

Institution: University of the Highlands and Islands (UHI)		
Unit of Assessment: 15		
Title of case study: Neolithic archaeology: contributions to the growth of tourism in Orkney and beyond		
Period when the underpinning research was undertaken: 2000-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Jane Downes	Professor	1999-2020
Nick Card	Research Associate, Director of Ness of Brodgar excavations	2006-2020
Ingrid Mainland	Snr Lecturer	2010-2020
Scott Timpany	Lecturer	2013-2020
Antonia Thomas	Lecturer	2017-2020
Colin Richards	Professor	2017-2020
Period when the claimed impact occurred: January 2014-July 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact <p>Research into Orcadian Neolithic archaeology by the University of Highlands and islands (UHI) has created the conditions for substantial regional economic growth. This includes fieldwork undertaken by staff at UHI's Archaeology Institute, both within and beyond the World Heritage zone known as the 'Heart of Neolithic Orkney'. The research has enabled the development of heritage tourism, as well as associated infrastructure and goods. It has also delivered cultural impact through a range of media changing the perceptions of a global audience. In turn, coverage has driven engagement with archaeological research among local citizens, helping local communities to understand and appreciate their heritage.</p>		
2. Underpinning research <p>The long-term research into the Neolithic period of Orkney - particularly in the World Heritage Sites (WHS) and buffer zone by current UHI Archaeology Institute staff - began with the discovery and excavation of Barnhouse and fieldwork at satellite sites including Maeshowe [3.1]. This research helped make the case for the 'Heart of Neolithic Orkney' to be established as a WHS which was granted in 1999 (https://whc.unesco.org/en/news/165/). The subsequent establishment of a WHS research strategy [3.2] resulted in further field-based research leading to a range of discoveries such as the Ness of Brodgar [3.3] and further fieldwork at Maeshowe passage grave, Ring of Brodgar, and the Stones of Stenness [3.4].</p> <p>Beyond the World Heritage Sites, a substantial number of Neolithic sites and 'settlement landscapes' have been discovered and continue to be investigated by UHI Archaeology Institute staff. These include: Vestra Fiold (Richards), Ha'Breck (Thomas), Knowes of Troty (Downes), Wideford Hill, Stonehall, Smerquoy (all Richards), Crossiecrown (Card & Richards) [3.5] and Cata Sand (Downes & Richards). Taken together, this substantial body of research has enabled sophisticated charting of Orcadian Neolithic settlement history, unparalleled elsewhere in northern Europe [3.5; 3.6].</p> <p>Continued research by Institute staff at the Ness of Brodgar [3.3], the Ring of Brodgar [3.4] and the wider WHS landscape [3.6] adding to previous results from Barnhouse - has radically transformed understanding of Neolithic dwelling practices and monument construction. This covers the WHS 'Heart of Neolithic Orkney' and buffer zone, including the extraordinary density of settlement adjacent to these great monuments. UHI excavations continue at the Ness of Brodgar (2008-2020) uncovering a vast settlement complex with stone-built monumental structures. Currently, more than 30 structures have been discovered, many standing over a metre tall covering an area of c.3 hectares. Described as the most spectacular Neolithic architecture in northwest Europe, the sheer scale and visual spectacle of the numerous monuments and ongoing Ness of Brodgar excavations have ensured continual national and</p>		

international academic interest together with widespread coverage in the mainstream media. This long-term research programme has helped to elevate the status of Neolithic Orkney to be perceived as a claimed 'cultural capital of the ancient world'.

3. References to the research

- 3.1. **Downes, J. & C. Richards**, 2005. The dwellings at Barnhouse, in C. Richards (ed.) *Dwelling among the monuments: the Neolithic village of Barnhouse, Mashowe passage grave and surrounding monuments at Stenness, Orkney*. Cambridge: McDonald Institute Monograph, 57-128.
- 3.2. **Downes, J.**, S. M. Foster, C. R. Wickham-Jones & J. Callister, 2005. *The Heart of Neolithic Orkney World Heritage Site Research Agenda*. Edinburgh: Historic Scotland.
- 3.3. **Card, N., I. Mainland, S. Timpany**, R. Towers, C. Batt, C. Bronk Ramsey, E. Dunbar, P. Reimer, A. Bayliss, P. Marshall & A. Whittle, 2018. To cut a long story short: formal chronological modelling for the late Neolithic site of Ness of Brodgar, Orkney. *European Journal of Archaeology* 21(2): 217-63.
- 3.4. **Downes, J., C. Richards**, J. Brown, A. J. Cresswell, R. Ellen, A. D. Davies, A. Hall, R. McCulloch, D. C. W. Sanderson & I. A. Simpson, 2013. Investigating the great Ring of Brodgar, Orkney, in C. Richards (ed.) *Building the Great Stone Circles of the North*. Oxford: Windgather Press, 90-118.
- 3.5. **Richards C.** & R. Jones (eds.) 2016. *The development of Neolithic house societies in Orkney*. Oxford: Windgather Press. (Richards led the project on which this book is based and was lead author and editor).
- 3.6. **Brend, A., N. Card, J. Downes**, M. Edmonds & **J. Moore** (eds.) 2020. *Landscapes revealed: remote sensing across the Heart of Neolithic Orkney World heritage Site*. Oxford: Oxbow Books.

4. Details of the impact

'Unquestionably among the most important Neolithic sites in Western Europe' are those in Orkney' states UNESCO, further describing them as 'monumental masterpieces', with the group constituting 'a major relict cultural landscape graphically depicting life in this remote archipelago north of the coast of Scotland five thousand years ago' (<https://whc.unesco.org/en/news/165/>). UHI Archaeology Institute research informs the interpretation and presentation of these sites to a world-wide audience enabling enhanced and far-reaching appreciation of this extraordinary expression of Neolithic culture. Between summer 2014 and 2020 more than 700,000 people visited the WHS *Heart of Neolithic Orkney* in what is a remote archipelago of ~ 22,000 inhabitants. The robust data for increased visitor numbers during the REF period relates to WHS Skara Brae and the Ness of Brodgar only. Many other archaeological sites such as Ring of Brodgar, Stones of Stenness and Barnhouse are unattended, and freely accessible to visitors. WHS Skara Brae saw an increase of ~ 26,000 during the period with a notable increase in 2017 (Fig. 4.1). Open day numbers at the Ness of Brodgar follow this trajectory, both benefiting from and reflecting enhanced media attention based on ongoing UHI research. For example, of visitors surveyed 64% knew of the UHI Ness of Brodgar excavations in advance and 63% said it was very important/important in their decision to visit Orkney [5.1, p12].

4.1 Economic impact

Member of the Scottish Parliament (MSP), Liam McArthur says that ongoing UHI research projects in the WHS "are a major tourism draw for Orkney and the excavation [Ness of Brodgar] has been demonstrated to be a key driver in the visitor economy" [5.2], a sentiment mirrored by Orkney islands Council in recognising 'the short term local economic value of this project is exceptionally high and the long-term awareness raising potential is enormous' [5.9, annex A].

UHI archaeological research has indeed made a substantial economic contribution to the local economy through the large increase in independent tourists visiting Orkney during the REF 'impact' period. Many visited archaeological sites, particularly the accessible ongoing excavations at the spectacular Ness of Brodgar. The rise in independent tourist numbers - from 142, 816 in 2014 through to 174,273 in 2017, with an additional 113,000 cruise liner passengers

– increase tourist revenue from £31m to £50m [5.3]. Overall, this increase has helped to transform the local economy and in 2017 more than half (62%) of all visitors were ‘heritage tourists’, with 40% identifying that archaeology as the main reason for their visit. [5.6, p29]. Approximately 80% of tourists visit an archaeological site in Orkney, and as a proportion this far exceeds Shetland (57%) and the Outer Hebrides (44%) although both island groups have outstanding archaeological remains. However, the research and presentation of Orkney archaeology has become a model for their own economic development [5.4, p 15-7].

Neolithic archaeology, particularly excavations at the Ness of Brodgar, offers substantial economic impacts to the local community (5.5, p12). Economic beneficiaries include tour guides, accommodation, service providers, and transport companies. There are now 28 Orkney-based tour companies noted in a guide list provided by the Visit Orkney Tourist Information Centre in Kirkwall. Fully three-quarters of these businesses highlight Neolithic archaeology on their websites and/or other promotional material [5.5, p6]. Specialist/guided tours frequently visit the Ness of Brodgar during the excavation period, 59 such guided parties – a total of 770 people - visited the site in 2018-19. This is summarised in table 4.1 [5.5, p13-14].

Table 4.1 Economic impact of ‘heritage visitors’ to Orkney

<i>Period</i>	<i>No. of Site Visitors</i>	<i>No. of Visitors (excluding Orkney Residents)</i>	<i>No. of visitors for whom Ness of Brodgar was Very Important</i>	<i>Average Tourist Visitor Length of stay (Nights)</i>	<i>Average Daily Expenditure GBP</i>	<i>Total Expenditure during trip to Orkney GBP</i>
2012-19	101,250	87,075	25,252	5.3	68	9,100,821
2018	18,200	15,652	4,539	5.3	68	1,635,856
2019	18,500	15,910	4,614	5.3	68	1,662,886

As an example, multiplying an average stay of 5.3 nights and £68 daily expenditure [5.6, p53; 5.5, p14], by the number of visitors for whom the Ness of Brodgar was *very important* in their decision-making [5.1] generates a total expenditure figure for 2019 of £1,662,886 [5.5, p14]. The number of local jobs supported by this spending can be estimated by applying the ratio of £50,000 expenditure:1 FTE job (including multiplier) giving a total of 31 local jobs created in 2019 [5.5, p16].

Locally, exhibitions such as 2015’s *Art and Artefacts – Ness of Brodgar* helped to push the annual number of visitors to Stromness museum over 11,000 for the first time (11,976 in 2015, an increase of 3,606 on the 2014 figure of 8,370, a normal annual figure between 2000 and 2014). The 30% increase in visitor numbers in 2015 - substantially attributed to the exhibition - helped to improve the 2015 financial performance of the independent Stromness Museum [5.7]. Neolithic archaeology is generating wider economic impact, such as the July 2019 launch by Highland Park of 5000 bottles of its highly successful limited-edition *Ness of Brodgar* malt whiskey (sold out).

4.2 Changing perceptions of Orkney and its Neolithic heritage through media exposure

Wider appreciation of the spectacular nature of Orcadian Neolithic archaeology is enhanced by UHI research in the WHS ‘Heart of Neolithic Orkney’ zone [3.1 - 3.4] and beyond [3.5 – 3.6]. The research continues to compile evidence of a complex and rich Neolithic society living more than 5000 years ago. Awareness and appreciation of this society has reached a worldwide audience via social media, TV and radio, newspapers, magazines, and public lectures. Between 2016 and 2020 the Ness of Brodgar excavations/Neolithic Orkney appeared more than 600 times in the national and international media, and the Ness of Brodgar over half a million website and Facebook visits (5.5, p11).

In August 2014, a front-page feature in National Geographic Magazine showcased UHI research within the WHS 'Heart of Neolithic Orkney' [5.8a]. The UHI excavations established a claim to Orkney as a 'cultural capital of the ancient world'. This precept formed the basis of a 2017, three-part, BBC documentary which not only altered overseas perceptions of the archaeology of Orkney but also engendered internal pride and shift in appreciation by local communities of the world-class significance of their archaeological heritage. The series – *Britain's Ancient Capital: Secrets of Orkney* – was based on the UHI excavations in the WHS area and generated an audience of 2.1m viewers, almost 9% of the total available UK audience [5.8b]. The series was 'infectiously enthusiastic', according to a review in *The Daily Telegraph* [5.8c]. It also caught the popular imagination by proposing that a number of ancient customs and artefacts – including stone circles and pottery – originated in the rich cultural milieu of Neolithic Orkney, including the structure of Stonehenge. Other, earlier programmes – such as BBC2's *Orkney's Stone Age Temple – A History of Ancient Britain Special*, presented by Neil Oliver [5.8d] – have now been viewed more than three million times, and are regularly repeated on terrestrial television.

In addition, in 2017 a BBC News Channel Travel Show featuring Neolithic archaeology reached an estimated 350 million worldwide [5.8e]. As an indication of the effect of the substantial media coverage in 2017, the number of tourists visiting WHS 'Heart of Neolithic Orkney' increased considerably that year, as shown in Figure 4.1. Social media amplifies the reach and awareness of Neolithic archaeology. The Ness of Brodgar's Facebook page attracted more than 290,000 views and its website more than 137,000 page views over a six-week period in 2019 [5.5, p11].

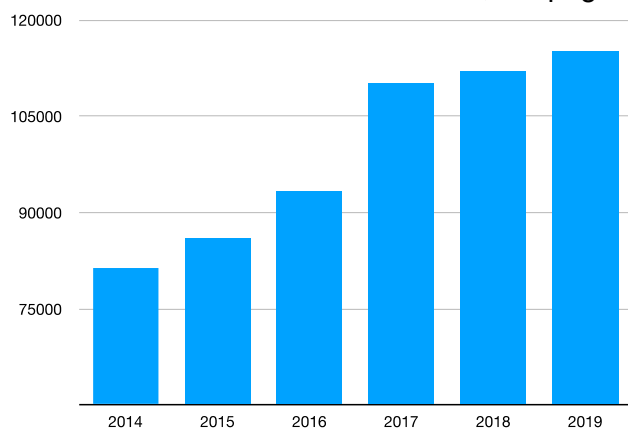


Figure 4.1. Increasing visitor numbers for WHS Heart of Neolithic Orkney Skara Brae: note the 2016-17 jump from 93,375 – 110,028 visitors (source: Historic Environment Scotland).

4.3 Further engagement in heritage as a consequence of UHI Neolithic research

Visitor numbers to the Ness of Brodgar reached over 18,500 during the 2019 excavation period, and two Open Days had over 1000 visitors each day; Some 83% of visitors to the Ness of Brodgar excavations (sample size 750) state that the experience had increased their interest in archaeology/heritage, while 82% said they were more likely to visit further archaeological sites in Orkney [5.1]. Research-based narratives of the Neolithic Age through a broad array of media coverage have had substantial impact locally, leading to greater engagement with heritage and fostering community-based research. As an example, Orkney Islands Council sponsored a successful 2019-21 National Lottery Grant of £60K for a Neolithic 'Tombs o' the North' project, under which local communities are researching and conducting fieldwork in six of the Northern Isles to produce Neolithic chambered tomb trails. This enhances island heritage and local tourism in outlying areas. Equally, community involvement in the Cata Sand excavations of a coastal eroding Neolithic settlement in Sanday enhanced local understanding of the effect on island communities of rising sea levels, coastal erosion, and climate change. In conclusion, it is challenging to capture the numerous ways in which Neolithic archaeology, specifically, has become embedded in the local community through societies, museum groups, volunteers and in particular, school projects and classes; as MSP Liam McArthur says 'I would wish to note for the record the considerable investment in time in engaging local schools and young people in what

is happening at the Ness of Brodgar' [5.10]. In short, Neolithic archaeology is efficacious in the social and economic fabric of Orkney – and beyond.

5. Sources to corroborate the impact

- 5.1. *Report Ness of Brodgar visitor survey 2019*, J. E. Sybenga. (pdf)
- 5.2. 2018 Letter from Liam McArthur MSP for Orkney
- 5.3. Orkney Volume Tourist Management Study: interim update report to Orkney Islands Council 2017 (pdf)
- 5.4. Economic impact of Orkney archaeology to Outer Hebrides: ekos 2017 (pdf)
- 5.5. Brian Burns 2020 Economic impact of Ness of Brodgar Report (pdf)
- 5.6. Orkney Visitor Survey 2017 (pdf)
- 5.7. Letter from Ian Johnston, Chair of Orkney Natural History Society (Stromness Museum) (pdf)
- 5.8. Media coverage document (pdf)
- 5.9. Orkney Islands Council Development and Infrastructure Committee: 4 February 2020. Archaeological Investigations. Report by Executive Director of Development and Infrastructure.
- 5.10 2016 letter from Liam McArthur MSP for Orkney