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INTRODUCTION

12.1 This chapter of the ES, prepared by Andrew Josephs Associates, presents the findings of a cultural heritage desk-based assessment and field evaluation in connection with a planning application for a mineral development on the former Hatfield Aerodrome (hereafter the application site). The location and extent of the application site is shown on **Figure 12.1**.

12.2 The detailed description of the proposals is set out in Chapter 3 of this Volume. The proposed working scheme is shown on **Figure 12.2**. For the purposes of the impact assessment it is assumed that disturbance could occur anywhere within the red line application boundary.

SCOPE OF CULTURAL HERITAGE AND METHODOLOGY

12.3 Cultural heritage is represented by a wide range of features that result from past human use of the landscape. These include historic structures, many still in use, above ground and buried archaeological monuments and remains of all periods, and artefacts of anthropological origin. In its broadest form cultural heritage is represented by the landscape and townscape itself.

12.4 This chapter considers both direct (physical) and indirect effects upon cultural heritage. Indirect effects can occur as a result of significant changes to the setting of an historic landscape or feature, whether permanent or temporary. This is particularly relevant to designated assets of national importance, such as Scheduled Monuments, Listed Buildings, Conservation Areas, and Historic Parks and Gardens.

12.5 A search was made of the National Monuments Record and the Hertfordshire Historic Environment Record (HHER) for a study area of up to 1km from the application site. This was considered an appropriate area of search, based upon topography, vegetation and built development that encloses the application site and restricts long-distance views from designated assets.

Consultations

12.6 Consultations were held with Alison Tinniswood and Andy Instone of the Natural, Historic & Built Environment Advisory Team, Hertfordshire Council, to agree the scope of the field evaluation stages.

Planning Policy

12.7 The importance of cultural heritage is clearly recognised at both national and local levels. Certain features that are deemed to be of particular importance are given legal protection through the Ancient Monuments and Archaeological Areas Act 1979 (Scheduled Monuments), the Town and Country Planning Act 1990 (Listed Buildings and Conservation Areas) and the Hedgerows Regulations 1997 (Hedgerows of Historic Importance).

12.8 The following policy and guidance is of particular relevance to this application:

- National Planning Policy Framework 2012. Department for Communities and Local Government.
- Planning Practice Guidance: Conserving and Enhancing the Historic Environment http://planningguidance.planningportal.gov.uk
- English Heritage 2008. Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment. London.
- English Heritage 2011. Seeing The History In The View: A Method For Assessing Heritage Significance Within Views.
- Historic England 2015 Good Practice Advice 3 – The Setting of Heritage Assets
- English Heritage 2008. Archaeology and Mineral Extraction. London.
- English Heritage 2008. Mineral Extraction and the Historic Environment. London.
- Minerals and Historic Environment Forum 2008. Mineral Extraction and Archaeology: A Practice Guide.
- English Heritage 2009. Planning Mitigation and Archaeological Conservation – Resource Assessment.

BASELINE CONDITIONS

Previous Cultural Heritage Studies

12.9 No cultural heritage studies or investigations have taken place within the application site prior to the work associated with this planning application.

Designated Heritage Assets

12.10 No designated assets of cultural heritage importance lie within the application site.

Scheduled Monuments

12.11 No scheduled monuments lie within 1km of the boundary of the application site. The nearest is the Colney Chapel moated site in London Colney parish (list entry number 1010718), about 1.8km south west of the application site. There is no visual connection with the application site.

Listed Buildings

12.12 The nearest listed buildings are Popefield Farm (with two attendant listed farm buildings) and the Three Horseshoes Public House. A Grade II milestone lies 70m to the east of the Three Horseshoes. These are described in Table 12-1.

Table 12-1
Listed Structures in proximity to the application site

NHLE entry number	Name	Description	Date
1103025	Popefield Farmhouse	Farmhouse. Timber frame. Painted brick ground floor. Plastered upper floors. Plain tile roofs. 2 storeys and attics.	Mid C17 origins, restored circa 1980.
1172843	Barn NW of Popefield Farmhouse	Two barns in long range, linked to farmhouse by single storey extension at right angles. Timber frame. Weatherboarded. Plain tile roof.	Late C17, altered and extended in C18.
1347189	Granary and shed	Granary and attached open shed. Granary is timber frame with C19 brick infill. Plain tile gable end roof. 2 storeys and attics.	The granary is late C17, the shed early C19.
1347182	Milepost ENE of the Three Horseshoes Public House	Cast iron, triangular open back	c1820
1172839	Three Horseshoes Public House	Timber framed with plastered brick casing. Steep pitched plain tile roof.	Early C18 with C19-20 additions.

12.13 A further twenty five listed structures lie between 250m and within 1km of the application site boundary. These are listed in Table 12-2. Of these the flight test hanger, offices, fire station and control tower of the former Hatfield Aerodrome are Grade II*, as is Torilla a house of 1930s construction, the remainder being Grade II.

12.14 The locations of listed buildings are shown on **Figure 12.3**.

12.15 Two buildings are assigned a sixteenth century date: they comprise the Grade II listed Sleapshyde Farmhouse (1347209) and the Old Forge Cottage (1348162). The others range from the seventeenth century to the twentieth although some may have unidentified earlier work within their cores.

Table 12-2
Listed Structures within 1km of the application site

NHLE entry number	Name	Description	Date
1100903	Milepost to west of Comet roundabout	Cast iron, triangular, open backed.	c1820
1101036	The Comet public house	Red brick two storey Hotel with Clipsham stone dressings	1933
1101043	Astwick Manor	Manor house now college headquarters	Late C17 or early C18 extended in C19 and C20
1102875	Oak Farmhouse	Timber frame farmhouse	Mid-late C17 with possibly earlier core. C19-20 casing
1102984	Rose Cottage and	Pair of house in a single long range.	Late C17 C19/20

NHLE entry number	Name	Description	Date
	Little Rose Cottage	Timber frame with weatherboarding	extensions and alterations
1102985	Two barns and stable at Sleapshyde Farmhouse	Pair of barns and attached stable forming L-shaped plan	Barns C17, Stable C19
1102986	Farm Cottage, Sleapshyde Lane	Timber framed house, plastered walling steeply pitched red tile roof	Late C17 with C19-20 casing
1102987	The Plough Inn, Sleaphyde Lane	Public House. Timber framed painted brick ground floor plastered upper floor, thatched roof.	Late C17 extended mid C19
1103006	Barn south of Oak Farm House	Timber framed barn weather boarded with corrugated iron roof	Probably late C17, four bay C19 extension
1103018	Smallford Cottage	Farmhouse now house. Timber framed with later C20 weatherboarding	Mid C17, C18-19 extension
1102988	Sunnyside	House. Timber frame	C17-C19
1347211	Forge Cottage	House, formerly a forge. Timber frame	C17-C20
1101006	Barns at Nast Hyde Farm	Barns and stable range in L plan, Weatherboarded.	C17-C19
1173779	Nast Hyde Farmhouse	Farmhouse. Timber framed rear part with red brick. Plain tile roof. 2 storeys	C17-C19
1101005	Cottage at Great Nast Hyde	Cottage. Timber frame and painted brick	C17-C20
1173761	Great Nast Hyde	Manor house, now British Aerospace residence. Red brick, stone dressings, plain tile roof.	C17-C20
1348145	Torilla	House by F R S Yorke. Modern style, showing influence of Le Corbusier	1934-5
1173109	Farmhouse and small barn at Suttons Farm	Farmhouse and barn with C18 brick front but probably earlier core. Slate roof with C17 red brick chimney	C17-18
1175602	Barn south of Oak Farmhouse	Barn with four timber frame bays. Open on SE gable, weatherboarding. Corrugated iron roof	Late C17
1245067	Smallford station	Station now office building. Timber framed and weather boarded Welsh slate roof.	1866
1347208	Ye Olde House	House divided into three properties. Timber framed with red brick ground floor weather boarded upper. Plain tile roof	Mid-late C17
1347209	Sleapshyde Farmhouse	Farmhouse. Timber framed. Cement-rendered with combed pargetting. Half hipped plain tile roof with massive C17 red brick chimney.	Early C16 altered and floored in later C17
1347210	Granary SE of Sleapshyde Farmhouse	Granary now dog kennel. Timber framed with brick infill, cemented brick piers. Corrugated iron roof.	Late C17 or early C18
1348162	Old Forge Cottage	House formerly forge. Three timber framed bays, painted brick exterior.	Late C16, extended C17, brick exterior

NHLE entry number	Name	Description	Date
			C18-C19
1376561	The flight test hanger, offices, fire station and control tower	Main hanger built of aluminium covered with insulated aluminium. Some steel framing in the brick clad offices. The six storey control tower noted for its use of non-reflective glass	1952-3 hanger, offices and tower 1954

Conservation Area

12.16 Towards the southern edge of the 1km radius study area lies Sleapshyde Conservation Area. There is no visual or contextual connection between the Conservation Area and the application site.

Other designated assets

12.17 There are no World Heritage Sites, Historic Parks and Gardens or Registered Battlefields within 1km of the application site.

Site visit to designated assets

12.18 A site visit to designated assets in the vicinity of the application site was carried out in June 2015.

12.19 The application site is well screened from all but the nearest listed buildings at Popefield Farm by vegetation and built development. Peripheral hedging along the A1057 and the narrow country lanes to the south would ensure that there could be no impacts of magnitude upon listed buildings in Wilkins Green and Sleapshyde (**Photograph 12.1**).

12.20 The view from the Three Horseshoes Public House (**Photograph 12.2**) illustrates well the screening effect of the application site's hedged boundaries (**Photograph 12.3**).

12.21 Popefield Farm lies on private land and it was not visited. The Farm complex comprises three listed buildings, as described above (Table 12-1). **Photographs 12.4-12.6** show the Farmhouse and farmbuildings recorded for the Images of England database. The house is orientated to its courtyard setting, that is to the south-west.

12.22 The view from the public road looking towards the Farmhouse and the application site is shown on **Photograph 12.7**.

Historic Environment Record

12.23 Details of investigations, sites and finds lying within 1km of the boundary of the application site were provided by the Hertfordshire HER. These are tabulated below, Table 12-3, (listed buildings have been omitted from the table) and the locations of sites discussed shown on **Figure 12.4**.

Table 12-3
HHER entries within 1km of the application site

HER NO.	DESCRIPTION
125	LATE IRON AGE OCCUPATION, HATFIELD AERODROME
465	DENE HOLES, CHANTRY WOOD, CHANTRY LANE, HATFIELD
2617	CROPMARKS OF A DITCHED FEATURE, HATFIELD
2666	LATE IRON AGE AND ROMANO-BRITISH ENCLOSURE, OAKLANDS COLLEGE, COLNEY HEATH
2935	PALAEOLITHIC HANDAXE, SE OF SLEAPSHYDE FARM, COLNEY HEATH
5301	VICTORIAN LETTER BOX, OPPOSITE THE PLOUGH PH, SLEAPSHYDE, COLNEY HEATH
5371	SITE OF MALTINGS, WATERS GARAGE, HATFIELD
5517	SITE OF HALT, NAST HYDE, HATFIELD
6839	ROAD BRIDGE, STATION ROAD, SMALLFORD
6881	POST-MEDIEVAL CHALK PIT, COLLEGE LANE, HATFIELD
9628	HATFIELD-ST ALBANS BRANCH OF THE GREAT NORTHERN RAILWAY
9760	CROPMARKS OF FIELD SYSTEM AND TRACKWAYS, JERSEY FARM, SANDRIDGE
9925	MEDIEVAL DITCHES AND PITS, SUTTONS FARM, HATFIELD QUARRY
9926	BRONZE AGE PITS & ROMANO-BRITISH DITCH SYSTEM, SUTTONS FARM, HATFIELD QUARRY
9927	LATE IRON AGE FEATURES, SUTTONS FARM, HATFIELD QUARRY
11536	SITE OF HARPSFIELD HALL, HATFIELD
11540	BOUNDARY DITCHES, HATFIELD AERODROME
11541	BOUNDARY DITCHES, HATFIELD AERODROME
11544	UNDATED CREMATION, HATFIELD AERODROME
11546	LATE BRONZE/EARLY IRON AGE OCCUPATION, HATFIELD AERODROME
11547	LATE IRON AGE CREMATION URN, HATFIELD AERODROME
11549	LATE IRON AGE/ROMANO-BRITISH DITCHES AND POTTERY, HATFIELD AERODROME
11550	LATE BRONZE AGE/EARLY IRON AGE DITCH, HATFIELD AERODROME
11551	LATE BRONZE/EARLY IRON AGE FEATURES, HATFIELD AERODROME
11556	POSSIBLE FLINT ARROWHEAD, SUTTONS FARM, HATFIELD
11559	MIDDLE BRONZE AGE POTTERY, HATFIELD AERODROME
11560	SAXON POTTERY, HATFIELD AERODROME
11561	PALAEOLITHIC HANDAXE, HATFIELD AERODROME
11562	LATE IRON AGE/ROMANO-BRITISH PITS AND POTTERY, HATFIELD AERODROME
11649	POSSIBLE GREEN, E OF SLEAPSHYDE FARM, COLNEY HEATH
11830	SITE OF ROEGREEN FARM NORTH, COLLEGE ROAD, ROE GREEN, HATFIELD
11831	SITE OF ROEGREEN FARM SOUTH, COLLEGE ROAD, ROE GREEN, HATFIELD
11832	ROEHYDE FARM, HATFIELD
11886	DE HAVILLAND AERONAUTICAL SCHOOL ACCOMMODATION BLOCK, COOPERS GREEN LANE, HATFIELD

HER NO.	DESCRIPTION
11887	DE HAVILLAND AERONAUTICAL SCHOOL TRAINING HANGAR, COOPERS GREEN LANE, HATFIELD
11907	POST-MEDIEVAL FIELD BOUNDARIES, HATFIELD AERODROME, HATFIELD
11908	MESOLITHIC TRANCHET AXE OR THAMES PICK, HATFIELD AERODROME, HATFIELD
11909	HAMMER-STRUCK FLAKE, HATFIELD AERODROME, HATFIELD
12235	SITE OF BUTTERWICK FARM, SMALLFORD
13076	SITE OF TOLL GATE, OAKLANDS LANE, SMALLFORD
13600	UNDATED PIT, OAKLANDS COLLEGE, SMALLFORD, COLNEY HEATH
13616	OAKLANDS, HATFIELD ROAD, COLNEY HEATH
13687	DE HAVILLAND CANTEEN & ADMINSTRATION BLOCKS, COMET WAY, HATFIELD
13721	BRONZE AGE FLINT FLAKES, HATFIELD BUSINESS PARK, HATFIELD
15396	NAST HYDE FARM, WILKINS GREEN LANE, ELLENBROOK, HATFIELD
15397	GREAT NAST HYDE, WILKIN'S GREEN LANE, ELLENBROOK, HATFIELD
15400	SUTTONS FARM, COOPER'S GREEN LANE, HATFIELD
15569	UNDATED PIT, HOWE DELL PRIMARY SCHOOL, HATFIELD
16446	SITE OF HOLLYBUSH HALL, COLNEY HEATH LANE, SMALLFORD
17354	SITE OF MISSION ROOM AND ROE GREEN COTTAGES, COLLEGE LANE, ROE GREEN, HATFIELD
17599	SITE OF 'CHALK SHAFTS', COLLEGE LANE, HATFIELD
17661	SITE OF MISSION ROOM, COOPER'S GREEN LANE, HATFIELD
18084	CROPMARKS OF POSSIBLE DITCHES AND PITS, SANDPIT LANE, JERSEY FARM, ST ALBANS
18091	CROPMARKS OF PITS, BOUNDARIES AND PROBABLE TRACK, SMALLFORD LANE, SLEAPSHYDE
18472	SUNNYSIDE, WILKINS GREEN LANE, WILKINS GREEN, COLNEY HEATH
18473	WILKINSGREEN FARM, WILKINS GREEN LANE, COLNEY HEATH
18475	SITE OF TOLL GATE, HATFIELD ROAD, SMALLFORD
18476	METHODIST CHURCH, SLEAPSHYDE, COLNEY HEATH
30774	POST-MEDIEVAL POTTERY AND OTHER DEBRIS, EAST OF OAKLANDS LANE, COLNEY HEATH
30775	POST-MEDIEVAL POTTERY AND OTHER DEBRIS, NORTH OF SLEAPSHYDE, COLNEY HEATH

Discussion

Early Prehistoric

12.24 The HER records two instances of Palaeolithic finds within the study area (2935, 11561), both of which were isolated hand axes, and a single Mesolithic find, a tranchet axe or Thames pick found on the aerodrome (11908).

Later Prehistoric

12.25 A number of finds of flint attest to a later Prehistoric presence in the study area. Finds such as an arrowhead (11556), a hammer struck flake (11909) and scatter of Bronze Age flakes (13721) suggest a background of activity further reflected by the identification of Bronze Age pits (9926) and from the aerodrome a find of middle Bronze Age pottery (11559).

12.26 Further late Bronze Age to Iron Age evidence is also recorded in the form of 'occupation' (11546) and a ditch and other features (11550, 11551) all within the aerodrome. A single late Iron Age cremation in an urn is also recorded from the aerodrome and a group of Iron Age features (9927) from quarrying at Suttons Farm.

Roman

12.27 The Roman period is surprisingly sparsely represented in the study area. Only two sites, each of which also have late Iron Age activity are recorded as producing Roman material. They comprise some ditches (11549) and pits 11562), both within the former aerodrome.

Saxon

12.28 Some Saxon pottery (nine small and abraded sherds) was recovered from archaeological work in the aerodrome but there is no indication whether they came from a feature.

Medieval

12.29 The medieval period is represented by a group of ditches excavated at Suttons Farm ahead of quarrying in 2000. They produced pottery of C12-C13 date and were interpreted as part of a wider system.

Post Medieval

12.30 The remaining material is either of post-medieval date or undated. Many of the entries relate to the site of farms or structures that appear on earlier maps but are no longer extant in the landscape.

Historic Landscape Assessment

Introduction

12.31 The application site was until recently partially occupied by elements of the Hatfield Aerodrome including a runway, taxiway and ancillary structures, the removal of which has produced an uneven landscape. Significant land disturbance also took place associated with the filming of Saving Private Ryan and Band of Brothers.

Historic Landscape of the application site and immediate surroundings

12.32 Examination of the historic maps of the application site and its immediate surroundings reflect an agricultural landscape (before the aerodrome) of rectilinear fields that presumably date to the enclosure of the area. The form of the fields is unchanged from the 1883 1:10,560 (**Figure 12.5**) through to the 1925 1:10,560 mapping with the exception of the amalgamation of some of the smaller parcels with other larger fields.

12.33 Popefield Farm itself is depicted on each of these maps with the same building layouts, suggesting it too was unchanged. There is variation in the landuse of some of the adjoining land parcels which in the 1883 mapping are clearly shown as orchard but by 1899 (**Figure 12.6**) only one parcel fronting onto the Hatfield Road is shown thus.

12.34 On the 1899 mapping a gravel pit is depicted some distance to the north of the farm. This area is also shown unannotated on the 1925 map (**Figure 12.7**) when the field boundary to the north has gone. It is possible there was more extensive quarrying which removed the boundary that has not been mapped. This is perhaps more likely since on the 1938 1:10,560 (**Figure 12.8**) the field with the marked gravel pit is shown with two pits, possibly ponds, and it is subdivided by a new north-south aligned field boundary.

12.35 The area to the west of Popefield Farm is shown on the 1938 map with a racetrack. This was Smallford track and operated as a speedway venue from 1936-1939.

12.36 Subsequent mapping (**Figures 12.9-12.11**) show the farm and to its north and east elements of the runway associated with the de Haviland works. At the same time many of the field boundaries appear to have been removed or replaced. The 1975-78 1:10,000 mapping shows the former gravel pit/pond area as wooded.

Field Based Evaluation

12.37 Geophysical survey and trial-trenching was carried out in November and December 2015.[1]

Geophysical Survey

Aims and Methodology

12.38 Approximately 11.5 hectares was surveyed across the application site by Archaeophysica in areas where the ground was not overgrown or uneven, a result of earthmoving activities.

[1] Reports have been submitted to Hertfordshire County Council

12.39 The survey was carried out using Magnetometry in a continual recording mode taking readings at 1.0m between lines, and 0.3m mean along line interval. This is usually referred to as 'detailed' geophysics.

12.40 All work was carried out by experienced geophysical surveyors.

Results

12.41 The surveyed areas were predominantly around the southwest end of the former runway. The results (**Figure 12.12**) showed a general background of evidence for the degradation of the natural [1][2] and also extensive spreading of ferrous material across the site [2] as might be anticipated from the clearance of the site. A linear spread of anomalies [3] running approximately parallel to the northern boundary of the surveyed area and more extensive areas [4 & 5] to the south. The origin of these anomalies is unclear but it is likely to be the product of the demolition of structures and dumping of material.

12.42 Part of the origin of the area [6] may be the crash of a Lightning jet in 1962 and the subsequent 'clean up' (www.eyemead.com/noise-1.htm), **Photographs 12.8-12.9**).

12.43 In addition to identifying field boundaries that were in existence until the post war extension of the runway, only a single possibly archaeological linear feature [7] was identified. It is a short length of possible ditch on an orientation that is different to the recent field system and it may therefore relate to an earlier land division.

Trial-Trenching

Aims and Methodology

12.44 Trial-trenching of part of the application site was carried out by TVAS in November and December 2015. Some of the application site could not be explored at that time owing to the need to secure appropriate licences to allow working within 250m of ponds known to contain Great Crested Newts.

12.45 The general purpose of the evaluation was to determine the presence/absence, extent, condition, character, quality and date of any archaeological deposits within the area of development. Its specific research aims were to:

- determine if archaeologically relevant levels have survived on the application site;
- determine if archaeological deposits of any period are present;
- identify areas that may have been destroyed or disturbed while the area formed part of a film set and, if so, provide information on the extent of this disturbance;

[2] Numbers in [*n*] refer to **Figure**

- provide information in order to draw up an appropriate mitigation strategy if required.

12.46 This phase of evaluation was to comprise the digging of 204 trenches each 2m wide and 25m long. The trench locations were laid out using hand held GPS in a largely random but evenly spread pattern. Owing to on-site constraints, including a small plantation, it was not possible to open all of the trenches and a total of 165 were opened in this phase. The layout is shown on **Figure 12.13**.

12.47 The trenches were dug under archaeological direction by a 360°-type machine fitted with a ditching bucket. The spoil heaps were monitored for finds and all potential archaeological deposits were hand-cleaned and excavated.

Results

Introduction

12.48 The results of the trenching have revealed no positively identified ancient archaeological levels or features. In general the site stratigraphy was a topsoil or former agricultural soil of between 0.1 and 0.3m thick which overlay a silty clay subsoil of between 0.1-0.3m thick. This in turn generally overlay the 'natural' that ranged from a reddish clay to a gravel across the site. These naturals were clear and would allow the easy identification of any features cutting into them. The poor drainage these naturals provided is reflected by the presence of several different field drain systems across the application site. Most were ceramic pipes in narrow trenches infilled with loose gravel, although some were concrete pipes that may relate to drainage works associated with the application site's use as an airfield.

12.49 Although most trenches were blank, and had the simple stratigraphic sequence described above, some specific and destructive activities could be identified.

Plough scars

12.50 The first and slightest impact was from deep ploughing, with groups of parallel plough scars identified in a number of areas of the site, for example in trenches 7 and 13-15. These plough scars were however not present across the entire site as would have been expected if they were the product of normal agricultural ploughing. Instead they seemed to only be present in areas of tree planting, perhaps reflecting the deliberate breaking of the soils prior to the planting of presumably bare rooted cuttings.

Remains associated with the airfield

12.51 One part of the area evaluated produced evidence for extensive make up, in places in excess of 1m, of imported clean clays and sands along with deposits of brick bats and other material. The localised occurrence of this material in trenches 92, 100-106, 110-111, 114 and 117-18, coincided with

part of the concrete runway and the land to its immediate south which is indicated as a slight valley by the contours on the pre-airfield Ordnance Survey.

12.52 The original grass airstrip and wartime airfield did not extend into this area but in the immediate post- war years there was a need to extend the runway and replace the grass surface with concrete to accommodate the larger and heavier aircraft. Hatfield was one of the first examples of this new construction in the country. The work saw the runway cutting through a slight rise and running across a slight valley which was infilled, sealing its topsoil. Work commenced in June 1945 and was completed by December 1947. The dumped material noted in some of the trenches was presumably from the cutting through the slight ridge and the limited nature of the slight valley is reflected by the fact that in trenches 109, 111 and 115 there was a the suggestion of a tapering edge to the dumped material.

12.53 The valley contained the Ellenbrook, which had already been culverted in a pipe by the time of the construction of the new runway, but a new bigger culvert was inserted to carry its course. Whilst neither culvert was identified in the evaluation the black, slightly organic nature of the buried topsoil present in this group of trenches was characteristically typical of a waterlogged soil and may denote the proximity of the brook.

12.54 In addition to the dumping to provide a more level base for the runway, a possible post-runway pit was identified in trench 114 which extended in excess of 2.5m below the present ground level. This feature contained large amounts of wood, metal, salt-glazed sewer pipes and a rubber wellington boot. It is unclear why the pit was excavated but it represents modern dumping.

Ground disturbed as part of a film set

12.55 In addition to the areas of deliberate dumping to create the level base for the construction of the runway, several other areas of disturbed ground were identified where there was evidence to suggest the overburden had been previously stripped to, if not into, the underlying natural. This evidence was predominantly to the west and south west of the runway (for example in trenches 75, 76, 81, 82 and 127-134) and much of the area coincided with a large rectilinear but slight surface hollow.

12.56 The origin of this disturbance was almost certainly associated with the filming of The Band of Brothers mini-series. The series was shot over 8 to 10 months and the various sets included replicas of European towns. This part of the application site had previously been used to shoot the film Saving Private Ryan in 1997 and whilst aerial images have not been located, a still from the film (**Photograph 12.10**) shows significant construction, including a canal (still identifiable on site) and a raised railway.

12.57 A Google earth image of 2000 (**Photograph 12.11**) shows the extent of disturbance associated with filming during restoration and **Photograph 12.12** is a still of the Band of Brothers film set. Backfilling contained quantities of both brick rubble and cabling, in particular co-axial cable. Trenching

produced evidence for a toothed machine bucket having created striae in the upper surface of the natural and in other places bricks and other modern material had been compacted into the surface of the natural.

Tree root bowls

12.58 Discrete features were identified in several of the trenches. Some of the features were identified as tree root bowls (trenches 80 & 87), one of which in trench 80 produced modern material.

Linear features

12.59 The most frequently occurring feature type was that of a linear ditch or gully, of which 18 examples were identified over 12 trenches. The majority of these features could be identified as forming part of a field boundary or trackway depicted on the nineteenth century Ordnance Survey mapping of the area. The examples present in trenches 27 (ditches 5 & 6) formed part of a field boundary. That there are two ditches may denote either the replacement of one by the other or the suggestion that this line was also the parish boundary and was therefore marked on both sides. The individual cuts were both less than 1m wide and between 0.3-0.15m deep so clearly not of a size on their own and without a hedge, for example, to form a stock boundary.

12.60 It is significant that in other trenches that should have crossed field boundaries in this area (trenches 11, 17 & 23) no linear boundaries were identified perhaps suggesting that some boundaries were only defined by a hedge with no ditch.

12.61 In trench 6 a ditch on the same orientation as a field boundary on the 1896 mapping was present. It was 0.95m wide and up to 0.22m deep and from its infill a single piece of abraded clay building material (CBM) was recovered, along with a clay pipe stem fragment of mid to late eighteenth century date.

12.62 The construction of the airfield extension saw the removal of most of the previous field boundaries. A ditch in trench 104 (ditch 1) was almost certainly one of the approximately north-south aligned ditches shown on the mapping and its identification at a depth of about 1.8m below the present surface gives an indication of the scale of earthmoving that accompanied the construction of the extended runway.

12.63 The ditches identified in trenches 40 and 42 may be part of the complex that formed the track running north from Popefield Farm, with ditch 7 in trench 40 being equated to ditch 15 in trench 42. Only a single cut was evident in trench 40, but four ditches in two groups of two (ditches 13 & 15 and 11 & 12) were seen in trench 42 perhaps reflecting both sides of the track and its periodic redefinition.

12.64 Trenches 88 and 92 each held a single ditch that do not conform to the position of any of the mapped boundaries and neither contained any dateable artefacts. In trench 92, the ditch (23) lay approximately northeast to southwest across the trench and was 0.65m wide and 0.21m deep, whilst in

trench 88 the ditch (22) was almost east-west and measured 2m wide and 0.3m deep.

12.65 The two remaining ditches occurred in trench 130 (ditch 19) and trench 55 (ditch 26). Ditch 19 could not be equated to any of the identified mapped field boundaries but ditch 26 was almost certainly part of the south side of a small land parcel that lay toward the northern part of the application site.

12.66 Overall most of the identified ditches in the trenches could be reconciled as being boundaries shown on the nineteenth century Ordnance Survey mapping and where dating was recovered from them it was invariably of post medieval or recent date.

Fence line

12.67 A further recent boundary was defined in trench 46 where a line of 5 equal-sized post holes (8-10 & 16 & 17), at least one of which (17) was seen in section cutting from the base of the topsoil. This line was not structural and may have been the remains of a recent fence defining the plantation to the southwest. Posthole 9 contained a fragment of post medieval CBM.

Conclusion

12.68 This phase of evaluation has successfully identified a range of post-medieval features that can almost entirely be predicted from mapping of the site. No ancient artefacts were recovered, even from the spoil heaps. The oldest find was the sherd of salt glazed Bartmannkrug jug. The absence of any features of earlier date may reflect the marginal location of this part of the landscape, perhaps made too wet by the presence of the Ellenbrook.

SUMMARY OF DEVELOPMENT

12.69 The planning application is for the establishment of a new quarry on land at the former Hatfield Aerodrome, being part of an allocated site referred to in the extant Minerals Local Plan (”Preferred Area 1”). The proposals would involve the winning and working, together with processing for sale, of some 8Mt of sand and gravel over a period of around 30 years (based on an annual output of around 250,000tpa). In parallel with the extraction of minerals would be the importation of low permeability inert material to infill the mineral workings to facilitate the restoration of the site to a beneficial after use, combining recreation and nature consideration. The imported material would typically comprise excavation wastes from construction and engineering projects (soils, overburden, clays etc.) within the region.

12.70 The quarry would be worked on a phased basis to allow for progressive restoration. Excavated material would be processed at the quarry using a combination of screening and washing plant to produce a range of graded aggregates and sands. Processed aggregates would either be dispatched from the site in HGVs or used in ancillary ‘downstream’ plant (a ‘concrete batching plant’) located within the plant site for the production of concrete. Processed aggregates and concrete (together with the import of cement)

would be exported via a new access constructed onto the A1057 (Hatfield Road) on the southern side of the quarry.

12.71 Other ancillary development would include a weighbridge, office accommodation, electrical transformer, electrical switch-room, and small stores and maintenance building, fresh water and silt lagoons.

ASSESSMENT OF EFFECTS

Introduction

12.72 The nature of mineral extraction results in the total loss of the archaeological resource wherever extraction takes place, and the potential loss or damage in other areas associated with infrastructure and landscaping. These are direct effects.

12.73 Indirect effects are those that do not physically affect a cultural heritage asset, townscape or landscape, but that alter the context or setting.

Direct Effects

12.74 Although the HHER would indicate that the application site lies within an area of some archaeological potential, there is clear evidence of significant disturbance through the construction and demolition of the airfield, and subsequent use as a film set. Even where the ground is undisturbed, geophysical survey and Phase 1 trenching found scant archaeological remains and none that would appear to pre-date the post-medieval period. No artefacts of earlier date were found.

Indirect Effects

12.75 A site visit indicated that only the complex of three listed buildings at Popefield Farm could experience an adverse effect of any magnitude.

12.76 In order to quantify the scale of that effect an assessment has been carried out based upon criteria set out in Seeing the History in the View: A Method For Assessing Heritage Significance Within Views (Historic England 2011) and advice within Good Practice Advice 3 – The Setting of Heritage Assets (Historic England 2015). The use of views was chosen as the most appropriate way of assessing change to the setting, given that it is proposed to restore the land nearest the properties at close to existing levels, such that the long-term context would not adversely change. In the short-term, during preparatory works, extraction and infilling, the context would alter, but, as the property is occupied, it is the views of the development that are most sensitive to change.

12.77 As the property is on private land, the assessment has been made using evidence from Google Earth and by standing at the boundary of the property nearest the application site.

Operational Phase

12.78 Each phase of extraction would be worked in a similar fashion. Stripped soils and overburden would be placed into storage mounds (3m – 5m in height) located on the periphery of the working area. The greatest adverse effect would be during the creation of these bunds, estimated to take about 3 weeks. During extraction, the bunds would restrict views of the development. Phases A, D and F are the closest to Popefield Farm, at a distance of between 75m and 100m.

12.79 Seeing the History in the View states that "*the value of the view as a whole may be determined through its designated status, the overall heritage significance in the view, and the extent to which the view exhibits additional significance as a result of a number of heritage assets being seen in combination with each other*."

12.80 Views from the house towards the application site in Phase A would be partly screened by trees. In Phases D and F, views north from the house would be largely blocked by the barn to the north west. Views of the most southern limit of Phase F are likely to be largely unobstructed.

12.81 The viewing point of most significance, using Historic England guidance, is on the approach to the house where the house and two associated listed buildings can be viewed in the same envelope (**Figure 12.14**). This is an interpolated viewing point, as the viewing point lies on private land.

12.82 Based upon guidance contained in the policy document, the view is ascribed a "moderate" value/importance, defined as:

12.83 "*The view* is *likely to be of importance at the county, borough or district level …and contain heritage assets such as grade II listed buildings, grade II historic parks or gardens, conservation areas, locally listed buildings or other locally identified heritage resources whose heritage significance is well represented in the view and which benefit from being seen in combination with each other."*

12.84 Assessment of the magnitude of impact should "*as far as possible be objective, reasoned and quantifiable. The assessor should consider the extent to which heritage significance within a view may be changed or affected by the proposed development by reason of the latter's location or design*."

12.85 We have therefore assessed the magnitude of this change as 'low adverse', which is defined by Historic England in Seeing The History In The View, page 22 as:

12.86 "*The* development *erodes to a minor extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values*".

12.87 The rationale for this is that the listed buildings form a courtyard that prevent views to the north and east. Views to the north-west and west would be

largely unobstructed, although mitigated to some extent by the peripheral bund. The main impact is therefore during the estimated 3 weeks of bund construction.

12.88 Using the Historic England matrix, below, the effects upon the view is therefore calculated to be "minor adverse".

	WITH HIGH VALUE	WITH MEDIUM VALUE	WITH LOW VALUE
With high magnitude of impact	Major effect	Major effect	Moderate effect
With medium magnitude of impact	Major effect	Moderate effect	Minor effect
With low magnitude of impact	Moderate effect	Minor effect	Negligible effect
Negligible/ neutral impact	Negligible effect	Negligible effect	Negligible effect

12.89 A second view has been considered; that from the house looking north-east towards Phase A (**Figure 12.3**). This view is from the rear of the house and would therefore be of low value, described as "*a locally valued view [from] heritage assets such as grade II listed buildings, grade II historic parks or gardens, conservation areas, locally listed buildings or other locally identified heritage resources whose heritage significance is clearly readable, but not best represented, in this particular view*".

12.90 We have assessed the magnitude of the change to the view as medium adverse. This is defined by Historic England as "*the development erodes to a clearly discernible extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values*."

12.91 The rationale for this is that even with some filtering of views by trees, there would be clear views to the application site, especially from upstairs windows. The clearer views would however be oblique.

12.92 Using the Historic England matrix, below, the effects upon the view is therefore calculated to be "minor adverse".

	WITH HIGH VALUE	WITH MEDIUM VALUE	WITH LOW VALUE
With high magnitude of impact	Major effect	Major effect	Moderate effect
With medium magnitude of impact	Major effect	Moderate effect	Minor effect
With low magnitude of impact	Moderate effect	Minor effect	Negligible effect
Negligible/ neutral impact	Negligible effect	Negligible effect	Negligible effect

Post-restoration

12.93 It is proposed to restore the application site to a beneficial after-use, which is very similar in character and appearance to the existing Ellenbrook Fields, reinstates the current accessibility of the greenspace to members of the local public, whilst fulfilling all engineering requirements, in terms of managing water (surface and groundwater).

12.94 The landcover would consist of a broad area of gently sloping conservation grassland, divided by hedgerows and with some complimentary wetland and pond features.

12.95 The proposed hedge planting and alignment of open ditches/swales uses the 1888 historic field pattern which existed on the application site prior to the aerodrome and other interventions, with the aim of reinstating the broader landscape setting of the Popefield Farm listed building complex. Some of this remnant field pattern is still present on site, whilst some has been lost.

12.96 This would also create potential linkages with the existing hedgerows, woodland and tree belts around the perimeter of the application site.

12.97 The viewing point is the same as assessed in para 12.81 which is of "moderate" value/importance.

12.98 The magnitude of change is as 'low beneficial', which is defined as "*the development enhances to a minor extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values.*"

12.99 Using the Historic England matrix, below, the effects upon the view is therefore calculated to be "minor beneficial".

	WITH HIGH VALUE	WITH MEDIUM VALUE	WITH LOW VALUE
With high magnitude of impact	Major effect	Major effect	Moderate effect
With medium magnitude of impact	Major effect	Moderate effect	Minor effect
With low magnitude of impact	Moderate effect	Minor effect	Negligible effect
Negligible/ neutral impact	Negligible effect	Negligible effect	Negligible effect

Criteria used in the Evaluation of Predicted Effects

12.100 In accordance with the EIA Regulations the significance of an effect should be identified. This is achieved using a combination of published guidance and professional judgement, including the assessment criteria published by Historic England, above.

12.101 The EIA Regulations require that 'significant' effects are identified, whereas NPPF uses the terms 'substantial' and 'less than substantial'. As this application is being determined under the EIA Regulations, the terms 'significant' and 'not significant' are therefore used below.

12.102 Four criteria have been considered in evaluating the significance of the predicted effects of the proposed development. This draws on the results of the assessment of impact upon listed buildings (paras 12.75-12.99, above) and the results of the desk-based and field-based evaluation.

Type of effect

12.103 Effects may be positive, negative, neutral (i.e. no discernible effect) or none. They may be permanent or temporary, direct or indirect. They may also be cumulative with other effects occurring in the vicinity.

Probability of the effect occurring

12.104 An assessment is made as to the likelihood of the identified effect occurring. Probability is considered as certain, likely, unlikely or not known.

Sensitivity

12.105 Three categories of sensitivity are identified: high, medium and low. These are expanded upon in Table 12-4, below.

Table 12.4
Definitions of sensitivity

Sensitivity	Definition
High	Sites and settings of *national importance*. Scheduled Monuments. Registered Battlefields. Grade I and Grade II* Listed Buildings and Grade I Registered Historic Parks and Gardens. Sites may also be discovered as a result of new research that are also of national importance and are candidates for scheduling.
Medium	Sites and settings of *regional importance*. Archaeological sites and features that are not considered sufficiently important or well-preserved to be protected as Scheduled Monuments. Grade II Listed Buildings and Grade II Registered Historic Parks and Gardens. Conservation Areas.
Low	Archaeological sites and structures, and other components of the historic environment that contribute to the local landscape. Locally designated assets.

Magnitude

12.106 The magnitude of change to a cultural heritage asset or landscape is considered in terms of its vulnerability, its current condition and the nature of the impact upon it. With respect to sub-surface archaeology, there may be a degree of uncertainty of the magnitude of change, and where this is the case it is noted. Magnitude is assessed as high, medium, low or negligible/none and the criteria used in this report are set out in Table 12-5, below.

Table 12-5
Criteria for Assessing Magnitude of Change

Magnitude of Change	Description of Change
High	Complete destruction of a well-preserved archaeological site, structure or element of the cultural heritage landscape Change to the setting of a cultural heritage feature such that our ability to understand the resource and its historical context is permanently and substantially changed
Medium	Partial destruction of a well-preserved archaeological site, structure or element of the cultural heritage landscape Change to the setting of a cultural heritage feature such that our ability to understand the resource and its historical context is permanently changed, but not to the extent of removing its whole context
Low	Destruction of an archaeological site or other cultural heritage feature already in degraded condition Change to the setting of a cultural heritage feature such that our ability to understand the resource and its historical context is slightly or temporarily changed
Negligible/None	No physical effect upon an archaeological site or other feature of the cultural heritage landscape No discernible effect upon the setting of a cultural heritage feature, or our ability to understand the resource and its historical context

ASSESSING SIGNIFICANCE

12.107 The four criteria are considered together to reach a conclusion upon the significance of an effect. This does not take into account any measures that are proposed to mitigate the effect, as set out in paras 12.110-12.117. In

accordance with the EIA Regulations these are quantified as significant, not significant or neutral (i.e. no change to the existing situation). In some cases it may not be possible to quantify the significance of an effect, for example due to a gap in information, and this is noted.

12.108 Table 12-6 presents a matrix of the inter-relationship of sensitivity with magnitude.

Table 12-6
Inter-relationship of sensitivity with magnitude

Sensitivity ↓	Magnitude → High	Medium	Low	Negligible/None
High	**Significant**	Not significant	Not significant	Neutral
Medium	**Significant**	Not significant	Not significant	Neutral
Low	Not significant	Not significant	Not significant	Neutral

EVALUATION OF THE SIGNIFICANCE OF PREDICTED EFFECTS

12.109 The results of the assessment are drawn together in **Table 12-7**, below, to reach an overall assessment of significance.

Table 12-7
Effects and Evaluation of Significance

	Type of Effect	Probability of Effect Occurring	Sensitivity	Magnitude of Effect	Significance	Rationale
Direct effects upon statutorily designated assets of the historic environment	Neutral	Certain	High	None	Neutral	There are designated heritage assets within the application site
Effects upon buried archaeology within PEA	Negative Permanent	Certain	Low	Low	Not significant	Although the HHER would indicate that the application site lies within an area of some archaeological potential, there is clear evidence of significant disturbance through the construction and demolition of the airfield, and subsequent use as a film set. Even where the ground is undisturbed, the geophysical survey and Phase 1 trenching found scant archaeological remains and none that would appear to pre-date the post-medieval period. No artefacts of earlier were found. A scheme of precautionary mitigation involving monitoring by archaeologists, followed if necessary by excavation, recording, analysis and publication, would be implemented (see para 12.11 -12.17*).
Indirect effects upon Popefield Farm: Operational Phase	Negative	Certain	Medium	Medium	Not significant	Using Historic England guidance, an assessment has concluded that the effect upon the setting of Popefield Farm would be 'minor adverse' during the operational phase due to visibility of, in particular, the construction of peripheral bunding. The most sensitive view, looking to the front of the house, would not be affected, but there would be clear views from the rear elevation, although these would mainly be oblique.
Indirect effects upon Popefield Farm: Post-restoration	Positive	Certain	Medium	Medium	Not significant	It is proposed to restore the application site to a beneficial after-use that includes reinstating the 1888 historic field pattern, which existed on the application site prior to the aerodrome and other interventions, to enhance the broader landscape setting of the Popefield Farm listed building complex. Using Historic England guidance, an assessment has concluded that the effect upon the setting of Popefield Farm after restoration would be 'minor beneficial'.
Indirect effects upon other designated assets	Neutral	Certain	High Medium	Negligible	Neutral	A combination of distance, topography and intervening vegetation would prevent effects of any magnitude upon other Listed Buildings or designated assets within 1km of the application site.

MITIGATION

Designated Heritage Assets

12.110 No additional mitigation is considered necessary in connection with the effects upon offsite designated heritage assets.

Archaeology

12.111 Although to date there is no evidence of archaeology pre-dating the post-medieval period on the application site, it is recognised that there remains a potential for it to be present, in particular in areas not disturbed by the airfield and film making.

12.112 A tiered watching brief during soil stripping would be appropriate mitigation, with the frequency and intensity adjusted to reflect ongoing results. This could be as set out in **Table 12-8**.

Table 12-8
Scope of Tiered Watching Brief

Tier 1	**Low-level monitoring** would involve one archaeologist observing soil stripping within designated areas of the application site. These would be areas that retain potential through lack of modern disturbance. This would be an appropriate approach where isolated archaeological sites are being occasionally exposed. If archaeology is apparent s/he can intervene, and request a change of machining methodology to avoid archaeology until it can be dealt with or adopt a Tier 2 approach, below. If no archaeology is showing up and with the agreement of Herts CC, the watching brief would become more intermittent.
Tier 2	**Continuous monitoring** would involve two archaeologists per machine - one watching, one cleaning and marking. This would be an appropriate approach where archaeological features are being regularly exposed. When/if there is more archaeology than two archaeologists can deal with, a team would be brought in to excavate (Tier 3, below).
Tier 3	**Set piece archaeological excavation** of areas containing a density of features using a team of archaeologists.

Outline of Watching Brief and Excavation Procedure

12.113 An archaeological contractor would be appointed to carry out the fieldwork with an experienced and appropriately qualified supervisor in charge of day-to-day site-based work.

12.114 Where required within areas of potential archaeological interest, soils would be stripped using a backacting 360° machine to a level agreed with the monitoring archaeologist. No tracking or movement of plant may take place on the exposed surface until it has been signed-off by the County Archaeologist, or a delegated archaeologist. Machinery may need to be halted or diverted to allow archaeologists safe access to examine the stripped surface.

12.115 Any archaeological finds within the topsoil would be collected and bagged by area; all finds from the exposed surface would be individually bagged and located to their findspot. Exposed surfaces would then be cleaned by hand tools as necessary in order to clarify located features and deposits.

12.116 Excavation and recording of archaeological features and deposits would then take place either within the remit of the watching brief if not extensive or as part of a formal archaeological excavation. Established excavation and recording methodology would be used.

12.117 Details of methodologies would be formalised in a Written Scheme of Investigation, agreed with Herts CC, prior to development commencing.

RESIDUAL IMPACTS

12.118 With the implementation of the proposed mitigation strategy in respect of archaeology and the historic landscape-led restoration scheme, there would be no adverse residual impacts.

CUMULATIVE EFFECTS

12.119 Cumulative assessment is required under the EU Directive on EIA. Its purpose is to identify impacts that are the result of introducing the development into the setting of cultural heritage assets in combination with other existing and proposed developments. It may also include the combined effects upon the archaeological resource. The combined impact may not simply be the sum of the impacts of individual developments; it may be more, or less.

12.120 There are considered to be no cumulative effects of the proposed scheme upon cultural heritage.

CONCLUSIONS

Direct Effects and Mitigation

Archaeological potential and effects

12.121 Although the Hertfordshire Historic Environment Record would indicate that the application site lies within an area of some archaeological potential, there is clear evidence of significant disturbance through the construction and demolition of Hatfield Aerodrome, and subsequent use as a film set for Saving Private Ryan and Band of Brothers.

12.122 Even where the ground is undisturbed, geophysical survey and Phase 1 trenching found scant archaeological remains and none that would appear to pre-date the post-medieval period. No artefacts of earlier date were found.

12.123 The nature of mineral extraction however results in the total loss of the archaeological resource wherever extraction takes place, and the potential loss or damage in other areas associated with infrastructure and landscaping.

Designated Heritage Assets

12.124 There would be no adverse direct effects upon designated assets such as listed buildings or scheduled monuments.

12.125 The direct effects upon designated heritage assets is therefore neutral.

Mitigation

12.126 In accordance with planning policy, a precautionary approach should be taken to the potential loss of the archaeological resource. A tiered watching brief within areas undisturbed by modern activities, accompanied by excavation and recording, is proposed. Such mitigation could be carried out in line with the quarry phasing.

12.127 Should archaeological features be identified these would be recorded and excavated, appropriate to their significance, with subsequent analysis and publication of the results. This would ensure recovery of archaeological information within the application site.

12.128 The scope of work would be submitted to Hertfordshire County Council before development commences in the form of a Written Scheme of Investigation and would be subject to a planning condition requiring its implementation.

12.129 The effects upon archaeology would be negative. However, taking into account the proposed mitigation measures and lack of archaeological evidence to date, it is considered that the effect is not significant.

Indirect Effects and Mitigation

Designated assets in the vicinity of the application site

12.130 Examination of a study area of 1km from the application site was undertaken to assess the potential effects of the proposed development upon the setting of designated heritage assets.

12.131 Thirty listed structures lie within 1km of the application site boundary, but due to intervening vegetation and development only the listed building complex at Popefield Farm could experience an adverse effect of any magnitude.

12.132 An assessment of the predicted effects upon Popefield Farm both during operation and after restoration was carried out using Historic England guidance.

12.133 This concluded that there would be a minor adverse effect upon views of and from Popefield Farm during the operational phase. After restoration, that would include hedge planting to recreate the 1888 historic field pattern with the aim of reinstating the broader landscape setting of Popefield Farm, there would a minor beneficial effect.

12.134 Taking into account the proposed mitigation measures, it is considered that the effect upon Popefield Farm is not significant and upon other offsite designated heritage assets the effect is neutral.

Mitigation of indirect effects

12.135 No additional mitigation is considered necessary in connection with the effects upon offsite designated heritage assets.

Residual Impacts

12.136 With the implementation of the proposed mitigation strategy, in respect of archaeology and the historic landscape-led restoration scheme, there would be no adverse residual impacts.

Cumulative Effects

12.137 There are considered to be no cumulative effects of the proposed scheme upon cultural heritage.