2013, fortunes varied widely between regions. When we account for inflation, the construction industry in London grew by 10 per cent, the East of England held steady, while activity fell elsewhere[1]. These differences yielded regional variations between subsectors of the industry including those involving heritage-related construction work.

Regional differences in other constituent industries of the heritage sector may also partially explain the observed regional variations. Particularly, in recent years, the arts and culture industry in London has seen a rapid growth spurred by increased international tourism and growth in creative industries.

Figure 4: Estimated GVA in the heritage sector by the regions in England, 2011-16, £ million.



Source: ONS` Annual Business Survey 2016, Cebr analysis

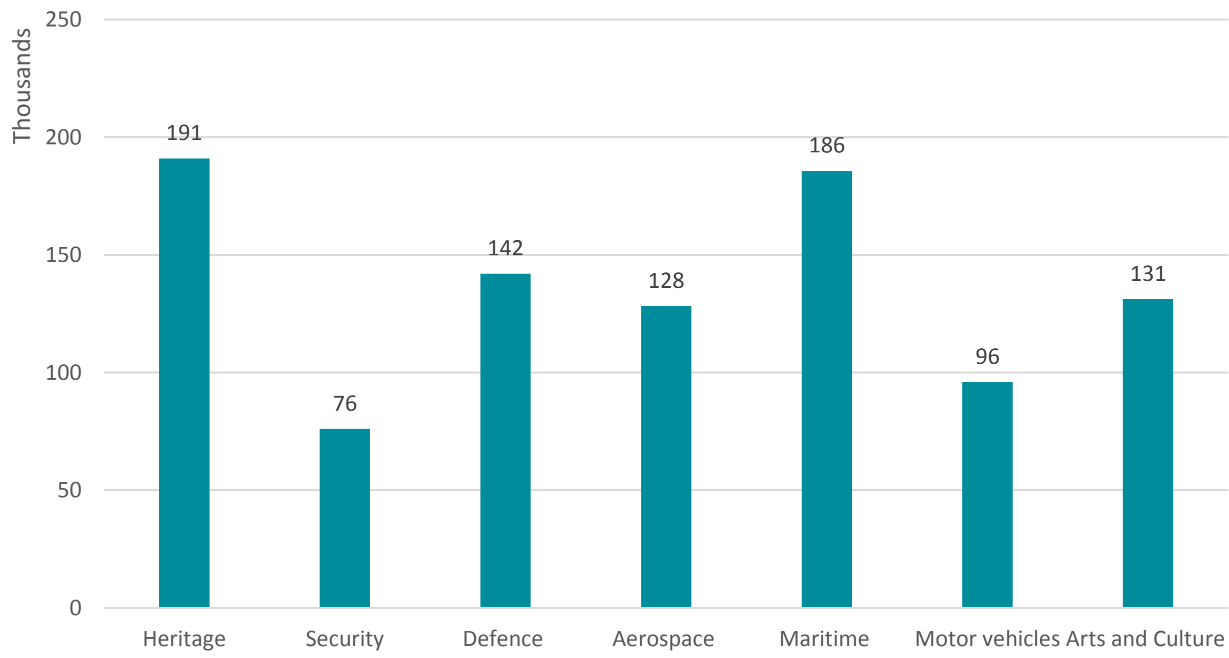
[1] https://policy.ciob.org/wp-content/uploads/2015/10/CIOB-research-The-Real-Face-of-Construction.pdf

3.2 The direct economic impact through employment

Employment estimates are collated from a number of different sources. They are based on a definition that uses SIC and SOC codes, combined with data from other sources on specific areas of heritage. Since the SIC and SOC codes are limited in their ability to sufficiently isolate heritage employment, coefficients derived from a number of different data sources are used to proportionally allocate employment estimates. Technical details related to how this has been done can be found in the technical notes of **Appendix II.**

Figure 5 below show that, in 2015, employment in England's heritage sector was broadly comparable to employment in the maritime industry but significantly higher than the employment in the security, defence, and aerospace and motor vehicles industries. Similarly, during the same year, England's heritage sector had a higher employment contribution in England than the whole of the arts and culture industry in the UK.

Figure 5: Estimated employment in England's heritage sector against employment figures of selected UK industries in 2015

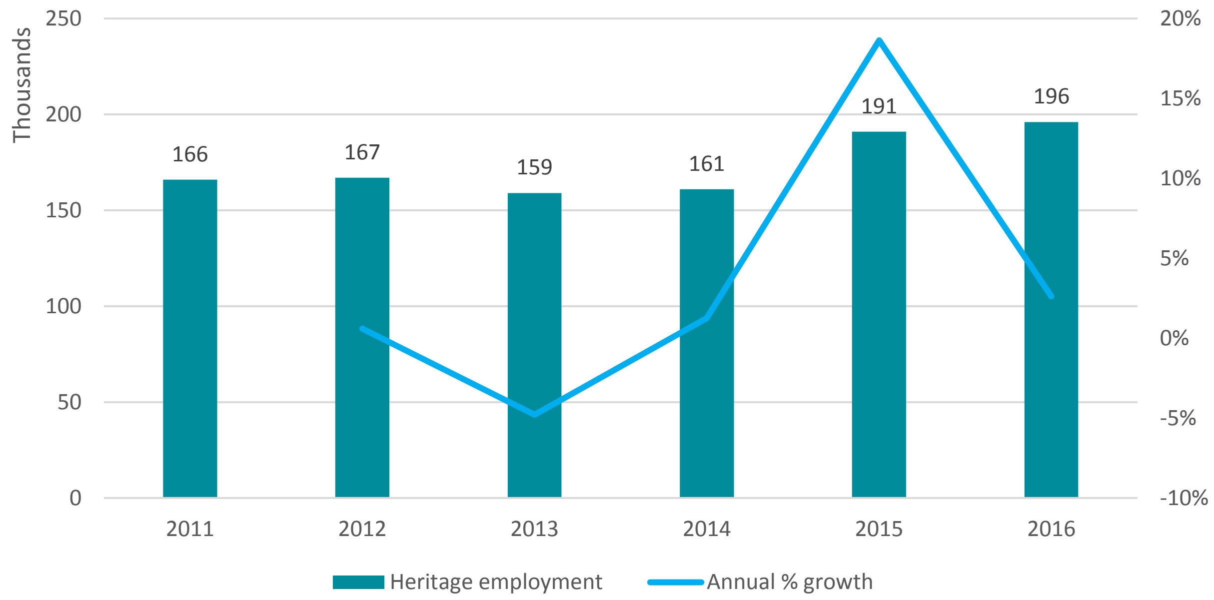


Source: ONS` Annual Business Survey 2015, Cebr analysis

Figure 6 shows the direct impact through employment in the years 2011 to 2016. Given the nature of the activities embedded in the heritage sector, the sector`s employment contribution has followed a volatile trend. As illustrated, it is estimated that the heritage sector in England directly supported around 196,000 jobs in 2016, an increase of 2.6 per cent from the 191,000 jobs in 2015.

Similar to the figures presented for GVA, the large spike of 18.6 percent in heritage employment between 2014 and 2015, was largely due to a significant growth in the construction industry driven by a general improvement in the UK economy.

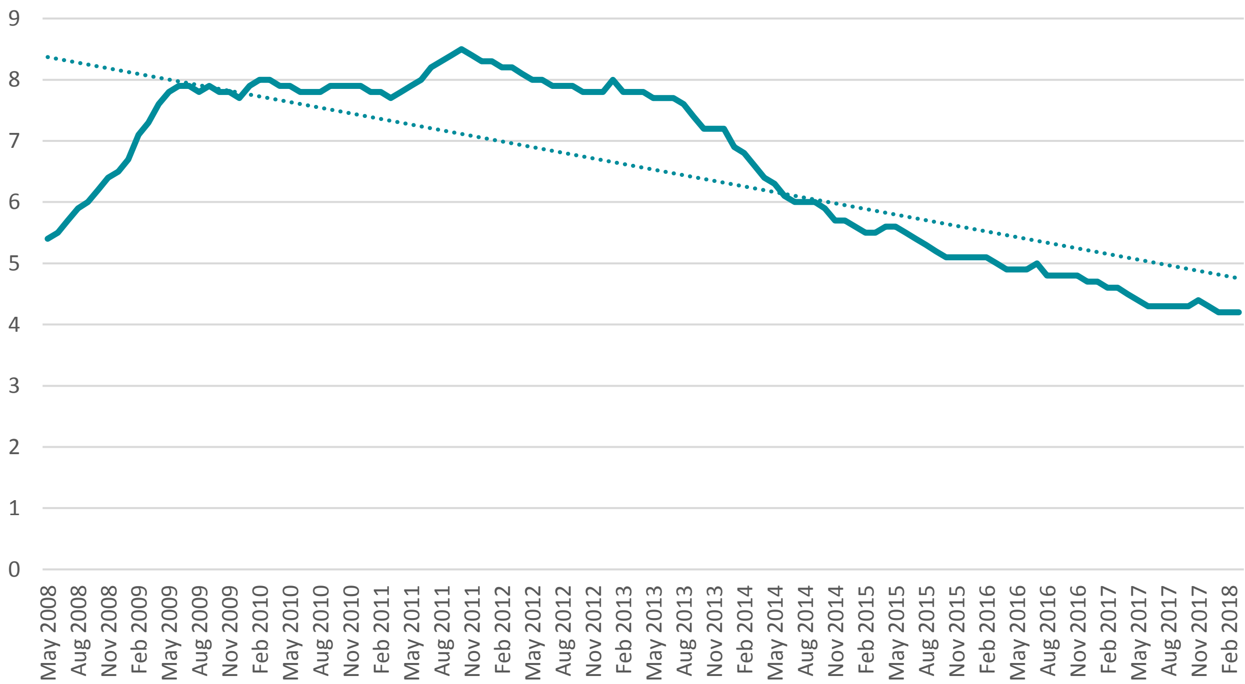
Figure 6: Estimated employment in the heritage sector, 2011-16



Source: ONS Business Register and Employment Survey 2011-16, Cebr analysis

Ata macro level, UK unemployment increased during the 2008 crisis but has since fallen strongly, as shown in Figure 7.

Figure 7: UK unemployment rate (%) monthly

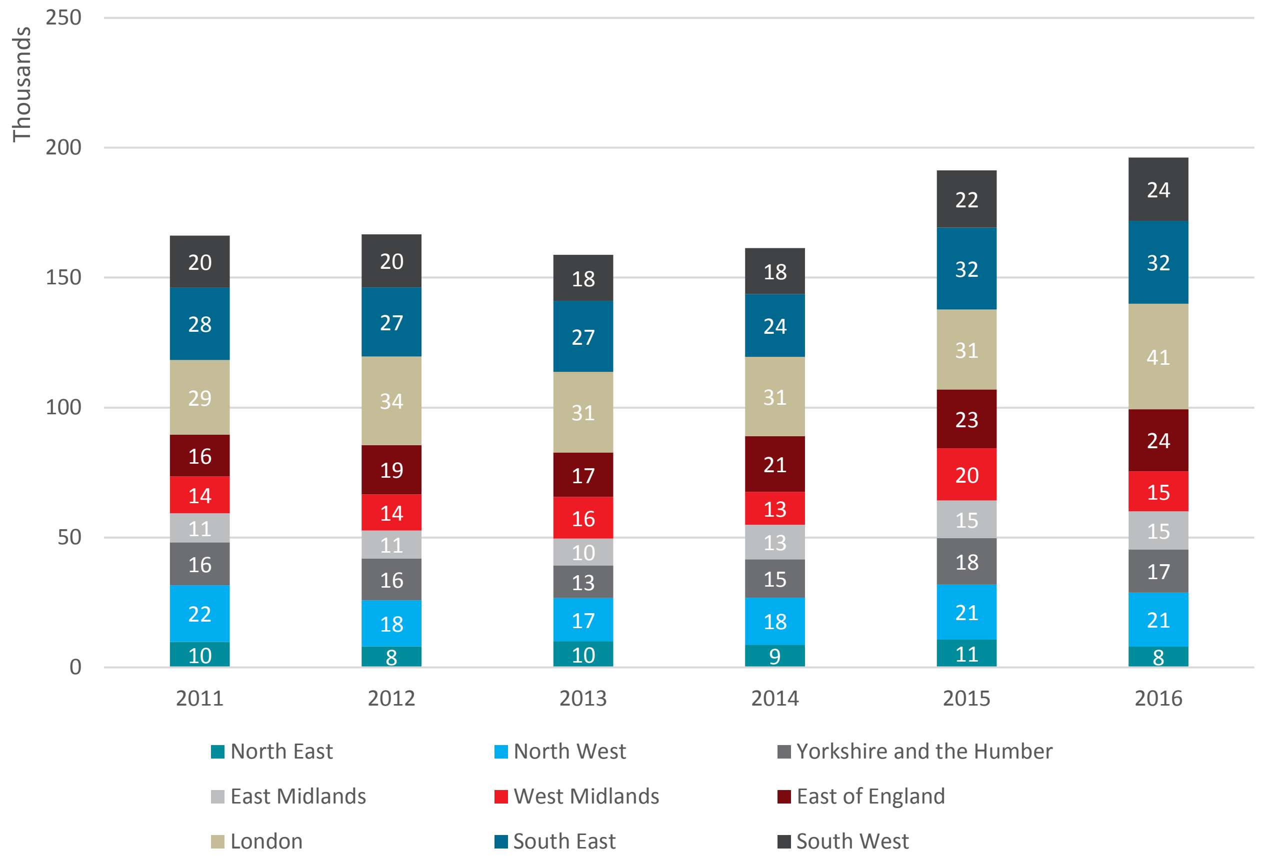


Source: ONS UK`s unemployment rate, Cebr analysis

Figure 8 illustrates employment in the heritage sector in the English regions over the period 2011-16. London alone accounted for 41,000 workers in the heritage sector in 2016, followed by the South East with 32,000 workers in the heritage sector in 2016. The North East had the lowest employment number of 8,000 heritage workers in 2016. Between 2011 and 2016, East of England, London and East Midlands saw the highest growth in employment, 48 per cent, 41 per cent and 30 per cent, respectively.

The expanding workforce of these regions was largely driven by an increase in the number of heritage workers involved in building completion and finishing and in specialised construction activities. Some further context for the trend in employment by the constituent occupations of England's heritage sector is presented in **Appendix I**.

Figure 8: Employment in the heritage sector by English regions, 2011-16



Source: ONS Annual Business Survey 2011-16, Cebr analysis

4 Macroeconomic impacts of England's heritage sector

This section sets out our findings on the macroeconomic contributions of England's heritage sector, including indirect and induced multiplier impacts.

4.1 Embedding heritage within our macroeconomic impacts framework

In this subsection we give a broad overview of the way in which we embed heritage activities within our macroeconomic impacts modelling framework. We adopt the framework provided by the ONS supply-use tables to establish the size and economic impact of heritage. Using this framework to analyse the heritage sector is one of the best means of ensuring consistency with the national accounting framework.

The process of embedding a specific subset of productive activities within the framework involves assigning the heritage sector an explicit role within the supply-use tables and Cebr's input-output models. In so doing, we provide the foundation for establishing the economic size (direct impact) of heritage, and the wider economic impact on the national and regional economies. We then use the multipliers along with the direct impacts data presented in Section 3 to produce estimates of the total impacts of the sector through the supply chain response (indirect impacts) and through the income from employment generated and spent in the wider economy (induced impacts). We produce these impacts for England as a whole before analysing regional differences.

4.2 The supply chain of the heritage sector

The most apparent way in which industries interact with the wider economy is through the purchases they make from businesses in the same and other industries through their supply chain. The supply chain thus provides the logical starting point for an analysis of the multiplier impacts and the economic footprint of the heritage sector. The structure of the heritage sector' supply chain is presented in Table 2 below.

Table 1: Industrial structure of the heritage sector domestic supply chain

Sector	% Domestic supply chain
Construction	29.4
Manufacturing	19.1
Professional, scientific and technical activities	10.9
Administrative and support service activities	10.3
Heritage	4.2
Wholesale and retail trade, repair of motor vehicles	4.2
Information and communication	4.1

Financial and insurance activities	3.5
Other service activities	3.1
Arts, entertainment and recreation	2.5
All other sectors	8.8

Source: Cebr analysis

Table 2 shows how the heritage sector's domestic supply chain breaks down across the sectors of the economy. We estimate that this is dominated by the construction industry and the manufacturing industry, accounting for 29.4 per cent and 19.1 per cent of the domestic supply chain. This is followed by professional and administrative industries with estimated shares of 10.9 per cent and 10.3 per cent, respectively. The heritage sector's purchases from its own industries are estimated to account for 4.2 per cent. While arts, entertainment and recreation industries stood for 2.5 per cent of the domestic supply chain of the heritage sector.

4.3 The heritage sector's contribution to GVA

The results of our input-output modelling estimates of the indirect and induced multiplier impacts of the heritage sector's contribution to GVA are presented in deconstructed form in Figure 9.

The Type I multiplier is the sum of direct and indirect impacts and is equal to 1.68, meaning that for every £1 of additional heritage GVA, an additional £0.68 of GVA is generated indirectly through the heritage sector`s supply chains. This £0.68 represents the GVA of the industries from which the heritage sector purchases goods and services as inputs to its own production processes, and of the industries that in turn provide inputs to these suppliers, and so on.

The Type II multiplier, which is the sum of the direct, indirect and induced impacts, is equal to 2.21. The additional induced impact of £0.53 represents the GVA of the industries that supply finished goods and services to households when the direct and indirect employees of the heritage sector spend their earnings in the wider economy.

This means that for every £1 of heritage sector`s GVA, an estimated £2.21 of GVA will have been or will be generated in the economy as a whole, due to the combination of direct, indirect and induced multiplier impacts.

Based on the heritage sector's direct GVA impact in 2016 of £13.1 billion, we estimate that its aggregate GVA contribution, including direct, indirect and induced impacts, amounted to approximately £29 billion in the same year.

Figure 9: The heritage sector's GVA multiplier in England

Source: Cebr analysis

4.4 Contribution of England's heritage sector to employment

Our estimate of the direct employment contribution of the heritage sector to employment in England is outlined in Section 3, where we presented an estimate of 196,000 in employment in 2016. However, the employment impact of the heritage sector is not confined to these direct job contributions.

Figure 10 illustrates our estimate of the indirect and induced multiplier impacts related to employment in the heritage sector. The two types of multiplier are again visible. The Type I multiplier is estimated at 1.78, meaning that for every additional heritage job, an additional 0.78 jobs is generated indirectly through the heritage sector`s supply chains. These represent employees of the industries from which the heritage sector purchases goods and services as inputs to its own production processes, and of the industries that in turn provide inputs to these suppliers, and so on.

The Type II multiplier is estimated to equal 2.34. The additional induced impact of 0.56 represents the employment of the industries that supply finished goods and services to households when the direct and indirect employees of the heritage sector spend their earnings in the wider economy.

This means that for every heritage job, an estimated 2.34 jobs will have been or will be generated in the economy as a whole, due to the combination of direct, indirect and induced multiplier impacts. This employment multiplier produces an estimated total employment impact of 458,640 jobs in 2016.

Figure 10: The heritage sector multiplier in England

Source: Cebr analysis

4.5 Regional variation in our multiplier estimates

Using our multiplier modelling we have also estimated the contribution made by the heritage sector to the regional economies in England in 2016.

Table 3 gives the results of our input-output modelling at the level of the English regions. Separate Type II multipliers that capture direct, indirect and induced impacts are shown for GVA and employment.[2] These estimates suggest that the heritage sector in the East of England had the largest GVA multiplier impacts. While North East had the lowest multiplier impacts. In the latter case, this suggests that the regional economy is relatively less able to supply the goods and services demanded as a result of increased demand for the heritage sector. This means that more of these goods and services must be sourced from outside the region, reducing the multiplier effects realised within the region itself. In terms of absolute levels, the heritage sector in London alone supported £7.7 billion in total GVA through direct, indirect and induced impacts, while the sector supported a total of 88,000 workers in London. The North East had the lowest total GVA and employment supported, namely £803 million GVA and 15,000 workers supported by the heritage sector, respectively. The total economic impacts in terms of GVA and employment supported for all the regions in England are listed in Table 1.

Table 3: Type II multipliers and impacts in the English regions, 2016

English regions	Type II GVA multiplier	Total GVA supported (£ million)	Type II employment multiplier	Total employment supported (Thousands)
North East	1.81	803	1.89	15
North West	2.13	2,663	2.26	48
Yorkshire and the Humber	2.14	1,947	2.27	39
East Midlands	2.11	1,705	2.25	34
West Midlands	2.08	1,819	2.21	33
East of England	2.15	3,077	2.29	55
London	2.07	7,728	2.19	88
South East	2.10	4,616	2.23	71
South West	2.10	3,077	2.21	53

Source: Cebr analysis

[2] Note that these estimates capture the impacts of the heritage sector of a region on that region itself. They do not take account of the potential impacts on the heritage sector of other regions when other regions need to draw on suppliers in that region for which the multiplier estimate is being produced.

5 Spillover impacts of heritage through tourism

Tourism in general is influenced by numerous factors such as exchange rate sensitivities and changing international trends. For example, in recent years, domestic tourism growth has been slower than inbound tourism growth due to the maturity of the market and the slow population growth in the UK relative to the global average. Similarly, the Brexit vote in June 2016 triggered a sharp depreciation in Sterling, making UK relatively cheaper to international visitors and travelling abroad relatively more expensive for UK residents.

England's heritage creates additional spending through tourism in two ways. Some tourists visit the UK primarily to visit heritage attractions, while others take part in heritage activities during trips that are made for other purposes, potentially extending trips and generating additional spending as a result. This in turn supports thousands of jobs and contributes to national and local economic growth.

In this section, we present a series of descriptive statistics on heritage-related overnight trips and day visits and the corresponding spending generated by these trips.

The methodology applied to isolate the figures for heritage-related tourism is based on an activities-based definition that estimates the appropriate portion of heritage expenditure and visits. Official data sources such as GB Tourism Survey that provides a national breakdown of activities undertaken by tourists enabled us to derive estimates for the direct impact of tourism attributed to heritage.

This methodology draws upon HLF tourism research which goes further in capturing the indirect and induced impacts of heritage tourism, as well as looking at motivation-based heritage tourism. Further details and rationale for the methodology used is found in the technical notes of **Appendix II.**

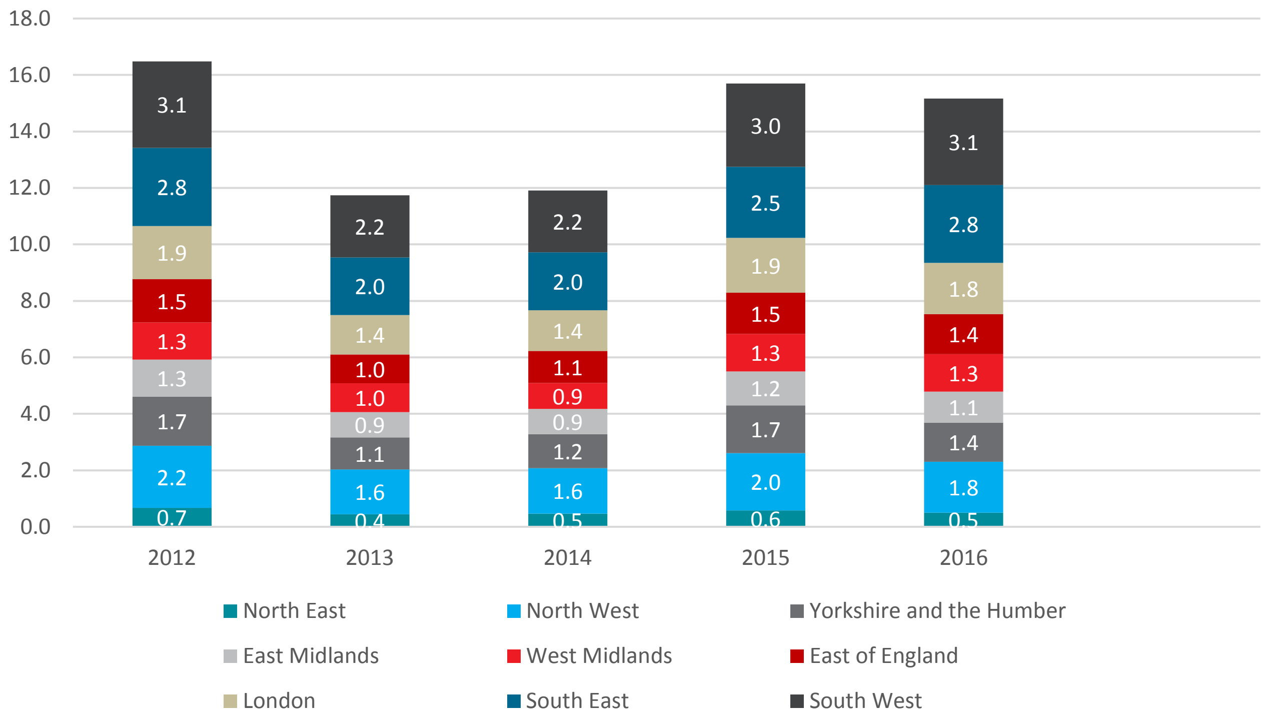
5.1 Domestic overnight tourism

In this sub-section, the GB Tourism Survey (GBTS) is used to estimate the impact of domestic overnight tourism. This is a monthly survey that covers overnight trips taken for any purpose, including holidays, business, or visiting friends and relatives.[3] We first present estimates for all heritage-related overnights trips, followed by heritage-related overnight holiday trips.

Figure 11 illustrates that domestic overnight heritage-related trips in England decreased from 16.2 million to 14.9 million trips in 2016, an 8 per cent drop. In 2016, South West accounted for the highest number of trips with 3.1 million. While the North East accounted for the fewest trips with 0.5 million heritage-related domestic overnight trips. In the South East, the number of domestic overnight heritage-related overnight trips rose by 0.3 million to 2.8 million between 2015 and 2016, a 10 per cent increase.

[3] GBTS measures the volume and value of domestic overnight tourism, and provides detailed information about trip and visitor characteristics. "Trips" are classified as trips or journeys away from home involving an overnight stay, taken by adults aged 16 and over and accompanying children. It includes costs paid in advance of the trip, costs paid during the trip and any other expenses incurred as part of the trip.

Figure 11: Total estimated domestic overnight heritage-related trips (million)



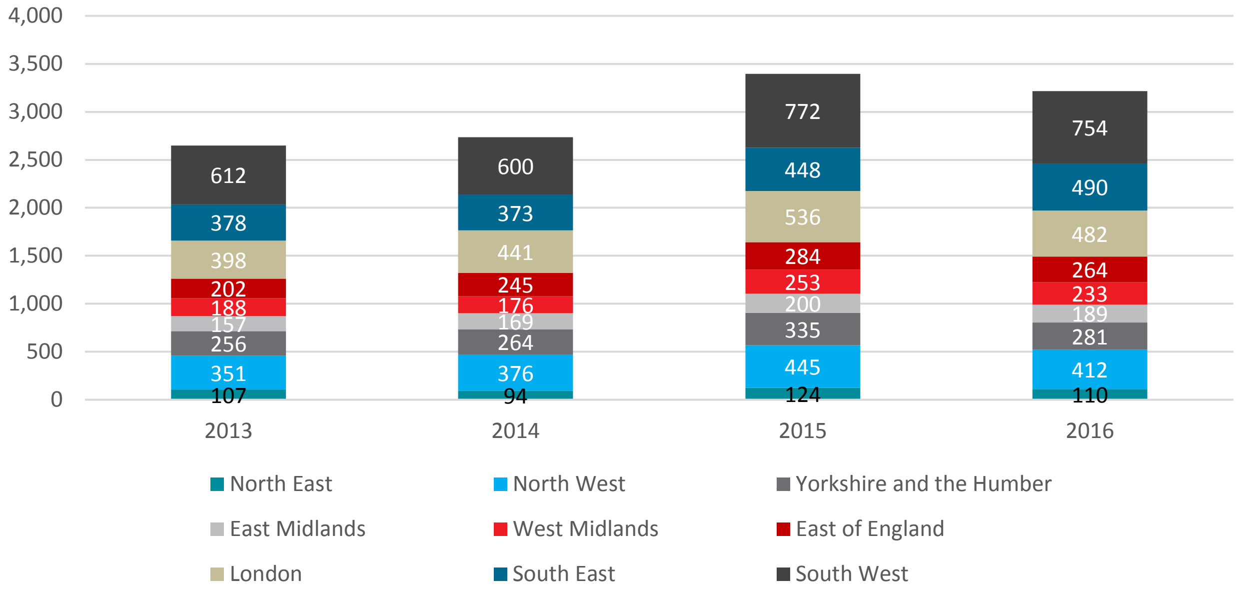
Source: GB Tourism Survey, 2012-16. Cebr analysis

Figure 12 presents estimated spending generated from trips involving heritage-related overnight trips. The total heritage-related domestic overnight spend in England increased by 24 per cent between 2014 and 2015, from £2.736 billion in 2014 to £3.397 billion in 2015. This was followed by a fall of 5 per cent to £3.2 billion between 2016 and 2015.

Considering the regions in England, the South West is estimated to have generated £754 million in heritage-related domestic overnight spend in 2016, the largest spending amount in England. This is followed by South East which is estimated to have generated £490 million in heritage-related domestic overnight spend in the same year, a 9 per cent increase from £448 million in 2015. Interestingly, London dropped from having the second largest heritage-related spending in 2015 of £536 million to the third highest spending of £482 million in 2016.

Similarly, Yorkshire and the Humber experienced a considerable fall of 16 per cent in domestic heritage-related domestic overnight spend between 2015 and 2016, from £335 million to £281. The North East had the lowest heritage-related domestic overnights spend of £110 million in 2016, an 11 per cent drop from £124 million in 2015.

Figure 12: Total estimated domestic heritage-related domestic overnight spend (£ million)

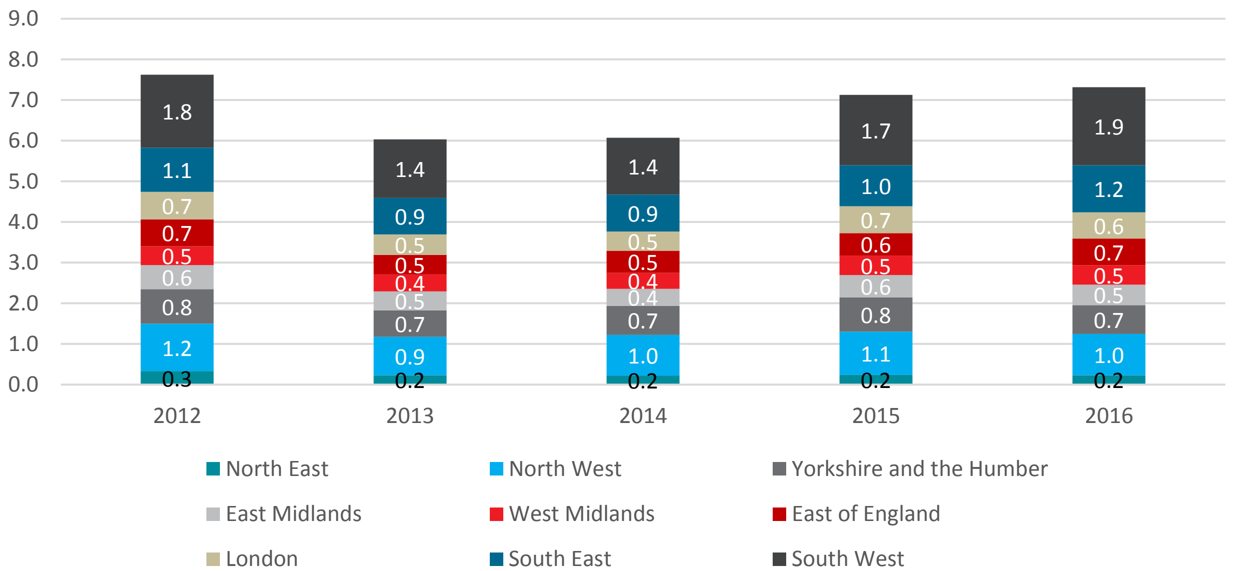


Source: GB Tourism Survey, 2013-16. Cebr analysis

Figure 13 illustrates domestic overnight heritage-related holiday trips in the regions of England in the years 2012-2016. 'Holidays' are planned holidays, and do not include visits to friends and relatives trips for leisure purposes.

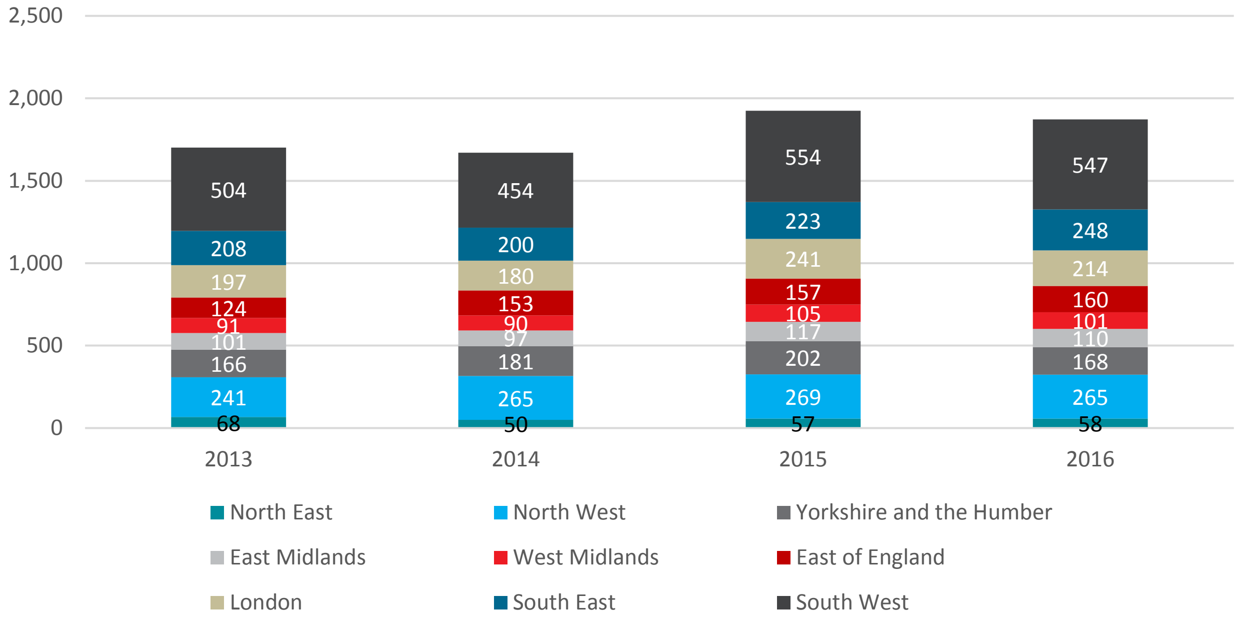
Similar to all heritage-related overnight trips, South West accounted for the highest number of heritage-related overnight holiday trips. While North East accounted for the fewest heritage-related holiday trips with 0.2 million in 2016. For England as a whole, domestic overnight heritage-related holiday trips decreased by 4 per cent between 2012 and 2016, from 7.5 million holiday trips to 7.2 million holiday trips.

Figure 13: Total estimated domestic overnight heritage-related holiday trips (million)



Source: GB Tourism Survey, 2012-16. Cebr analysis

Figure 14: Total estimated domestic overnight heritage-related holiday spend (millions)



Source: GB Tourism Survey, 2012-16. Cebr analysis

Figure 14 above presents estimated spending generated from trips involving overnight heritage-related holiday trips. The total heritage-related overnight spend in England increased by 9 per cent between 2013 and 2016, from £1.713 billion to £1.874 billion.

Considering the regions in England, East of England experienced the largest increase in spending between 2013 and 2016, a 29 per cent increase from £124 million to £160 million. The South West which accounted for the largest overnight heritage-related holiday spend, saw a 9 per cent growth between 2013 and 2016. While the North East, accounting for the smallest spend, experienced a fall of 14 per cent, from £68 million in 2013 to £58 million in 2016.

5.2 Domestic day visits

The National Lottery has played an important role in helping England`s heritage attractions to thrive. This includes funding for eight of England's top 10 most popular attractions, 21 of the UK's 25 World Heritage Sites, and 14 National Parks, as well as providing considerable funding for heritage attractions in the most deprived local authorities[4].

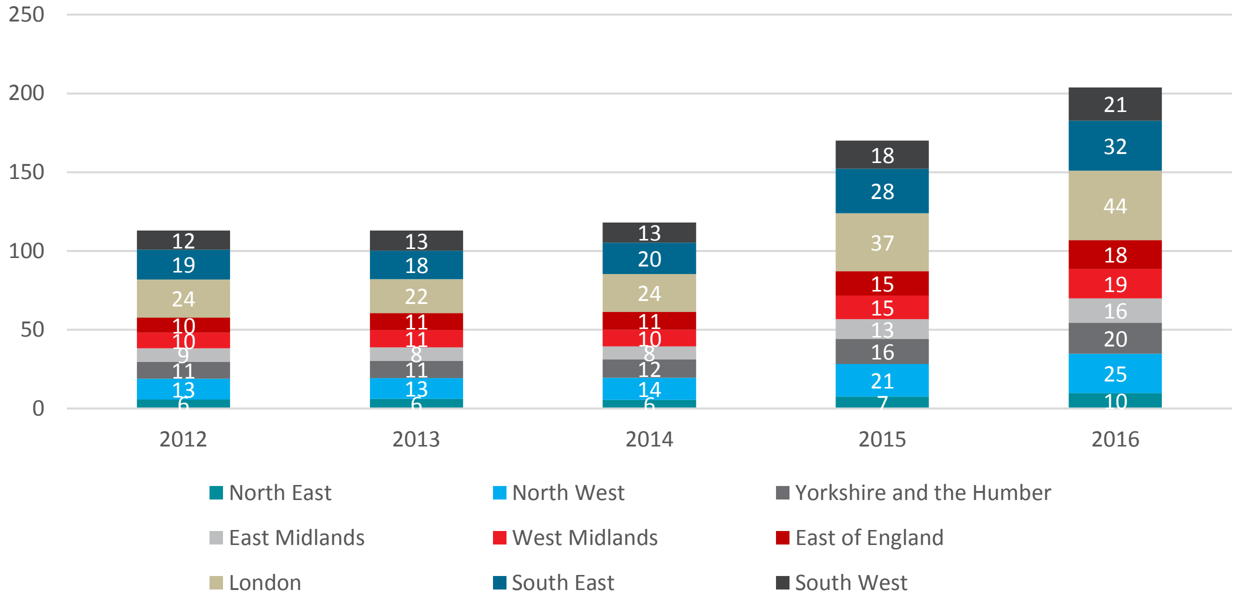
This sub-section presents the volume of domestic day visitors and related expenditure for England and all the English regions. The analyses draw on Visit England's Day visit survey. A visit is defined as one that; involves one of 15 defined leisure activities, lasted at least three hours, was not a regular activity, and one that is in a destination outside the respondent`s place of residence except trips to special public events, live sporting events and visitor attractions[5].

[4] https://www.hlf.org.uk/file/10822/download?token=nYc3SDf6niLPrTzXGY4Sz7_f7ZlqntB9Ue81u2Z-Osg

[5] For more information: http://www.visitengland.com/biz/resources/insights-and-statistics/market-size-and-value/domestic-day-visits

Figure 15 illustrates that the volume of heritage-related domestic day visits in England significantly increased by 44 per cent between 2014 and 2015 and then rose again by 20 per cent to 204 million in 2016. This considerable growth between 2014 and 2015 was largely driven by an increase in heritage-related visits in the East Midlands, London and the North West.

Figure 15: Volume of estimated heritage-related visits in the English regions (million)



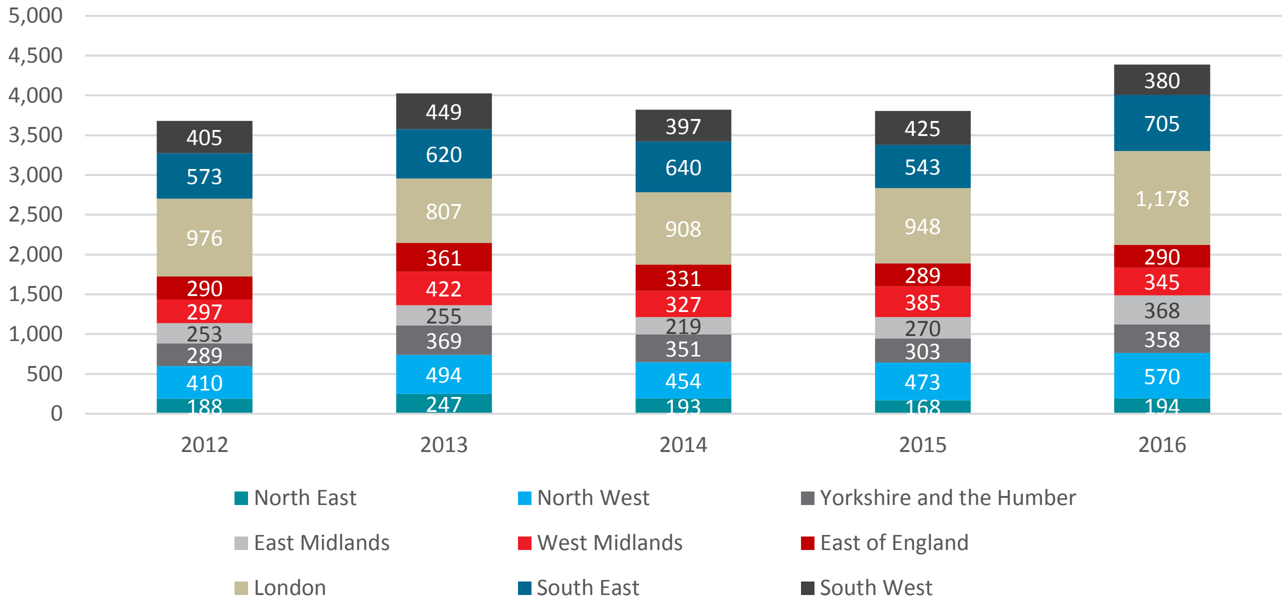
Source: Visit England's Day visit survey, 2012-16. Cebr analysis

The volume of heritage-related domestic tourism day visits has increased year on year in Yorkshire and the Humber since 2012, with a significant increase of 4.2 million between 2014 and 2015. Despite a small decline in the volume of heritage-related day visits between 2012 and 2013, London saw a significant increase of 12.6 million between 2014 and 2015. Similarly, having experienced a small decline in the volume of heritage-related day visits between 2012 and 2013, the South East saw a significant increase of 8.4 million between 2014 and 2015 and again a growth of 14 per cent between 2015 and 2016.

Figure 16 presents the value of heritage-related visits in the English regions. The total heritage-related visits in England as a whole generated £4.4 billion in 2016, an increase of 15 per cent from £3.8 billion in 2015.

Considering the regions in England, London generated the largest spending value from visits, £1.2 billion in 2016. South East generated the second largest value of heritage-related visits of £705 million. The East Midlands experienced the largest growth in visits value between 2012 and 2016, a 46 per cent increase from £253 million to £368 million. Similarly, the North West, which accounted for the third largest visits value in 2016, experienced a 39 per cent growth between 2012 and 2016. While the North East, accounting for the smallest visits value, experienced a small growth of 3 per cent, from £188 million in 2012 to £194 million in 2016.

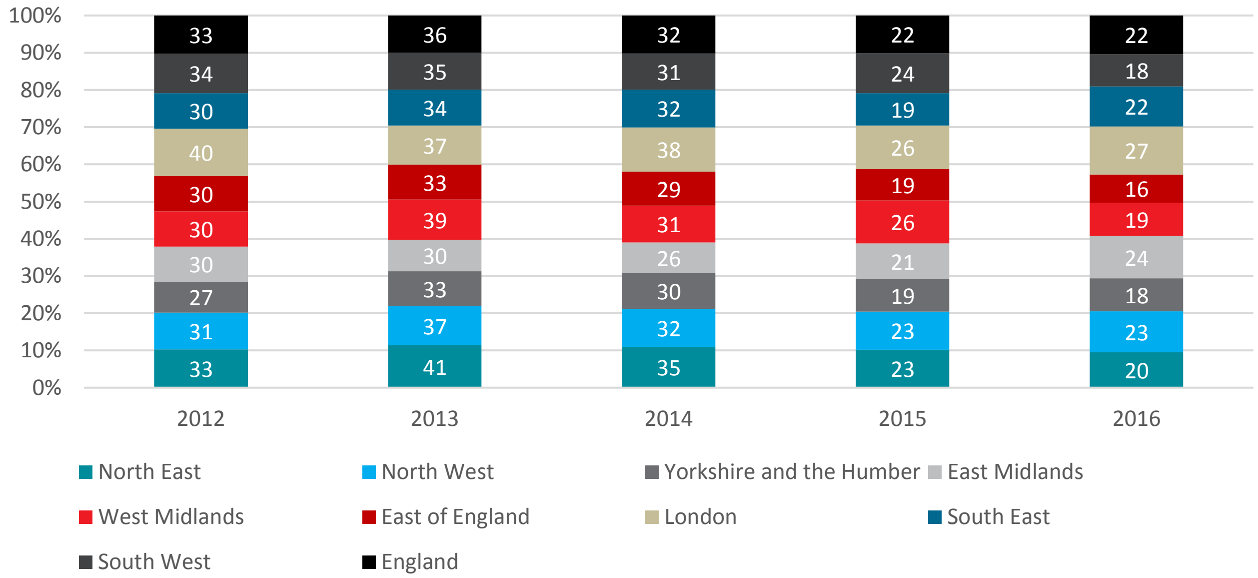
Figure 16: Value of estimated heritage-related visits in the English regions (million)



Source: Visit England's Day visit survey, 2012-16. Cebr analysis

Figure 17 presents average spend per heritage-related visit for the regions in England. In 2016, London generated the largest spend per visit with £28 spend per visit, followed by the East Midlands and the North West. Over the period under consideration, average spend per heritage-related visit exhibited considerable fluctuations between different years. For instance, in 2014, the West Midlands generated the largest average spend per heritage-related visit of £39 but had the lowest spend per visit in 2016.

Figure 17: Estimated average spend per heritage-related visit in the English regions (£)



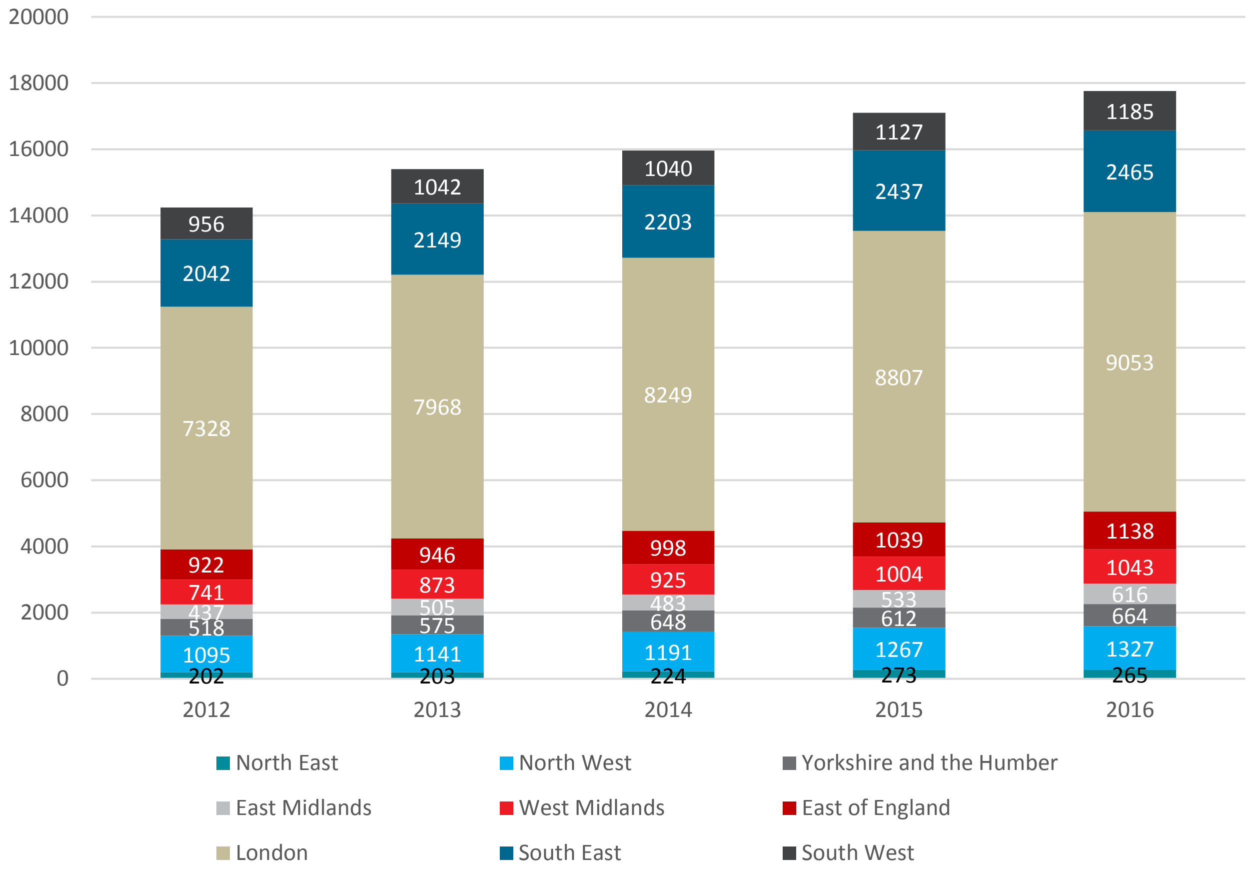
Source: Visit England's Day visit survey, 2012-16. Cebr analysis

5.3 International tourism

While a large share of heritage-related activities and spending is generated domestically, England's heritage sector also draws visitors from much further afield. For example, the Anholt Nations Brand Index (NBI) consistently ranks the UK's strengths in history and culture attributes including contemporary culture, historic buildings and cultural heritage.

In this sub-section, the International Passenger Survey (IPS) which collects information about passengers entering and leaving the UK is used to produce estimates of overseas travel and tourism[6]. Figure 18 illustrates estimated heritage-related visits to the regions in England by international visitors. For England as a whole, heritage-related inbound visits steadily increased between 2012 and 2016. A large share of the inbound visits are made to London, accounting for 51 per cent of all inbound visits to England.

Figure 18: Inbound visits: Estimated heritage-related visits (thousands)



Source: IPS, 2012-16. Cebr analysis

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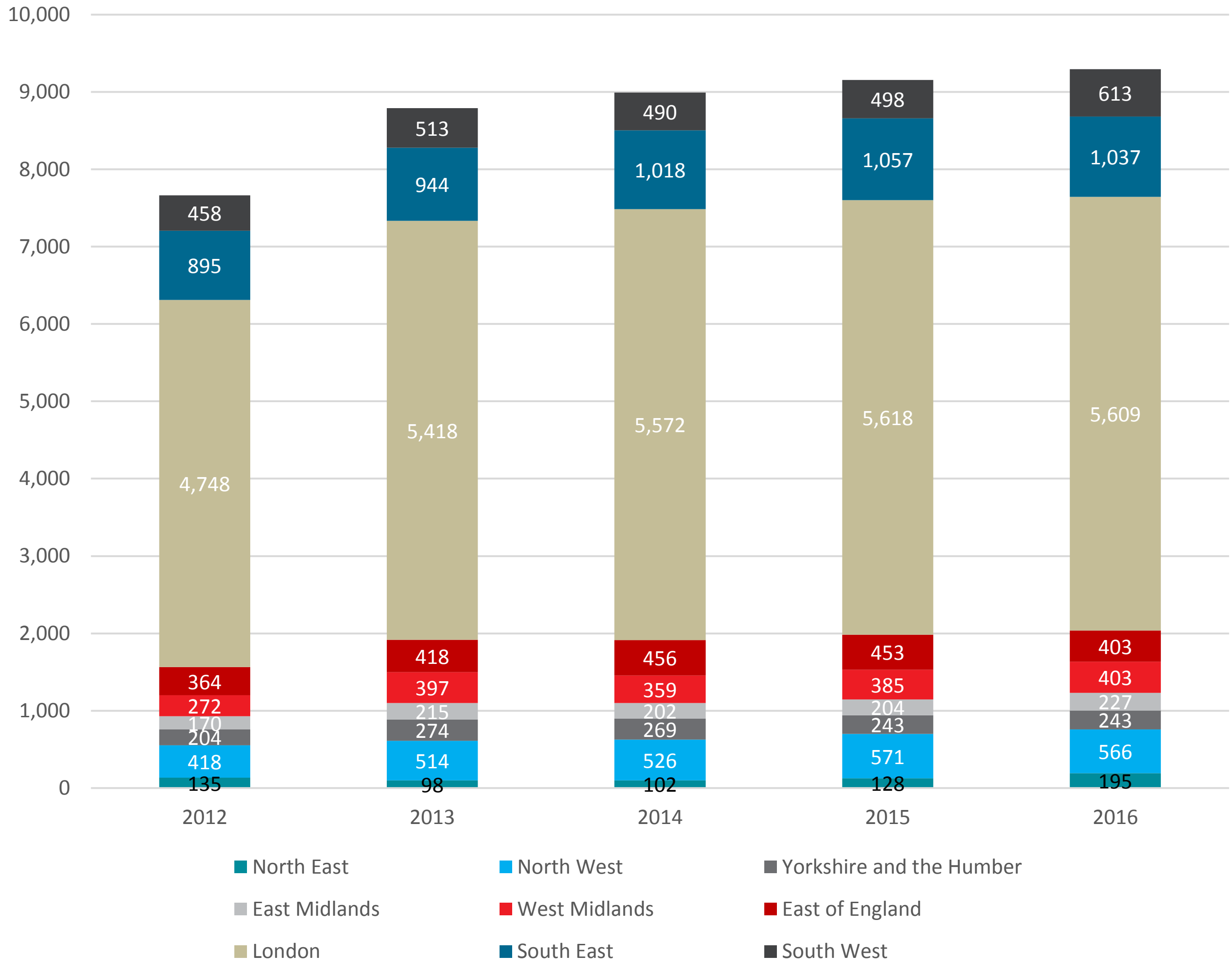
[6] The IPS conducts between 700,000 and 800,000 interviews a year. Interviews are carried out at all major airports and sea routes, at Eurostar terminals and on Eurotunnel shuttle trains.

Figure 19 illustrates estimated heritage-related spend by international visitors. In line with the increasing visitor numbers, heritage-related inbound spending by international visitors steadily increased between 2012 and 2016 for England as a whole.

Between 2015 and 2016, North East experienced the largest growth in heritage-related spending, a 52 per cent growth from £128 million to £195 million. While during the same period, East of England saw a negative growth of 11 percent, from £453 million in 2015 to £403 million in 2016. North West had the second largest heritage-related spend of £571 in 2015, but was overtaken by the South West which saw a growth of 23 per cent, from £498 million in 2014 to £613 million in 2016.

Figure 19: Inbound visits: Estimated heritage-related spend (£ million)



Source: IPS, 2012-16. Cebr analysis

6 Wider Spillover impacts of heritage: evidence from primary research

In this section we set out our findings on the wider spillover impacts of the heritage sector. These spillover impacts come, for example, through the role of heritage in developing skills, nurturing innovation and through community wellbeing and regeneration.

The analyses presented draw upon a variety of data sources. Specifically, we draw on existing research and support this with case studies drawn from our primary research that involved surveying organisations in the heritage sector as well as conducting a programme of in-depth interviews with individuals and organisations in the heritage sector.

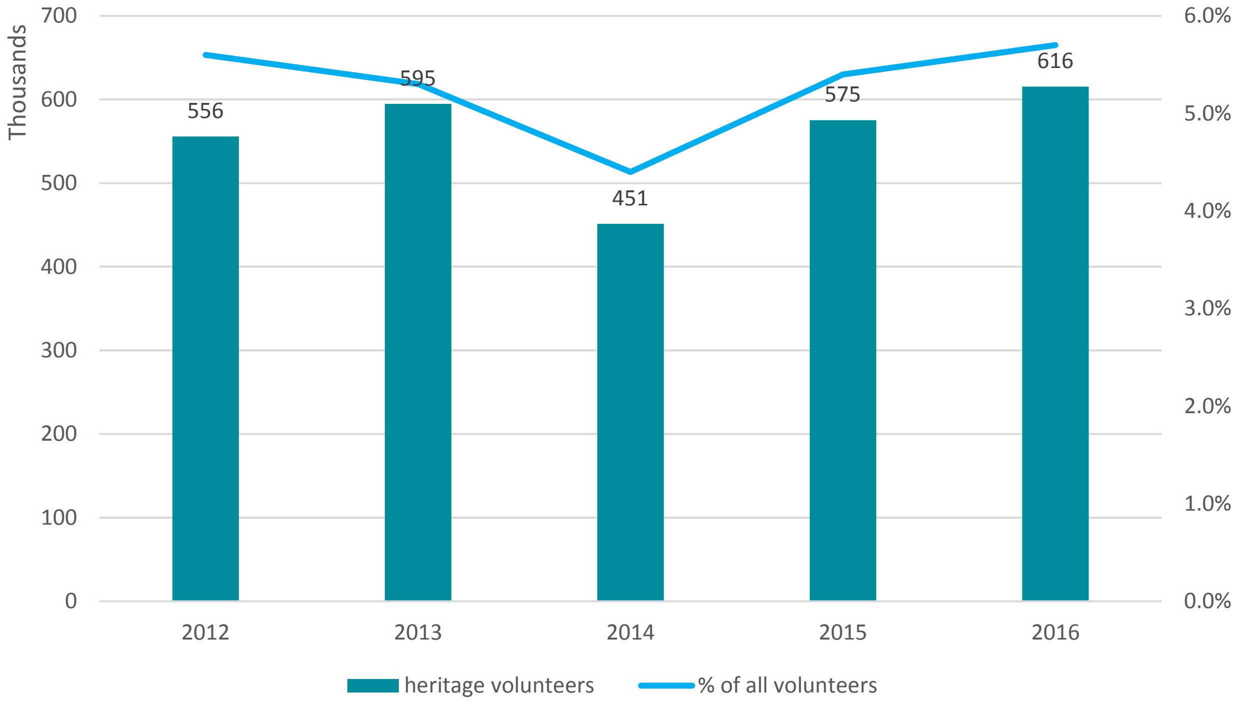
This involved survey of 52 heritage organisations and a programme of in-depth interviews with ten organisations selected to be representative of the sector. The list of organisations that contributed to the survey and the in-depth interview programme is presented in **Appendix III**.

We begin with an examination of the importance of volunteering in the heritage sector before examining the role of heritage in improving community wellbeing and regeneration.

6.1 Volunteering and skills development in the heritage sector

Volunteering, in addition to the well-being effects, can help in skills development and support future employability. As illustrated in Figure 20, the number of heritage volunteers has been increasing since 2012, peaking at 616,000 in 2016. Heritage volunteering has also gradually increased as a proportion of all volunteering, accounting for 5.7 per cent in 2016.

Figure 20: Estimated number of adults volunteering in connection to heritage



Source: Taking Part Survey, 2011-16. Cebr analysis

Anecdotal evidence from our primary research indicates that volunteers in the heritage sector play a key role in facilitating the operation of the sector. For example, some of the organisations that we surveyed reported that without the time and effort given freely by volunteers, the effectiveness of their activities and engagements would significantly decline.

Our survey evidence also suggests that volunteers in the heritage sector dedicate significant amounts of time, knowledge and expertise in a wide range of high-skilled and low-skilled activities, including running temporary events and exhibitions, regular “front of house” duties, research activities and administrative duties. A majority of the organisations surveyed also indicated that volunteers were involved in fundraising and outreach activities. Participating in collective activities such as these can improve the skills and knowledge of volunteers and help them develop professional networks.

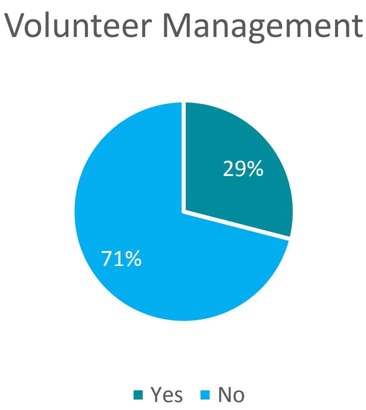
A significant part of innovation in creative industries is defined as ‘soft innovation’, unobservable or at least less observable than tangible products, networking through volunteering is thus likely to be an opportunity to showcase individual creativity.

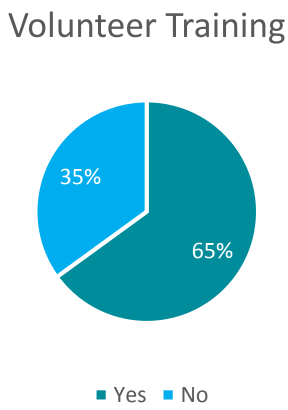
For example, some of the organisations that we surveyed reported that the exposure through heritage leads, in some cases, to individual volunteers gaining professional work. Particularly, heritage organisations in the construction sector reported that there is a shortage of heritage tradesmen and that volunteering is important in closing the gap. CLA which took part in our in-depth interview stated that some of their volunteers are currently training to be committee members and officers.

Given the vital role played by volunteers, a considerable share of the organisations in the heritage sector offers schemes aimed directly at attracting and nurturing the skill set of volunteers. As illustrated in Figure 21, of the organisations that we encountered through our survey and in-depth interviews, 29 per cent offered volunteer management programmes, while 65 per cent provided volunteer training.

In addition to skills development, programmes such as these offer young people a role in leading and shaping their own lives and activities, allowing them to take responsibility for their own learning. Heritage activities are understood to support wellbeing of both young and elderly volunteers by increasing life satisfaction and perceived health.

Figure 21: Heritage organisations which offer: Volunteer Management Programme and Volunteer Training

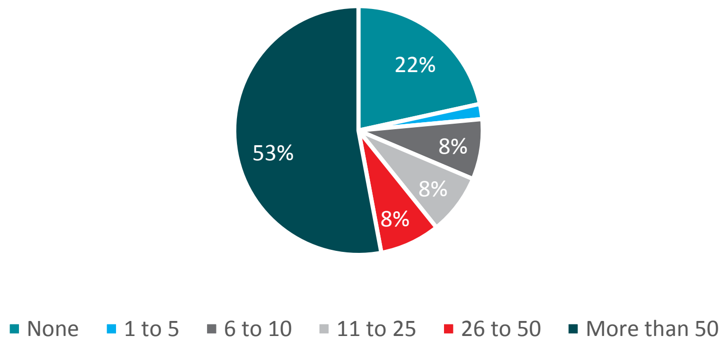




Source: Cebr survey and analysis, 2018

Furthermore, the organisations surveyed were asked to state the number of volunteers they employed in the latest available financial year. 53 per cent of the organisations reported that they employ more than 50 volunteers on a regular basis. Given that over 70 per cent of the organisations that we surveyed had fewer than 50 employees, this suggests that a considerable proportion of the workforce of these organisations are made up of volunteers.

Figure 22: Heritage volunteers employed by organisations surveyed



Source: Cebr survey and analysis 2018

6.2 Heritage as a catalyst for improving community wellbeing and economic regeneration

The arts and culture industry has often been seen to be effective in stimulating local economic development and regeneration with the premise of creating local areas that attract skilled artists and creative businesses needed to fuel the local economy[7].

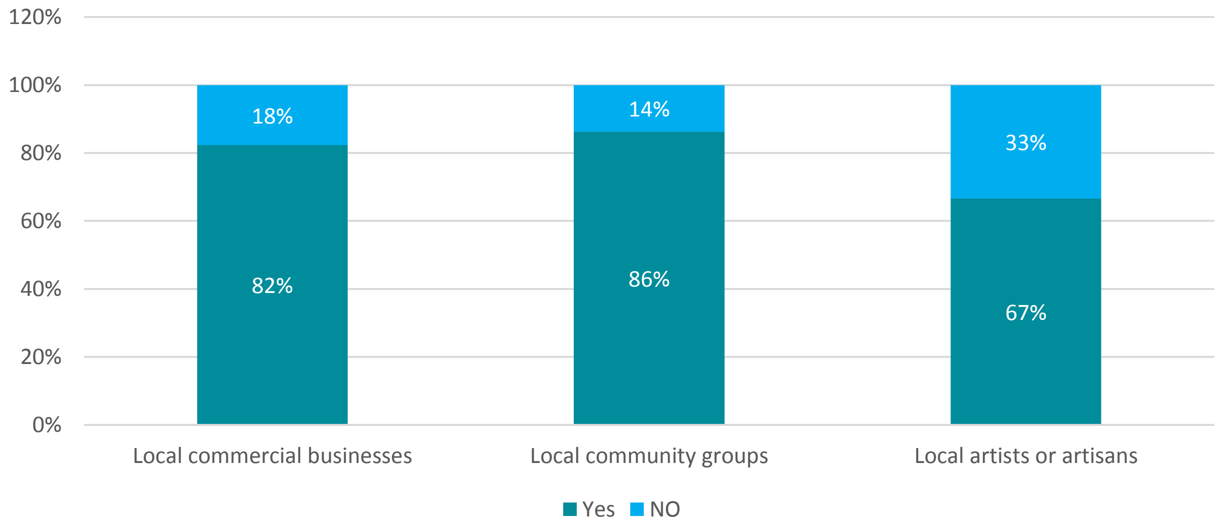
The evidence from our primary research carried out as part of the study demonstrates the apparent breadth of the links between organisations in the heritage sector and the local economies. For instance, as illustrated in figure 23, 82 per cent of the organisations surveyed reported that they support or employ local commercial businesses. This suggests that local businesses are part of the heritage sector`s supply chain. Similarly, 86 per cent of organisations surveyed support local community groups. While 67 per cent indicated that they support or employ local artists and artisans.

When asked what prompted them to offer these schemes, most of the organisations that took part in our in-depth interviews reported that development of next generation talent and providing opportunities to local artists are at the heart of their mission.

Many of these organisations also emphasised the importance of offering high quality heritage to their local community. They particularly stressed the importance of connecting their offer to their geographical surroundings and considered this as an important factor in making a local impact.

Partnerships with local heritage organisations are also understood to help spread knowledge of opportunities and available resources to local businesses. While we did not find systematic evidence to confirm the assertion, anecdotal evidence suggests that partnerships with local heritage organisations are an important source of innovation and creative ideas for local community groups and artists.

Figure 23: Regularly employ or work closely with:



Source: Cebr survey and analysis 2018

[7] Northall, P., 2008. Culture Led Regeneration & Local Art Communities. Centre for Local Economic Strategies: Manchester, p.1.

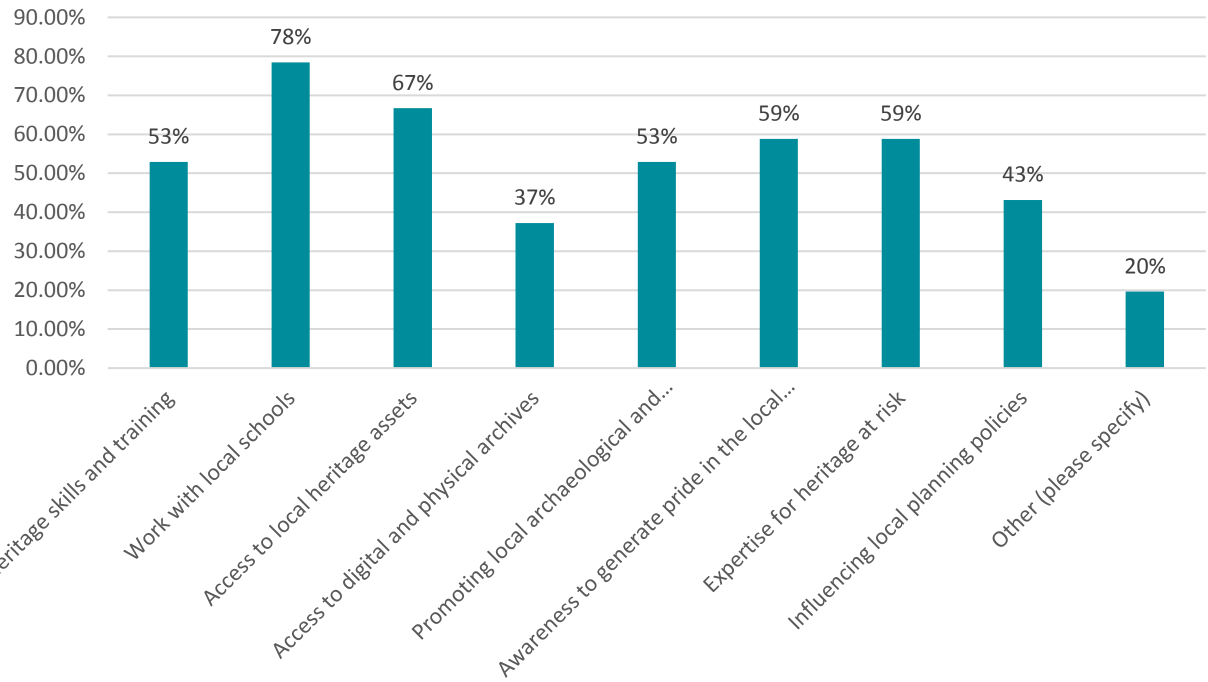
Further evidence collected during our primary research found that organisations in the heritage sector play an important role in their community, through outreach work, partnerships with local schools and support for local heritage sites and assets.

For example, Urban Vision Enterprise CIC, a partnership between a community interest company and a registered charity delivering community-led regeneration which took part in our survey, reported that they were involved in drafting planning policies, feasibility studies and business planning, and advising on heritage strategies. Blackburn Cathedral, which also took part in our survey, reported that they are currently developing a multi-use conferencing, exhibition, education and community space through Heritage Lottery Fund.

Figure 24 below shows a breakdown of the range of outreach activities undertaken by the heritage organisations surveyed. 78 per cent of the organisations surveyed reported that they work with local schools and educational establishments. 67 per cent indicated that they promote physical and intellectual access to local heritage. While over a half of the survey participants indicated that they provide heritage skills and training courses. An equivalent proportion of the survey participants reported that they provide expertise for heritage at risk.

Similarly, about 59 per cent of the participants stated that they promote local archaeological and historic sites and an equivalent proportion raise awareness to generate pride in the local environment. 43 per cent of the survey participants, mainly those involved in heritage construction, also reported that they seek to influence local planning policies as part of their outreach activities. Others indicated that they provide a wide range of services from consulting to restoration and conservation work.

Figure 24: Involved in the following outreach activities:



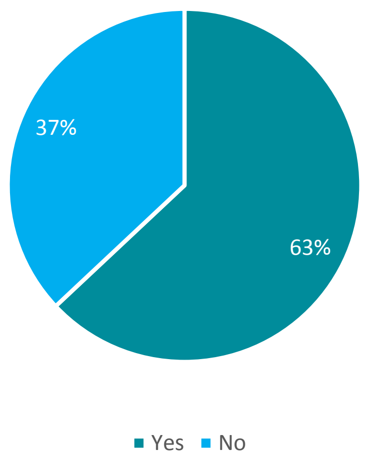
Source: Cebr survey and analysis 2018

Evidence from our primary research suggests that the benefits of heritage-led regeneration can be large when this is related to place. Heritage-led regeneration initiatives identify and make use of heritage assets and reinforce the qualities that make them significant to help stimulate environmental, economic and community regeneration. This includes historic buildings, landscape features and views.

As illustrated in Figure 25, approximately 63 per cent of the organisations surveyed reported that they were currently involved in heritage-led regeneration initiatives.

For example, Historic Houses, which took part in our survey, reported that the majority of the historic houses they represented are in active use as businesses, homes, tourism attractions or a combination of all three. This wide range of active uses reinforces the qualities that make these heritage assets significant, and helps stimulate environmental, economic and community regeneration.

Figure 25: Involved in heritage-led regeneration:



Source: Cebr survey and analysis 2018

The organisations that we interviewed also noted that it is rare for heritage-led regeneration to take place in isolation. Instead regeneration efforts usually form part of a broader strategy including, for example, the development of green spaces or revitalising commercial districts. For instance, Wells Cathedral reported that they work with partners in Wells to create a "medieval quarter” in order to conserve heritage and promote tourism with the end goal of fostering local economic growth.

The few heritage organisations in the construction sector that we interviewed also reported that there are strong dependencies within the construction sector on heritage skills, knowledge and expertise. This includes the repair, maintenance and conservation of historic buildings as well as archaeological surveying for major infrastructure projects.

The above anecdotal evidences suggest that the heritage sector is indirectly a significant source of support for jobs in the local economies. This, along with the indirect impacts through other sectors of the economy and through induced employee spending impacts, is reflected in the direct and multiplier impacts presented in Section 4.

Lastly, as part of our in-depth interviews, we explored whether, against a backdrop of large cuts in local government spending, raising funds for heritage investment has been challenging in recent years. The general insight is that a majority of the organisations interviewed reported a difficult yet dynamic operating environment. Particularly, the organisations we interviewed suggested that the scale and speed of the public funding cuts presented new challenges.

Among the many issues raised, the intense pressure to generate additional income streams in an increasingly competitive business environment was extensively reported. By working closely with local authorities, Historic England and other public bodies, many of the organisations we interviewed noted that they have been able to survive and indeed thrive through new commercial practices and business models. Some of the organisations surveyed suggested that the change in the way in which they operate as a result of the public funding cuts has made them more entrepreneurial and business-like.

Appendix I: Breakdown of the workforce of England's heritage sector

***Appendix I**.: Workforce of England's heritage sector, 2011-2016. Thousands*

Constituent industries of the heritage sector England	2011	2012	2013	2014	2015	2016
Workers in the museum sub-sector	10	10	8	10	11	13
Workers in the historical sites & buildings sub-sector	3	3	2	2	2	2
Workers in the archives sub-sector	45	44	42	46	53	58
Heritage workers in the building completion and finishing sub-sector	33	34	32	27	39	37
Heritage workers in the other specialised construction activities subsector	9	8	10	10	10	11
Archivists and curators in all industries	5	5	4	4	4	5
Archaeologists in all industries	9	11	9	9	14	11
Conservation professionals in all industries	7	8	7	7	10	7
Conservation and environmental associates in all industries	3	2	3	2	3	2
Gardeners & nature reserve heritage workers	10	8	11	11	10	11
Architects working with heritage	3	3	3	4	3	3
Town planning officers working with heritage	12	12	12	11	11	14
Chartered surveyors working with heritage	3	3	3	3	4	5
Building and civil engineering technicians working with heritage	10	10	8	10	11	13

Source: ONS Business Register and Employment Survey 2011-16, Cebr analysis

Appendix II: Technical notes related to approach and methodology used in the study

***Appendix IIA**: Technical note GVA*

Type of indicator : GVA	Data source	Estimation method and assumptions
Regional GVA estimates	Regional GVA Estimates (income approach) and Annual Survey of Hours & Earnings, both ONS	Economic output from heritage was estimated using a method adapted from that used in the DCMS Creative Industries Economic Estimates, and requires heritage employment estimates to have been calculated. The Annual Survey of Hours & Earnings was used to calculate median earnings for relevant heritage sectors and occupations. Given the insufficient sample sizes at regional level, estimates for the UK as a whole were used; these were weighted by region according to the ratio of total median earnings per region and the overall national average. Median earnings for relevant heritage sector and occupations were then multiplied by employment numbers to derive weighted total earnings for the heritage sector of each region. This was then divided by total weighted earnings of all industries of the respective region to arrive at the share of total earnings which heritage accounts for. Lastly, this share was applied to the ONS regional GVA estimate to estimate total heritage GVA for each region.

Source: Cebr analysis

__Appendix IIB__. Technical note workforce

Type of indicator : Workforce	Data source	Estimation method and assumptions
Workers in the museum sub-sector	Business Register & Employment Survey (BRES). SIC code: 91020 Annual Population Survey (APS)	To avoid double-counting between APS and BRES, defined heritage professions in the museum subsector such as Archaeologists, Conservation professionals etc. were stripped out using a SIC-SOC mapping process.
Workers in the historical sites & buildings sub-sector	Business Register & Employment Survey (BRES). SIC code: 91030 Annual Population Survey (APS)	To avoid double-counting between APS and BRES, defined heritage professions in the museum subsector such as Archaeologists, Conservation professionals etc. were stripped out using a SIC-SOC mapping process.
Workers in the archives sub-sector	Business Register & Employment Survey (BRES). 91012 Annual Population Survey (APS)	To avoid double-counting between APS and BRES, defined heritage professions in the museum subsector such as Archaeologists, Conservation professionals etc. were stripped out using a SIC-SOC mapping process.
Heritage workers in the building completion and finishing sub-sector Heritage workers in the other specialised construction activities subsector	Business Register & Employment Survey (BRES). SIC code: 433 & 439 Annual Population Survey (APS) The English Heritage report Skills Needs Analysis 2013 Repair, Maintenance and Energy Efficiency Retrofit of Traditional (pre1919) Buildings in England and Scotland.	The number of people involved in heritage building craft skills in England was divided by total employment in built environment sectors, to arrive at a coefficient. This was then applied to the relevant BRES data. In addition, SIC-SOC matrices were used to avoid double-counting between APS and BRES.
Archivists and curators in all industries	Annual Population Survey (APS). SOC code: 2452 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. This was done to avoid double-counting between APS and BRES.
Archaeologists in all industries	Landward Research report Archaeology Labour Market Intelligence. Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. This was done to avoid double-counting between APS and BRES.

Conservation professionals in all industries	Annual Population Survey (APS). SOC code: 2141 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. This was done to avoid double-counting between APS and BRES.
Conservation and environmental associates in all industries	Annual Population Survey (APS). SOC code: 3550 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. This was done to avoid double-counting between APS and BRES.
Gardeners & nature reserve heritage workers	Annual Population Survey (APS). SOC code: 5113. Business Register & Employment Survey (BRES)	Gardeners & nature reserve workers involved in holiday centres and villages and general public admin activities were isolated using a SIC-SOC mapping process. This was done to avoid double-counting between APS and BRES.
Architects working with heritage	Annual Population Survey (APS). SOC code: 2431 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. To isolate heritage employment, coefficients were calculated based on the proportion of pre-1919 building stock in each region. These were derived from Council Tax: Stock of properties data from the VOA.
Town planning officers working with heritage	Annual Population Survey (APS). SOC code: 2432 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. To isolate heritage employment, coefficients were calculated based on the proportion of pre-1919 building stock in each region. These were derived from Council Tax: Stock of properties data from the VOA.
Chartered surveyors working with heritage	Annual Population Survey (APS). SOC code: 2434 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. To isolate heritage employment, coefficients were calculated based on the proportion of pre-1919 building stock in each region. These were derived from Council Tax: Stock of properties data from the VOA.
Building and civil engineering technicians working with heritage	Annual Population Survey (APS). SOC code: 3114 Business Register & Employment Survey (BRES)	Using APS data at regional level, SIC-SOC matrices were constructed to examine the distribution of employment by SIC and SOC, and to identify the intersection. To isolate heritage employment, coefficients were calculated based on the proportion of pre-1919 building stock in each region. These were derived from Council Tax: Stock of properties data from the VOA

Source: Cebr analysis

***Appendix IIC**. Technical note multiplier impacts*

Type of indicator : Multiplier impacts	Data source	Estimation method and assumptions
Multiplier impacts of GVA and Employment	ONS supply-use tables and Cebr input-output models.	The national accounting data in the supply-use tables provide detailed information for a given year on production activities, the supply and demand for goods and services, intermediate consumption, Primary inputs (factors of production) and foreign trade. The multiplier impacts are estimated using Cebr`s in-house input-output models, which draw on the ONS' national accounting framework. The input-output models identify the industries from which the heritage sector purchases its inputs and trace the sector's economic footprint. In so doing, it provides the foundation for establishing the economic size (direct impact) of heritage, and the wider economic impact on the national and regional economies. We use the multipliers along with the direct impacts data to produce estimates of the total impacts of the sector through the supply chain response (indirect impacts) and through the income from employment generated and spent in the wider economy (induced impacts). We produce these impacts for England as a whole before analysing regional differences.

Source: Cebr analysis

***Appendix IID**. Technical note heritage tourism*

Type of indicator: heritage tourism	Data source	Estimation method and assumptions
Domestic trips and spending related to heritage	GB Tourism Survey (GBTS), Visit Britain	The approach taken to apportion the figures for heritage-related tourism uses an activities-based definition. GBTS provides a national breakdown of the data by activities undertaken, which enabled us to derive a proportion for heritage activities undertaken as a share of all activities undertaken by visitors. The following categories were classed as 'heritage' to create this coefficient: • Visiting a historic house, stately home, palace • Visiting a cathedral, church, abbey or other religious building • Visiting a country park • Visiting a garden • Visiting a castle/other historic site • Visiting an art gallery • Viewing architecture and buildings • Visiting a museum

Domestic day visits and spending related to heritage	Great Britain Day Visits Survey (GBDVS), Visit Britain	The approach taken to apportion the figures for heritage-related tourism uses an activities-based definition. GBDVS provides a national breakdown of the data by activities undertaken, which enabled us to derive a proportion for heritage activities undertaken as a share of all activities undertaken by visitors. The following categories were classed as 'heritage' to estimate the heritage-related share of trips and spend: • Visited a country park • Visited a garden • Visited an art gallery • Visited a cathedral, church, abbey or other religious building • Visited a historic house, stately home, palace • Visited a museum • Visited a castle/other historic site • Viewed architecture
International tourism related to heritage	International Passenger Survey, ONS	The approach taken to apportion the figures for heritage-related tourism uses an activities-based definition. IPS provides a national breakdown of the data by activities undertaken, which enabled us to derive a portion for heritage activities undertaken as a share of all activities undertaken by visitors. The following categories were classed as 'heritage': • Went to countryside or villages • Visited religious buildings • Visited museums or art galleries • Visited castles or historic houses • Visited parks or gardens

Source: Cebr analysis

Appendix III: Cebr`s heritage survey 2018 participants list

Appendix III.: Cebr`s heritage survey 2018 participants list

Survey participants
Alan Baxter Limited (survey + in-depth-interview)
Bath Abbey
Birmingham Conservation Trust
Blackburn Cathedral
Bradford Cathedral
Bridlington Priory Church
Bristol Cathedral
Buttress Architects Ltd (survey + in-depth-interview)
Carlisle Cathedral
Catholic Bishops' Conference of England and Wales
Chester Cathedral
Christ Church
CITB
City of Westminster
CLA (survey + in-depth-interview)
Conchie & Co: Community, Heritage and Learning
Cornwall Archaeological Unit
Cornwall Council (survey + in-depth-interview)
Coventry Cathedral
Derby Cathedral
Doncaster Minster
Durham Castle & Cathedral World Heritage Site
Giles Quarme & Associates
Guildford Cathedral
Hereford Cathedral
Heritage Trust Network
Historic England
Historic Houses
Leicester Cathedral
Listed Building Surveys Ltd (survey + in-depth interview)
Liverpool Cathedral
Local government historic environment record
London Parks & Gardens Trust

Martin J Clayton Ltd
Museums Association (survey + in-depth-interview)
National Parks England (in-depth-interview)
North Somerset Council (survey + in-depth-interview)
Past Wight Archaeological Consultancy
Pershore Abbey
Ripon Cathedral
Robinson Wild Consulting
Rochester Cathedral
Sheffield Cathedral
St Albans Cathedral
St Martin in the Bull RIng
Stone Federation GB (survey + in-depth interview)
Suffolk Preservation Society
Touchstone Glazing Solutions Ltd
U + I (in-depth-interview)
University of Suffolk
Urban Vision Enterprise CIC
Wells Cathedral
Westminster Abbey
Worcester Cathedral

Source: Cebr heritage survey 2018