

<b>Institution: University College London</b>
<b>Unit of Assessment: 17A – Geography, Environmental Studies &amp; Archaeology: Archaeology</b>
<b>Title of case study: Transforming the future of Silk Roads archaeology in Asia</b>
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>Research for the UNESCO trans-national World Heritage nomination of the Silk Roads led to a radical new policy framework for undertaking serial nominations (thematic groups of sites across state boundaries). The ‘Silk Roads Thematic Study’ transformed the attitudes of governments and heritage agencies in the region and had a major impact on conservation, management, interpretation and heritage tourism. This study was supported by a long-term site-specific project undertaken at the ancient city of Merv in Turkmenistan. By developing education strategies with local teachers and transforming national approaches to heritage (through conservation training, management planning, and interpretation) the ‘Ancient Merv Project’ is now an exemplar of best practice throughout the Silk Roads World Heritage Project.</p>
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>UCL Institute of Archaeology has conducted field research at the World Heritage site of Ancient Merv (Turkmenistan) since the early 1990s. Merv, one of the most important strategic centres on the Silk Roads, dates from the 6th century BC to the 13th century AD. In our first programme of research, led by Georgina Herrmann (then Reader in Archaeology at UCL) between 1992 and 2000 in collaboration with the British Museum and the National Institute for the History of Turkmenistan, the buildings were extensively documented and the evolution of this long-lived city was reconstructed and interpreted [a, b].</p> <p>Between 2002 and 2013 a team at UCL, led by Tim Williams (Senior Lecturer in Managing Archaeological Sites since 2002; Director of the Ancient Merv Project), conducted a further UCL-led programme of research at Ancient Merv, which underpinned the research of the Silk Roads Thematic Study. This more recent project focused on the archaeology of the Islamic city (7th–13th centuries AD) and encompassed a wide-range of detailed work including excavations, a systematic aerial survey using an Unmanned Aerial Vehicle, heritage management, interpretation and education. The team has developed various datasets including aerial imagery, GIS interpretations, extensive historical and contemporary photography, and high resolution laser scan data [c, d].</p> <p>The Merv project underpinned a second strand of research conducted between 2008 and 2013. The project team (Tim Williams, supported by UCL Research Assistants Paul Wordsworth and Gaygysyz Jorayev) carried out research in support of the UNESCO World Heritage Silk Roads serial trans-national nomination project. A <i>Silk Roads thematic study</i>, undertaken for ICOMOS (International Council on Monuments and Sites) between 2010 and 2013, aimed to help the 26 State Parties involved in the nomination to identify and conserve potential sites and provide a wider intellectual context for the Silk Roads, stretching from East Asia to the Mediterranean between the 2nd century BC to the 16th century AD. The project team explored a variety of data sources, examining site types, historic and modern maps, ecological and topographic information. The project mapped, in a GIS system, over 50,000 kilometres of routes, covering an area of 16 million square kilometres, and drew together data on over 10,000 individual sites. The data was subsequently analysed to explore geographical, chronological and socio-political variations in site types and through these to better understand the complexity of ancient Silk Road societies [e].</p> <p>In exploring the scale, range and geographic diversity of the archaeological evidence, a new holistic approach to the archaeology of the Silk Roads was developed which enabled the identification of key landscapes and sites across a wider area. This focused on ‘corridors of movement’ rather than narrowly defined ‘routes’ between large cities or spectacular monuments. The complexity of the archaeology, and the multifaceted character of the Silk Roads, was revealed, including the inter-relationship of activities, the impacts of political control on adaptation and development as well as shifting pathways of control and exploitation. The research led to a more nuanced appreciation of the impacts of the Silk Roads on communities, emphasising the significance of short to medium distance exchanges and the pivotal role of the central areas in promoting interactions. Importantly, it has also challenged the traditional east-west focus of Silk Roads dialogues by highlighting the north-south routes, particularly the interactions with the steppe</p>

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regions to the north and the South Asian societies to the south [e].

### 3. References to the research (indicative maximum of six references)

[a] Herrmann, G. (1997). Early and Medieval Merv: A Tale of Three Cities (Albert Reckitt Archaeological Lecture) *Proceedings of the British Academy* 94: 1–43. Available on request.

[b] Herrmann, G., & Kennedy, H. N. (1999). *Monuments of Merv: Traditional Buildings of the Karakum*. Reports of the Research Committee of the Society of Antiquaries of London, No. 62. London: Society of Antiquaries of London. Available on request.

[c] Williams, T. (2007) The city of Sultan Kala, Merv, Turkmenistan: communities, neighbourhoods and urban planning from the eighth to the thirteenth century. In Bennisson, A. & Gascoigne, A. (eds.) *Cities in the pre-modern Islamic world: the urban impact of religion, state and society*, London: Routledge, 42–62. Available on request.

[d] Williams, T. (2008) The landscapes of Islamic Merv, Turkmenistan: Where to draw the line? *Internet Archaeology* 25 [http://intarch.ac.uk/journal/issue25/merv\\_index.html](http://intarch.ac.uk/journal/issue25/merv_index.html); see also Williams, T. (2013) The Islamic cities of Ancient Merv, Turkmenistan (Part 1 The Archaeological Data Service). *Journal of Open Archaeology Data* (in press); available on request.

[e] Williams, T. (2013) *The Silk Roads: a thematic study*, Paris: ICOMOS. Output can be supplied by the HEI on request.

Quality of research is also demonstrated by the following peer reviewed research grants:

Williams, T. [PI] 2008–2009 Grant from British Academy for ‘Trade, pilgrimage and power: exploring the silk roads from the Oxus to Merv, Turkmenistan’ £7,480. Contributed to [e]. Williams, T. [PI] 2008–2010 Major Grant from the Getty Conservation Institute for ‘Ancient Merv Site Management Planning’ \$73,000. Led to [7], see below. Williams, T. [PI] 2010–2013 Major Grant from ICOMOS for ‘Silk Roads Thematic Study’ €17,180. Led to [e].

### 4. Details of the impact (indicative maximum 750 words)

The *Silk Roads thematic study* and the Ancient Merv Project have transformed inter-state working of governmental and heritage agencies in the Asian region and have had a major impact on the conservation, management and interpretation of Silk Road archaeology.

Listing as a World Heritage Site brings tourist and media attention, as well as access to international funding. The *Silk Roads thematic study* transformed the 26 partner countries’ approach to the nomination of trans-national and serial properties. It created a conceptual framework of ‘corridors of movement’ which now forms the basis of the Silk Roads World Heritage nomination strategy adopted by the 26 State Parties in 2011 [1] and implemented through two trans-national nominations in 2012 [2]. As a result two trans-boundary ‘corridors’ have now been submitted to UNESCO [3, 4] and several more transnational dossiers are underway, demonstrating that active trans-boundary working has been achieved by states working in partnership. In addition, the research has created an overarching vision for the Silk Roads Statement of Outstanding Universal Value (containing key references for the effective management and protection of the World Heritage Site) which was agreed amongst the State Parties in 2012 [2]. This agreement resolved more than 10 years of unfruitful discussion regarding chronology, site election, disparate tentative lists and the sites’ key attributes [1, 2]. The researchers have been actively involved in working to improve the quality and scale of trans-boundary co-operation (for example, a keynote speech by Tim Williams at a meeting of 26 foreign and tourism ministers, organized by the UNWTO in Berlin, March 2013 [5]). The impact of this trans-national approach was also reflected in a commission from UNESCO to undertake a series of South Asian workshops in April 2013 and to be repeated in April 2014, and to write a thematic study on the Silk Roads nomination process for India, Nepal, Bhutan and China in 2014.

UCL research into the scale, range and geographic diversity of the archaeological evidence of the Silk Roads changed the focus of the State Parties from simply focusing on large individual cities or spectacular monuments to a more holistic approach to the complexity of the Silk Roads archaeology. It has focused the attention of government and heritage agencies in the Asian region on key sites and landscapes and the project has had a major impact on site protection and

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management, as evidenced by the attention to the protection and interpretation of smaller sites, approaches to sustainable development and integrated education programmes in the nomination dossiers [3, 4]. Research also helped to show governments that a holistic approach to the Silk Roads would have beneficial impacts on tourism, leading to a series of high level government meetings to discuss and plan trans-national tourism initiatives [5]. The identification of smaller sites and landscapes, within broader corridors of movement, has provided the platform for a new United Nations World Tourism Organisation (UNWTO) approach to Silk Roads tourism [5].

**Impact on heritage conservation, preservation, interpretation and education in Central Asia**

In addition to providing a framework which focused State Party activities and the development of tourism in the region, our continuing research there has enhanced heritage preservation, conservation and presentation at the Merv Park World Heritage Site in Turkmenistan itself, and more widely in the region through skills, knowledge and resource transfers. Our first phase of collaborative work, led at UCL by Georgina Herrmann (1992–2000), led in 1999 to the listing of Merv itself as a World Heritage Site; Herrmann also contributed a five-year management plan to the listing bid document [6]. More recently, and during the REF impact census period, a team coordinated by Kirsty Norman (UCL-based Project Officer since 2007) in collaboration with the Ancient Merv Park and the Turkmen Ministry of Culture drafted a new 2012–17 Management Plan [7] for the World Heritage Site. Conservation work on site focused on the reburial of excavations, artefact conservation and museum storage. In addition, the team under the supervision of Louise Cooke (Project Research Assistant from 2003) carried out conservation work which addressed the particular needs of earthen architecture: examining reburial, sacrificial approaches and the role of traditional forms of maintenance [8].

Our research in earthen architecture conservation has developed the Turkmen approach to internationally recognised standards of minimum intervention, in contrast to the previous approach of extensive restoration [8]; this has led to more sustainable approaches including the revival of lost skills in traditional techniques of earthen material manufacturing and maintenance [9]. Capacity building in artefact conservation and museum storage, for Turkmen museum and park staff (14 individuals) and students (12 individuals) who do not otherwise have access to training between September 2011 and May 2013, has helped to establish more effective systems for the retrieval, storage, conservation and display of the archaeological objects in local institutions [9].

The management planning for the Merv World Heritage Site prompted specific advances in heritage protection, including the national implementation in January 2013 of 'buffer zones' (to prevent incursion up to their boundaries) for all the designated monuments in the country (5,000+) [9], and a Russian version has been requested by the other Central Asian republics. Two workshops for national heritage professionals, in 2011 and 2012, led by researchers on documentation and condition surveys significantly enhanced these processes in the country and have led to the revision and computerisation of the Soviet-era Monument Passport System enabling quicker/more efficient response to threats, by improving both the quality and dissemination of information [9]. These workshops, attended by 20 staff from the State Park Service, were the first of their kind in the region.

The research into 3D laser scanning undertaken at Merv in 2009 for documentation and monitoring of earthen architecture ([www.cyark.org/ancient-merv-intro](http://www.cyark.org/ancient-merv-intro)) has been used as a model for other programmes [10] and was selected as one of featured case studies at the launch of CyARK's 500 initiative (to document 500 of the world's most important heritage sites) in October 2013, demonstrating innovative applications of existing technologies (<http://archive.cyark.org/500/>).

In addition, an urban archaeological recording manual (adapted from previous work at the Museum of London) was developed, with specific modules designed to tackle the complexity of recording of earthen architecture and archaeology, the advanced in digital recording systems, and tackled Central Asia preservation conditions: this was produced in both English and Turkmen. This manual was widely disseminated (over 100 copies), which have influenced professional approaches to recording complex stratigraphy throughout the region (English version currently in use in Uzbekistan and Kazakhstan) [10]. The aerial survey work in 2011–2013 led to a redefinition of the boundaries of the Merv Park World Heritage Site in 2013, and discussions regarding the inclusion of the important early Islamic city of Shaim Kala [9,10].

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Archaeological excavations, landscape research, monument documentation and historic photographic research have provided detailed interpretive information which was synthesised in 2009 into a 'guides pack' and used to train and support tourism guides, enhancing the quality and range of interpretation, and diversifying destinations within the site [11]. The Teachers Handbook and workshops have substantially increased the use of the site by schools groups (c. 25 school visits in 2003 to c. 500 today), as well as transforming the approach to learning from a descriptive authorised discourse to evidence-based learning [11]. An adapted version of this handbook was requested by the park managers of all the seven State Archaeological Parks in Turkmenistan [10] and its reach was extended when the book was adapted to sites outside the region, e.g. for Tell Balata in Palestine, published in January 2013 [12]. In collaboration with local counterparts, therefore, the project was able to encourage positive changes in heritage management and heritage legislation in the country through influencing highest levels of the government in Turkmenistan and, through the ICOMOS research, all along the historic Silk Roads.

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

[1] UNESCO (2011) *Second meeting of the Coordinating Committee on the Serial World Heritage Nomination of the Silk Roads* (Ashgabat). <http://bit.ly/HqglJ1>. Corridors of movement [e] adopted as basis of the World Heritage nomination strategy.

[2] UNESCO (2012) *Recommendations for transnational heritage corridors of Silk Roads site nomination* (Tashkent) <http://bit.ly/1hcYrtG>. Corridors of movement [e] implemented through two trans-national nominations.

[3] China, Kazakhstan & Kyrgyzstan (2012) *World Heritage Nomination: initial section of the Silk Roads, the routes network of the Tian-shan Corridor*. Dossier submitted to UNESCO by State Parties showing impact on site protection. Not publically available until World Heritage Committee meeting 2014, but can be supplied on request.

[4] Tajikistan & Uzbekistan (2012) *World Heritage Nomination: Penjikent-Samarkand-Poykent Corridor*. Dossier submitted to UNESCO by State Parties showing impact on site protection. Not publically available until World Heritage Committee meeting 2014, but can be supplied on request.

[5] Example of a high-level government meeting to plan trans-national initiatives: UNWTO (March 2013) UNWTO Silk Road Ministers' Meeting at ITB Berlin. <http://bit.ly/1amx9aC>.

[6] Merv nomination documentation as a World Heritage Site. Herrmann's management plan begins on p. 44 of the PDF. <http://bit.ly/1b6j16i> [PDF].

[7] New management plan by UCL researchers. Norman, K. (ed.) (2012) *Ancient Merv, Turkmenistan: Management Plan 2012–2017*. Available on request.

[8] Conservation at Merv based on research: Cooke, L. (2010) *Conservation approaches to earthen architecture in archaeological contexts*. Oxford: Archaeopress. Available on request.

[9] Statement from the National Directorate for the Protection, Research and Restoration of Historical Monuments, Ministry of Culture, Turkmenistan on the impacts of the activities of the Ancient Merv project including sustainable approaches, capacity building, improved systems, and institution of buffer zones.

[10] Statement from the General Director of the Archaeological Expertise LLP, Kazakhstan on Merv 3D documentation as a model for their work in Kazakhstan, and use of Merv manual on complex stratigraphy by practitioners in Turkmenistan, Uzbekistan and Kazakhstan.

[11] Statement from Park Guide and local school teacher, Bairam Ali, Turkmenistan describing use of the guides pack developed from research to train guides and improve the interpretation for visitors and school groups.

[12] Statement from the Assistant Professor Archaeological Heritage Management (Uni. Leiden) on the Merv handbook as a model for the Tell Balata Archaeological Park Project, Palestine.