

# Understanding and attributing cultural heritage values to individual plants

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## Abstract

Plants create the structural, aesthetic, productive and seasonal elements of gardens and landscapes. Across the horticultural and botanical sectors, the aesthetic and scientific values of individual plants, as genetic resources or components of design or habitat, are well defined. For plants that may not be scientifically rare or unusual but are considered unique for their cultural heritage associations, the process for assessing their significance is less understood. The National Trust seeks to define and assign heritage significance to selected individual plant specimens, making them subject to conservation management processes, and to influence opportunities for visitor engagement. Previously, heritage values of individual plant specimens were rarely recorded and succession planting was often an automatic response to the loss of an iconic plant. This paper introduces an approach to the assessment of plant heritage significance and argues for a common understanding of heritage value across living and non-living collections.

## Introduction

The National Trust, as the largest single owner of gardens and collections of cultivated plants in Europe, is testing a process to catalogue garden plants with cultural, horticultural and ecological values in its custodianship. This includes recording values beyond the typical botanical database fields. Understanding the significance of a plant ensures the individual plant's inclusion in conservation planning and can provide themes and content for interpretation. It also has practical implications such as biosecurity risk assessments. Understanding the reason behind a plant's significance should also influence any decisions regarding its care and potential replacement. The decision to replace an iconic plant in a garden can have many approaches, all based on separate understandings of the plant's value to the garden.

Conservation, as the careful management of change, is dependent upon the understanding, communication and management of value. Landscape historians, horticulturists, botanists and ecologists are familiar with values, significance and protections placed on historic landscapes, priority habitats or plant groups. Individual plants that have a value relating to their rarity and their genetic resource benefit from processes and legislation that enable such plants to be categorised, their status recognised and the plant conserved. Nassauer (1995) acknowledges that cultural concepts of nature are different from scientific concepts of ecological function. A plant or group of plants that may not be scientifically rare or unusual can still be considered unique. This uniqueness may derive from the application of a value based

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on the plant's association with an event or person, thereby giving a cultural heritage value to the plant. Colleagues working with museum collections will be more familiar with the use of cultural heritage terms but the same values can also be applied to living plant collections.

The *Fagus sylvatica* (beech) tree planted by Queen Mary in the Arts and Crafts garden at Wightwick Manor near Wolverhampton (UK) is coming to the end of its life (Fig. 1). The tree has been assessed as being of cultural significance to the garden, as many trees there have been planted by notable people. The planting by Queen Mary cannot be reproduced but a planting by another notable person could; the significance for this plant specimen lies in the planter and not the plant.

## Assessing plant significance at the National Trust

Initial assessment is undertaken by garden staff as a desk-based review of existing documentation. This is supported by the Trust's regional Garden and Parks Consultants and the Plant Conservation team. The listing of a garden and parkland's significant plants is considered to be the minimum level of plant curation and is identified as such in the National Trust's Conservation Performance Indicators, an annual assessment of conservation management at each site. The significant plant list is a working document and is reassessed annually in order to respond to additional information. All data are recorded on the National Trust's plant database and areas for further research identified. Staff may also record other plants



**Fig. 1** Plaque (photographed in 2021) noting the beech tree planted by Queen Mary at Wightwick Manor. Photo: Dan Pooler.

in their gardens for botanical, maintenance, archive or other reasons.

The plants within the Trust's care are also supported by the Plant Conservation Centre, a specialist nursery created to propagate and distribute botanically or culturally important plants from plant specimens within the Trust, as well as working with other botanical institutions to further plant conservation both within the UK and internationally.

Not all the values in the National Trust's significant plant assessment relate to cultural heritage values, and some plants may have more than one value or be a component of group value. In addition to National Trust individual plant significance criteria, Tree Preservation Order criteria can also be used to assess individual value.

The National Trust's plant significance values are assessed using the following criteria:

- Historic or cultural: planted by a famous figure, relating to a significant event, an original introduction or an original cultivar
- Landscape or 'spirit of place': prominent or distinctive plants or planting associated with a property, or a current regional, country or UK champion tree. This includes many trees currently recorded as 'notable'
- Horticulture: part of a recognised plant collection, rare in cultivation (including rare fruit varieties in traditional orchards), have a name which reflects a property connection, or have a recognised atypical form
- Wild plant conservation: species of known wild origin growing *ex situ* or UK natives growing *in situ*; may also be part of a recognised *ex situ* conservation programme
- Nature conservation: ancient and veteran tree

Table 1 shows an example of a significant plant assessment.

The majority of plants with heritage associations are, unsurprisingly, trees. The potential cultural heritage value of trees was noted by William Gilpin (1791) in *Remarks on Forest Scenery*; he was aware of the attraction and veneration that veteran trees can evoke. He also mentions John Evelyn's (1776) book *Sylva*, which includes biographies of some significant and historic trees, including the Newstadt Lime whose limb-supporting props, some in the form of obelisks, were transcribed with inscriptions of notable visitors from as early as 1555. In Gilpin's (1791) own chapter, 'Celebrated Trees', he comments that 'as many trees, as well as men, have distinguished themselves in the world it seemed proper to dedicate a few pages to the particular mention of such celebrated characters'.

These comprise 16 pages of lists of notable trees, some with more detailed biographies including the Cowthorpe Oak, a well-known visitor attraction for 18th-century tree tourists. A 'Black Hamburg' vine was also admired. A similar list exists today as a Wikipedia (2021) 'List of individual trees' page. This features hundreds of 'notable trees from around the world, alive and dead, regarded as important or specific ... by their historical, national, locational, natural or mythological context'.

Many of us are familiar with a story and thereby an assumed value relating to a tree which was planted by a notable person or to mark an occasion, or a tree that is a survivor of or a witness to an event. These attributed values of a plant beyond genetics or aesthetics can be described using cultural heritage values, values that cannot be discussed without the consideration of authenticity and which may prompt verification through both historical research and DNA analysis.

**Table 1** Example of a National Trust significant plant assessment table for Hardwick Hall in Derbyshire (UK).

Plant	Information	Conservation approach	Location
<i>Cedrus libani</i>	<p><b>Significance criterion:</b> Individual plants of historical or cultural significance</p> <p>This plant was originally one of a pair grown from seed on the property by Head Gardener George Holmes and planted in the West Court in 1832 as 6-inch (15 cm) seedlings. The sister tree was lost in the storms of 1990. This tree is the current Champion Cedar of Derbyshire. Source: Garden archive.</p>	<p>Retention as long as possible, manage as a veteran tree.</p> <p>No succession planting.</p>	West Court
<i>Convallaria majalis</i> 'Hardwick Hall'	<p><b>Significance criterion:</b> Plants of horticultural significance</p> <p>A variant of <i>Convallaria majalis</i> with a cream edge to the leaf and large scented flowers. Discovered growing in the garden at Hardwick Hall (date unknown).</p>	<p>Retain sufficient stocks for display in the garden.</p> <p>Vegetative propagate for continuation and sales.</p>	Nuttery area SC1
<i>Juglans regia</i>	<p><b>Significance criterion:</b> Landscape or 'spirit of place'</p> <p>At over 300 years old, this is the oldest plant in the garden. Shown on the first edition of the Ordnance Survey plan. Source: Garden archive.</p>	<p>Two crown reductions have already taken place and a third will be required. The tree is very hollow but has produced significant buttress growth to support itself.</p> <p>No succession planting required.</p>	Nuttery area SC1

### *The potential to unify National Trust living and non-living collections*

In addition to plant collections, the National Trust is the custodian of 200 object collections, 144 of which form accredited museums representing 1 in 12 of all the accredited museums in England, Wales and Northern Ireland. The Trust seeks to increase its understanding of, and audience engagement with, the conservation, curation and relevance of the collections and assets within its houses, gardens and landscapes. This intention includes the desire to improve the connections between collections inside and out. The use of a shared language of heritage values which can be applied to a range of objects, including plants, will be beneficial. This could be achieved by combining the current National Trust plant significance values with the Collections Trust's 'Reviewing Significance' assessment process (Reed, 2018). The Collections Trust supports museums to record and share information that gives their collection items meaning. This includes audience or visitor value from a site specific to a local and international scale. The Collections Trust's assessment process does not create a hierarchy of items, instead noting that there will be varying levels of value, meaning and relevance for different people. Items are assessed against six questions including the consideration of associations with any particular period, event, activity, institution or person and even an assessment of an item's relevance within the context of the organisation's own history. In the case of plant heritage values, this might be relevance for that particular location or even a plant that is emblematic of the garden. It goes on to measure value against the potential user benefit and relationship to the item. It includes assessing an item against

international, national or local significance relating to or associated with nationally or internationally known events, themes, movements or people. All these aspects may be used as assessment criteria for individual plants and collections, creating a common methodology. Table 2 shows an example of a significance assessment grid used by the National Trust.

### **The representation of heritage values in association with plants**

Considering the authenticity and therefore cultural heritage values of an individual plant specimen can be complex. DNA analysis may verify a first introduction and its relationship to a documented plant-collecting expedition (Fig. 2), but the majority will require historical research to verify that any heritage value is associated with that particular specimen.

In the UK, cultural heritage values often form part of community engagement and awareness raising and are evident in organisations such as the Woodland Trust, the Tree Council, the Ancient Tree Forum, Plant Heritage and the Garden Organic Heritage Seed Library. All recognise the inclusive nature of plant-based stories in engagement and support for plant conservation, although within national and international policy, planning and conservation frameworks, the formal recognition of cultural heritage attributes for individual plants is limited. Research and discussion around plant heritage themes such as Bridgewater & Rotherham's (2019) critical perspective of biocultural diversity in nature and heritage conservation, McMillen *et al.*'s (2017) analysis of flora in living memorials, Małczyński's (2009) presentation of trees as living memorials and Pejchal's (2011) analysis of authenticity within landscapes demonstrate

**Table 2** Example of a significance assessment grid used by National Trust staff, adapted from Reed (2018), for a mature specimen of *Cedrus libani* (cedar of Lebanon) at Hardwick Hall.

	<b>A</b> Provenance/ acquisition	<b>B</b> Rarity/unique- ness	<b>C</b> Key significance category	<b>D</b> Condition/ completeness	<b>E</b> Historical/cultural meaning	<b>F</b> 'Exploitability'
<b>General/key points</b>	<ul style="list-style-type: none"> <li>When/where/why/for whom was it produced/collected? Is there evidence?</li> <li>Does its provenance connect it to any event, person, place or theme of garden/local/national/international significance?</li> <li>Is its creator/collector of garden/local/national/international significance?</li> <li>Country of origin</li> <li>Introduction date</li> </ul>	<ul style="list-style-type: none"> <li>Is it unique, rare or unusual?</li> <li>Is it the only/the best/a good example of its type accessible in a public collection?</li> </ul>	<ul style="list-style-type: none"> <li>Historical or cultural</li> <li>Landscape and 'spirit of place'</li> <li>Horticultural value</li> <li>Wildlife/ecology value</li> <li>Wild collected source</li> </ul>	<ul style="list-style-type: none"> <li>Is it intact/complete/largely in original condition?</li> <li>Is it in unusually good condition for its type?</li> <li>What are the plans for succession?</li> </ul>	<ul style="list-style-type: none"> <li>Does it reflect or illuminate a particular theme, person, group, organisation, event, place or activity of cultural or historical significance?</li> <li>Is it currently used for academic or other historical/cultural research and/or for answering enquiries?</li> <li>Has it ever been requested for research use?</li> <li>Does it feature in any garden illustrations or correspondence?</li> </ul>	<ul style="list-style-type: none"> <li>Does it have a Material Transfer Agreement or other conditions on its use?</li> <li>Could it support marketing and heritage/conservation awareness raising?</li> <li>Is it suitable for propagation and sale?</li> <li>Is it an iconic plant for the property or local or regional area?</li> </ul>
<b><i>Cedrus libani</i></b>	Remaining 1 of 2 planted in 1832. Grown from seed on site by Head Gardener George Holmes. Intro. 1664 Lebanon	This tree is the current Champion Cedar of Derbyshire.	Historical and cultural Landscape and 'spirit of place'	In decline, now a veteran tree. No succession required.	Cedar is evident on garden plans and images. Ref Garden CMP.	Exhibit information about George Holmes and associated archives. Potential, when felled, to use timber.



**Fig. 2** *Acer griseum* (paper bark maple) at Dyffryn Garden in South Wales. DNA analysis shows it to be from the Wilson and Veitch 1901 seed introduction. The tree blew down on 2 May 2021, and this significant plant has been propagated by the National Trust Plant Conservation Centre. Photo: Simon Toomer.

that it is a subject area with many approaches to achieving one aim: understanding the cultural heritage of plants.

### *Heritage values associated with traditional plant use*

The relevance of plant-based cultural heritage, and therefore its position within heritage recognition, has benefited from the work of the International Council on Monuments and Sites (ICOMOS). ICOMOS charters have increasingly demonstrated a greater understanding of cultural heritage. The local values, traditional cultivation and uses for food, symbolic and medicinal plants were at the forefront of the development of an understanding of intangible heritage.

The Nara Document produced by ICOMOS (1994), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the International

Centre for the Study of the Preservation and Restoration of Cultural Property emphasised the authenticity of cultural, native and national heritage in answer to the threat of global homogenisation. UNESCO (2003) proposed five themes through which intangible cultural heritage is manifested: oral traditions and expressions including language; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional craftsmanship. Such intangible cultural heritage themes are familiar to botanists and horticulturists through the Convention on Biological Diversity and the Nagoya Protocol (UN, 2015). This international agreement includes a recognition of traditional knowledge: the cultures and practices associated with the genetic resource held or owned by local and indigenous communities.

### *Landscape heritage values*

Significance value frameworks for designed landscapes focus on 'place', created by a series of components, significances and events. Historic England (2008) presents a method by which heritage values of a place can be assigned by understanding the values relating to:

- evidential value: the potential of a place to yield evidence about past human activity
- historical value: the ways in which past people, events and aspects of life can be connected
- aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place
- communal value: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory

Historic England's criteria for registering gardens and landscapes could also be considered against individual plant heritage.

### **A review of cultural heritage descriptors**

In consideration of the value of using common heritage terms to communicate plant heritage values, an understanding of some of the range of descriptive heritage terms is beneficial. A review of collections and heritage disciplines highlights terms such as 'artefact', 'relic', 'relict', 'replica', 'heirloom', 'monument' and 'memorial', some of which can be preceded by the terms 'living', 'biological' or 'ecological'. Historic England (2008) provides a list of terms used within heritage protection legislation and documents, the majority of which refer to processes. The only one included from the

above list is 'monument'. The Forum for Information Standards in Heritage (FISH, 2021) lists approved terms under themes such as maritime craft and archaeological objects. There is considerable potential for a FISH theme on garden and plant terminology.

### *Artefact*

The archaeologist Evžen Neustupný (2013) argues that artefacts go hand in hand with human existence; he states that artefacts cannot exist without humans, and humans always create artefacts. He goes on to define an artefact as an object created by a human to serve a purpose, but acknowledges that artefacts may have a non-material purpose which can reflect their social, symbolic or spiritual meaning. Such non-material purposes are of particular relevance in the consideration of plants with a value as a living artefact.

Archaeologists also use the terms 'biofact' and 'ecofact', referring to biological and ecological remains, for example, bone, wood or shell. However, more commonly used is the unifying term of 'palaeo-environmental'. The seeds found in association with archaeological deposits are not classed as artefacts if they remain in their original form. However, this may not be the case for all seeds. Siipi (2003) argues that if seeds have been genetically modified to have an additional benefit to humans, then these seeds could be classed as a living artefact. In considering whether an individual plant can be a living artefact, we must look at how human intervention has changed the plant to enable it to become an artefact. With the planting of a commemorative tree or even of a first introduction, which horticulturists would consider to possess heritage and horticultural significance, the intent is that the plant grows in the most natural way possible so there is no change of use, it is



still a plant and arguably not a living artefact although it may have a symbolic meaning.

### *Relic*

Relic can be defined as something that has survived from the past, such as an object or custom. Referring to the trade in religious relics in the medieval period, Appadurai (1986) notes, 'These relics belong to a particular economy of exchange and demand in which the life history of the particular relic is essential, not incidental, to its value. The verification of this history is also central to its value.' Non-living plant material has been perceived as a relic in two ways: a wooden box may have relic status because of its former contents or because of the origin of the wood. There are many examples of trees being damaged by souvenir hunters.

### *Relict*

The term 'relict' has a biological and ecological use and can be defined as a group

of animals or plants that exist as a remnant of a formerly more common group in an environment different from that in which it originated.

This term could apply to trees of heritage significance, such as former field boundary trees, subsequently surrounded by dwellings, that have survived to reach an age where they are venerated. One such case is Selly Oak, a suburb of Birmingham (UK) to which a tree gave its name. Its felling in 1909 was the subject of a ceremony, with photos taken and postcards produced to commemorate the event (Fig. 3). Its trunk was relocated to a local park and marked by a plaque, which can still be seen today.

### *Replica*

Foster & Jones (2020) argue that 'new understandings of authenticity recognise replicas as "original" objects in their own right with stories worth telling'. Replicas can be made from the same material as the



**Fig. 3** Postcard depicting the Selly Oak. Credit: author's archives.

## Relict plant populations at Benthall Hall, Shropshire (UK)

George Maw (1832–1912) was a tile manufacturer, geologist, archaeologist, botanist and plant hunter. He was a friend of botanist and explorer J.D. Hooker, and accompanied him on many plant-hunting expeditions.

Maw introduced over 3,000 species of mainly alpine and bulbs to his gardens at Benthall Hall, and wrote and illustrated *A Monograph of the Genus Crocus* in 1886. The gardens are now under the ownership of the National Trust.

Wooded lawn areas have remained uncultivated since Maw's time and contain naturalised crocus and *Lilium martagon* (L.) (Turk's cap lily) thought to be from populations dating back to Maw's residency at Benthall from 1852 to 1886. If this is the case the naturalised crocus and *L. martagon* populations could be described as a cultural relict population.

**Fig. 4** *Lilium martagon* naturalised at Benthall Hall. Photo: Pamela Smith.



original and involve the same craftsmanship, so they arguably develop their own value. Garden restoration can be considered the creation of a replica. Plants and their ability to be propagated create a contradictory understanding of the application of the term 'replica'. Clones of a plant, as occur through vegetative propagation, are not only a copy of the original but are arguably still the original and can be associated with the heritage story of the parent.

According to Foster & Jones (2020), a replica's potential can be a catalyst for cultural heritage engagement. Macdonald (2013) argues that 'authenticity is actively negotiated in the performance of selling and buying,

contrary to the prevailing assumption that heritage commodification in tourist settings renders objects and relationships inauthentic'.

Replicas can have a tradeable value but their worth in terms of monetary value and cultural heritage is measured by their association with the original, often far removed.

Many examples exist of trade and community engagement based around the opportunity to own a plant with perceived cultural heritage value. Every year, the American Forests Famous & Historic Trees programme sells 25,000 saplings which are the offspring of up to 180 noteworthy trees. Talking to the *Chicago Tribune* (Rodkin, 1998),

Jeff Meyer, Director of the Programme, said, 'If we can hook somebody into tree planting by one of their other interests – for example, a Civil War buff might like to plant the offspring of the honeylocust that stood to Lincoln's right during the Gettysburg Address – then maybe all of a sudden we have a new tree planter'.

### *Heirloom*

The term 'heirloom' is occasionally applied to individual plant specimens such as heirloom houseplants where their longevity and heritage value is as a result of propagules distributed between family members. The term 'heirloom seed' is frequently used to describe usually vegetable seed varieties that have been passed on through generations but are now more widely available.

### *Monument*

Of all the terms discussed as part of this analysis the term 'monument' has perhaps the most diverse set of definitions. The term is used to refer to areas of land and groups of buildings as well as to individual plants. The application of the term to living plants is principally based on the plant's physical context, such as its great age or size, which is arguably due to either a lack of human interference or active conservation management.

'Living monument' is a term that is often associated with the giant redwood forests of California, given National Monument status in 2000 as the Giant Sequoia National Monument. More recently, in 2017, 14 olive trees across Crete were classified as monuments by the Association of Cretan Olive Municipalities. The aim is to protect the trees as living monuments of Crete's cultural heritage and to promote them as attractions, recognising their individual values as heritage assets as integral to Crete's spirit of place.

Such 'monument' designations are supported by legislation and involve more than one plant, but the term could be applied to individual specimens.

### *Memorial*

This term is sometimes used interchangeably with 'monument'. A plant's value as a memorial can relate to a specific planting event or the fortuitous survival of a particular plant which results in an aesthetic that becomes noteworthy, or a chance presence at a place where a notable event occurred. In the latter case, trees are often venerated symbols of memorial and recovery, outliving their human witnesses. An example would be the Tolpuddle Martyrs' tree in the village of Tolpuddle, Dorset (UK) (Fig. 5).



**Fig. 5** The Tolpuddle Martyrs' tree in Dorset. Photo: National Trust images/Andrew Butler.

Six agricultural labourers met under the tree in 1833 to discuss their poor wages and living conditions, now considered to be the birthplace of British trade unionism.

Małczyński (2010) reports that in 2002, as a result of plans to create a commemorative landscape at the site of the former World War II concentration camp in Belzec (Poland), a number of trees were scheduled for removal. Dendrochronological surveys identified the trees as being old enough to have been present at a time before the Holocaust. As a consequence, they were conserved and incorporated into the design of the new landform. Younger trees that had been planted by the Nazis as a screen to the camp were felled. A plan to remove 370 of the screening trees and replant them in the hometowns of the murdered Jews was not realised. Within Belzec's cemetery a monument is inscribed with the words 'on this ground hallowed by the blood of the victims only the oak trees remain – the trees which were witnesses to the crime'. Małczyński (2010) concludes that as organic forms the surviving trees and those removed contain the remains of the victims and as such all were living monuments as well as witnesses to the crimes.

## Summary and conclusions

The benefits of understanding and engaging with the cultural heritage values of a plant lie beyond mere conservation management. Gardens are seemingly familiar places to share unfamiliar stories, including engagement with plant heritage which can be an inclusive means of engagement at a time when people are increasingly disconnected from nature.

The consideration of a common process to record heritage values of living and non-living collections can facilitate

collaborative processes across a range of heritage disciplines, bringing plants into the conversation about how we measure and value our heritage assets. This can create opportunities for partnership working with collections and cultural heritage disciplines, from unifying and engaging with museum collections across buildings and grounds to sharing online a heritage theme across a number of physically separate objects from living and non-living collections.

The recognition of plant heritage values must be seen through the lens of human culture bringing together both tangible and intangible cultural heritage values. These values may be familiar to horticulturists and botanists through the Nagoya Protocol (UN, 2015), and there are also opportunities in our increasingly multicultural and urban populations here in the UK to consider community traditions, symbols and social practices relating to plants. Plant heritage values have a unique ability to be shared and owned through the propagation of significant plants, as demonstrated by the opportunity to interact with, or even buy the offspring of, a famous tree or a seed that has been to the Moon (see the box on the next page). Understanding and communicating our plant heritage to colleagues and garden visitors alike can unify our professions, help conserve our cultivated and native plants, and benefit future conservation decisions and practices.

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## Witness, monument and relic – Newton’s apple tree

The ability to propagate plants and transfer their heritage values to their offspring can result in the adoption of several heritage value terminologies. This is evident in the case of Isaac Newton’s apple tree in the garden of his former home at Woolsthorpe Manor, Lincolnshire (UK) where the *Malus × domestica* ‘Flower of Kent’ is reputed to be the tree that dropped the famous apple. The tree is one of the UK’s 50 ‘Great British Trees’ compiled by the Tree Council in commemoration of Queen Elizabeth II’s Golden Jubilee in 2002.

Although the cultivar is commercially available there is frequent demand for both seeds and scion material from this tree, which implies an appreciation of a heritage significance attributed to this individual and the potential for its heritage value to be transferable. Grafts of the tree, subject to a Material Transfer Agreement – a document stating the purpose and approved uses of shared plant material – have been widely distributed. An internet search reveals a number of trees said to derive from the Woolsthorpe Manor specimen. Even though the heritage association is sometimes several times removed it is still valued, for example in the case

of Newton’s apple tree planted at the University of York and described by Dr Richard Keesing on the university’s website (University of York, 2020), which claims, with pride, the provenance of that tree via four parent trees in four different gardens.

In 2019 an apple sapling was planted at Isaac Newton’s home at Woolsthorpe Manor by British astronaut Tim Peake. The sapling had been grown by the Royal Botanic Gardens, Kew from seeds from Newton’s apple tree which had been taken into space on the Principia mission in 2015. This recreated the NASA project in which ‘Moon Trees’ were planted across the USA that were grown from seeds that had been taken to the Moon on Apollo 14 by astronaut and former Forest Ranger Service smoke jumper Stuart Roosa in 1971.

Newton’s apple tree at Woolsthorpe Manor can be described, using previously discussed terminology, as a witness and monument to an event, and its associated heritage value can be transferred to its offspring which can also claim to have relic status as tradeable heritage commodities.



**Fig. 6** Newton’s apple tree at Woolsthorpe Manor. Photo: National Trust images/James Dobson.



**Fig. 7** Grafted *Malus × domestica* ‘Flower of Kent’ at the National Trust’s Plant Conservation Centre. Photo: Chris Trimmer.

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