Housesteads Car Park Automatic Number Plate Recognition System Project
Excavation Method Statement

Context

Housesteads Car Park Is set of the B6318 Military Road in the Hadrian's Wall World Heritage Site and south of Northumberland National Park, (see accompanying plan). The car park caters for approximately 160 vehicles including cars, motor homes, coaches and the Hadrian's Wall Bus and provides visitor parking facilities for Housesteads Fort and the associated National Trust visitor centre. The site is set within a sensitive landscape and bounded to the north-east, north-west and south-west by land designated as Scheduled Monument. The Military Road borders the south-east of the site and following a recent car park extension in 2016, it was found that the south west corner of the site overlies an otherwise undiscovered Roman Road. The proposed works set out in this proposed development do not overlie this feature but the sensitivity of the site is acknowledged and this method statement reflects this.

Heritage Statement

The Housesteads site is of exceptional archaeological sensitivity, because of its proximity to features such as the civilian settlement, temples and cemeteries associated with the Roman fort at Housesteads. The land outside the stone wall that encloses three sides of the car park site is, as a consequence, both protected as a Scheduled Ancient Monument (see image 1 below), and forms a component part of the Hadrian's Wall World Heritage Site. For this reason, the application requires careful consideration for its potential to impact both directly on the archaeological remains and also on the setting of the World Heritage Site.

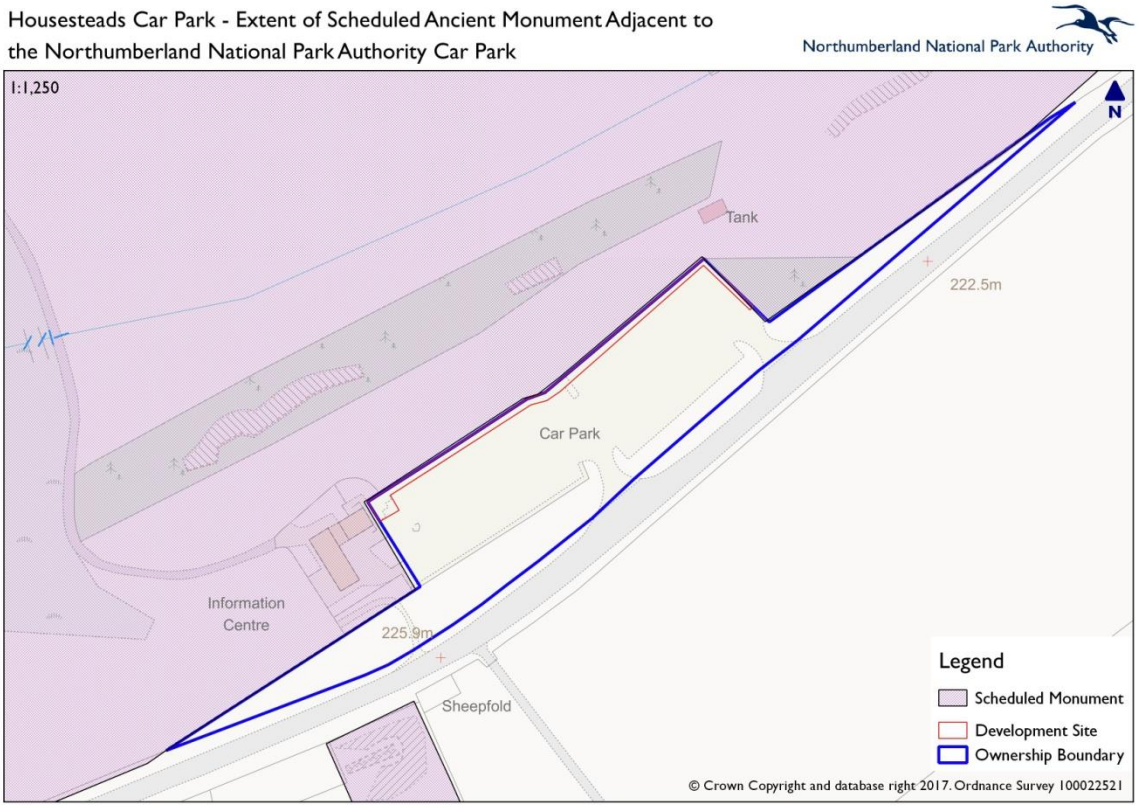

Image 1

Recent work associated with the extension of the car park, Planning Application 12NP0108 unearthed an otherwise unrecorded Roman Road located to the south-west corner of the car park, see Image 2 below.

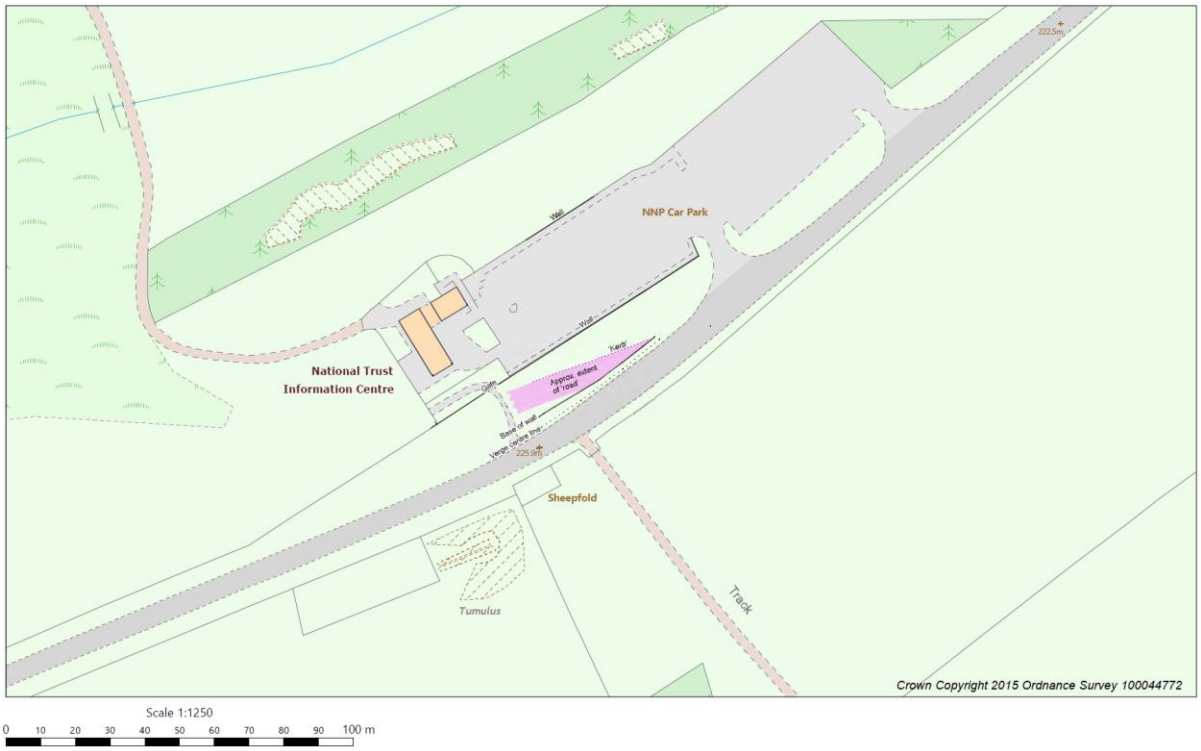

Image 2 (Taken from the 2017 Archaeological Watching Brief and Mitigation Excavation report produced by The Archaeological Practice)

As part of the National Trust visitor centre improvements and National Park car park extension project a preliminary investigation was undertaken by the National Park's Historic Environment Officer in 2011. This was followed by a more detailed Heritage Survey Report 2012 and following the construction of the car park extension in 2016 an Archaeological Watching Brief and Mitigation Excavation report has also been produced. These surveys have provided a greater understanding as to the sensitivity of the site and nature and extent of previous disturbance associated with the car park and the adjacent National Trust visitor centre site.

The five test pits associated with the 2012 Heritage Survey identified that the ground in this area has most likely been reprofiled and made up in recent years probably at the time of the original visitor centre construction in the 1980's. Only in test pit 5 was the natural underlying till unearth at a depth of 700mm. Also as part of this Heritage Survey, two evaluation trenches were dug on the south side of the car park to a depth of approximately 700mm. and no finds were recorded at that time. The second trench excavated in 2011 as part of the preliminary survey had established that there was a considerable extent of modern overburden (c. 0.900mm) in the eastern part of the proposed car park extension area.

As is now known, during the subsequent construction of the car park extension in 2016 and the discovery of the otherwise unknown Roman road, trench 1 of the 2012 Heritage Survey did in fact cut through the cobbled surface of the Roman road at a depth of approximately 350mm and therefore the possibilities of unearthing new archaeological finds is possible in otherwise undisturbed ground at a relatively shallow depth.

The 2017 Archaeological Watching Brief and Mitigation Excavation report did include several images and a chronology of aerial photographs of the Housesteads site going back to 1930. These clearly capture the archaeological sensitivity of the site and surrounding landscape and help inform the proposals set out within this within this car park infrastructure project.

The specification used to construct the new car park surface was, following levelling the ground and laying a Terram geotextile, to lay 300mm of sub base with 100mm of Type one hard core and topped off with a tar macadam surface.

The Project

Northumberland National Park Authority manages the onsite car park and has for several years operated an all year round 'Pay and Display' ticket charging system with two ticket machines. In 2016 a review of car park ticket machine infrastructure was undertaken for the six sites managed by the Authority along the Hadrian's Wall corridor. In December 2017 members of the Authority approved resources for the upgrading of the ticket machines, some of which were almost 20 years old, with spare parts increasingly becoming hard to source. For the Housesteads site it was decided to introduce an Automatic Number Plate Recognition (ANPR) system and following a tendering process, Park with Ease' was identified as the preferred provider. This planning application is for the installation of the Park with Ease ANPR system for Housesteads replacing the current Pay and Display system currently found on site.

As set out in Drawing 150044-14 (Rev. 1.2) the Park with Ease ANPR system will be operated by two parking kiosks that themselves will be connected to two number plate recognition cameras pointing towards the entrance and exit lanes that feed off the Military Road. The mains power supply and access to broadband data provision is via existing infrastructure located in wall mounted service boxes to the north west of the car park. Two separate cable ducts (high voltage and low voltage) are required to connect both the Park with Ease kiosks and the ANPR cameras to this power and data supply.

It is proposed to undertake the necessary work within the confines of the car park itself, thus not directly impacting the adjacent Scheduled Area surrounding the site. However, due to the close proximity of the Scheduled Area and archaeological sensitivity of the site, careful consideration has been given to the excavation work needed to bury the cable ducting and pits needed for the concrete footings for the kiosks and camera poles. There is no statutory depth at which data and low voltage ducting has to be laid although best practice suggests that cable ducts carrying 240 volt electrical cables should, if possible, be buried to a depth of 450mm below ground level on private land. This is identified on drawing 150044-14 (Rev. 1.2) as is the requirement to excavate pits to a depth of 600mm for the kiosk and camera pole footings.

From previous work undertaken on this site including other service ducting, the installation of electric vehicle charging posts and the recent car park extension itself, it is known that existing ground disturbance extends to a minimum depth of 350mm beneath the car park surface, and significantly deeper in some areas due to the levelling of the site as part of the original car park construction process.

It is proposed therefore to lay the ducting to a depth of 450mm, endeavouring to meet the guidelines for electrical ducting. Since there is a possibility of breaking into previously undisturbed ground it is proposed to appoint an archaeological watching brief to oversee the excavation of the trench and kiosk and camera pole footing pits. Should any areas of previously unknown archaeology be discovered, excavation work will cease and guidance will be taken from the appropriate authorities. If necessary the depth at which the ducting is buried, could be reduced to lie entirely within the extent of existing disturbed ground so as to avoid any conflict with otherwise unknown archaeological finds. Such circumstances will be identified in plan format on the site's Health and Safety Risk Assessment so as to inform future contractors or staff working on site that the ducting is not buried in line with current guidance.

In relation to the pits needed to be dug for the concrete footings for the Park with Ease kiosks and camera poles, these will be excavated to the base of the existing sub-base of the car park and if additional depth is required to meet the 600mm as specified by the manufacturer then the un-disturbed ground will be excavated, again with the work being overseen by the archaeological watching brief. If necessary, camera poles and kiosks can to

a degree be relocated but the intention is to reuse the pits associated with the existing ticket machines.

In terms of their setting, the location of the 4 metre high camera poles has in part been determined by the fact that they will be viewed by visitors against the backdrop of existing trees located just the other side of the car park wall. They should therefore not be seen as isolated vertical structures set within the wider open landscape, but it is expected that their visual effect will be diminished the presence of the adjacent trees that currently reach a height in excess of 7 meters. It is accepted that in so doing, some seasonal vegetation management is likely to be necessary to ensure that the foliage from the trees does not obscure the camera's view of the car park entrance.

From a review of the highlighted documents and experienced gained in managing this car park site since its original construction, it is believed that the likelihood of causing significant harm to the historic environment of the area is minimal. Whilst it is acknowledged that the possibility does exist, the appointment of an archaeological watching brief looks to mitigate this risk and is thought appropriate. The ability to lay the ducting entirely within the existing disturbed ground layer if necessary to a depth of 300mm, whilst a last resort, could be achieved if necessary.

It is also acknowledged, that as with the recent discovery of the Roman Road, should this proposed excavation work needed for the installation of the ANPR system at Housesteads car park throw up any significant archaeological finds, then the project will be suspended until appropriate expert assessment has been undertaken.

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