

<b>11</b>	<b>ARCHAEOLOGY AND HERITAGE.....</b>	<b>3</b>
11.1	Introduction.....	3
11.2	Aims and Objectives.....	3
11.3	Legislation and Policy Context.....	3
11.3.1	Statutory Legislation.....	3
11.3.2	Non-statutory Protection.....	4
11.3.3	Structure Plan and Local Plan Protection .....	6
11.4	Method Of Assessment.....	6
11.4.1	Introduction.....	6
11.4.2	Study Area .....	6
11.4.3	Site Visit .....	6
11.4.4	Data Sources .....	6
11.4.5	Consultation.....	7
11.4.6	Field Evaluation.....	7
11.4.7	Gazetteer .....	7
11.4.8	Assessment Criteria .....	7
11.4.9	Limitations Of The Assessment.....	9
11.5	Baseline Overview .....	10
11.5.1	Introduction.....	10
11.5.2	Scheduled Ancient Monuments .....	10
11.5.3	Listed Buildings.....	11
11.5.4	Historic Parks and Gardens and Registered Battlefields .....	11
11.5.5	Conservation Areas.....	11
11.5.6	Non-Scheduled Archaeological Sites and Monuments .....	11
11.5.7	Archaeological Evaluation at Grinsome Farm.....	12
11.5.8	Site Visit .....	13
11.5.9	Aerial Photographs .....	13
11.5.10	Historic Landscape and Historic Map Regression.....	13
11.5.11	Archaeological Potential.....	14
11.6	Assessment of Archaeological Impact.....	15
11.6.1	Introduction.....	15
11.6.2	Summary of Generic Impacts .....	15
11.6.3	Site Specific Impacts of CCC Application .....	16
11.6.4	Site Specific Impacts of DBERR Application.....	17
11.6.5	Site Specific Impacts of Entire Site .....	17
11.6.6	Indirect Impacts of CCC Application, DBERR Application and Entire Site .....	17
11.6.7	Mitigation Measures .....	23
11.7	Residual Impacts.....	26
11.8	Cumulative Impacts .....	26

## References

## Figures:

Figure 11.1(a): Entire Site - Location of Archaeological Sites .....	Insert
Figure 11.1(b): CCC Application - Location of Archaeological Sites .....	Insert
Figure 11.1(c): DBERR Application - Location of Archaeological Sites .....	Insert
Figure 11.2(a): Entire Site - Grinsome Farm – Archaeological Trial Trenches .....	Insert
Figure 11.2(b): CCC Application - Grinsome Farm – Archaeological Trial Trenches ...	Insert
Figure 11.2(c): DBERR Application - Grinsome Farm – Archaeological Trial Trenches	Insert
Figure 11.3(a) Entire Site - Archaeological Sites within 6km.....	Insert
Figure 11.3(b) CCC Application - Archaeological Sites within 6km.....	Insert
Figure 11.3(c) DBERR Application - Archaeological Sites within 6km.....	Insert

## Tables:

Table 11.1: Statutory Protection for Archaeological and Heritage Sites.....	4
Table 11.2: Non-statutory Protection For Archaeological And Heritage Sites .....	4
Table 11.3: Data Sources Consulted and Information Obtained .....	6
Table 11.4: Criteria Determining Archaeological Sensitivity (Importance) .....	7
Table 11.5: Criteria Determining Magnitude of Archaeological Impact.....	8
Table 11.6: Criteria Determining Significance of Impact .....	9
Table 11.7: Trench Results Summary.....	13
Table 11.8: Statutorily Protected Sites within 6km Radius of the Proposed Development .....	18
Table 11.9: Stages of Archaeological Assessment and Mitigation Measures .....	24
Table 11.10: Gazetteer of Archaeological Sites .....	27

## **11 ARCHAEOLOGY AND HERITAGE**

### **11.1 Introduction**

This section presents the results of an updated archaeological desk-based assessment originally carried out by RSK in 2005 and a subsequent field evaluation carried out by RSK and Cambrian Archaeological Projects (CAP) in 2006. The results of the desk-based assessment and evaluation would assist in minimising the impact of the proposed scheme on archaeological and cultural heritage resources. Where applicable, impacts have also been determined for the RDF (DBERR S36 application) and Integrated Waste Management Facility and Environmental Technologies Complex (Cheshire County Council planning application) in isolation. Recommendations are made to reduce the impact upon known archaeological features and to determine and mitigate any impact on potential archaeological features.

### **11.2 Aims and Objectives**

It is the aim of this section to make an assessment of the impact of the proposed development on the known and potential archaeological and cultural heritage resources within the defined study area.

To meet this aim, the specific objectives of this section are:

- To identify and define the extent of known archaeological and cultural heritage resources within the study area;
- To establish, from existing evidence, the likely archaeological potential of the study area;
- To provide a preliminary assessment of the importance of the known archaeological and cultural heritage resources;
- To assess the overall impact of the proposed development on the known and potential archaeological constraints; and
- To make recommendations on the need for (and scope of) further evaluation and mitigation, as necessary.

### **11.3 Legislation and Policy Context**

#### ***11.3.1 Statutory Legislation***

The following table summarises the statutory legislation relating to the historic environment and relevant to this section.

**Table 11.1: Statutory Protection for Archaeological and Heritage Sites**

Legislation	Key Issues
Ancient Monuments and Archaeological Areas Act (1979)	It is a criminal offence to carry out any works on or near to a Scheduled Ancient Monument without Scheduled Monument Consent.
Planning (Listed Buildings and Conservation Areas) Act (1990)	No works can be carried out in relation to a listed building without listed building consent. Designation of an area as a 'conservation area' introduces general controls over demolition and development within that area.
Treasure Act (1996)	The 1996 Act defines 'Treasure' as any object that is at least 10% gold or silver, associated coins or groups of coins which are over 300 years old, objects formerly classed as 'treasure trove' (i.e. deliberately deposited items with a high content of gold or silver) and any objects found in association with the above. Any find of 'Treasure' must be reported to the local Coroner.
Burial Act (1857)	Under Section 25 of the 1857 Act, it is a criminal offence to remove human remains from any place of burial without a Home Office licence.
Hedgerow Regulations (1997)	It is against the law to remove most countryside hedgerows without permission. A local authority can prohibit the removal of an 'important' hedgerow. The 1997 Regulations define the criteria for determining whether a hedgerow is important; these include historical and archaeological criteria.
Protection of Military Remains Act (1986)	The Act outlines the criteria for designating a military crash site. Certain activities are prohibited at protected sites, without the authority of the Ministry.

### 11.3.2 *Non-statutory Protection*

The following table summarises the non-statutory protection relating to the historic environment and relevant to this chapter.

**Table 11.2: Non-statutory Protection For Archaeological And Heritage Sites**

Legislation	Key Issues
Planning Policy Guidance Note 15: Planning and the Historic Environment (1994)	Outlines government policy on the treatment of the historic environment (e.g. listed buildings, conservation areas, world heritage sites, historic parks and gardens and battlefields) within the local planning process.
Planning Policy Guidance Note 16: Archaeology and Planning (1991)	Outlines government policy on the treatment of archaeology within the local plan and development control process.
Register of Parks and Gardens of Special Historic Interest	The Register identifies important historic parks and gardens, which should then be considered by the local planning authority in accordance with PPG15.
County Sites and Monuments Records and the National Monuments Record	PPG16 identifies that archaeological sites recorded by a SMR or by the NMR are a 'material consideration' to the planning process.
Battlefields Register	The Register identifies important Battlefield Sites which should then be considered by the local planning authority in planning decisions.

### 11.3.2.1 Planning Policy Guidance Note 16

Planning Policy Guidance Note 16 (PPG16), advocates a first presumption for the preservation *in situ* of any nationally important remains, whether scheduled or not and their settings. The assessment of the proposed development site has been undertaken within the context of determining the relative importance of any identified archaeology and assessing the impact of the proposed scheme on it, in order to assess the need for preservation *in situ* as a first principal .

In addition, the evaluation work undertaken and the staged approach to ongoing assessment and mitigation outlined in Section 11.6.7, provides a thorough staged site assessment in accordance with the PPG16 approach. Consultation has been undertaken with Cheshire County Council's Archaeology Officer as outlined in paragraph 19 of PPG16, and field evaluation undertaken before any decision on the planning application is taken (PPG16, paragraph 21). Further work has been discussed and agreed with Cheshire County Council and arrangements are presented in this section to afford either preservation *in situ* or by record for any remaining archaeological impacts, in accordance with paragraph 30 of PPG16.

Any potential indirect impact on the setting of the sites that are considered to be of national importance, has also been assessed in Section 11.6.6, in consultation with the Landscape and Visual Impact assessment.

### 11.3.2.2 Planning Policy Guidance Note 16

With regard to listed buildings and conservation areas, paragraphs 2.12 and 4.14, of Planning Policy Guidance Note 15 (PPG15) advise that the settings of listed buildings and conservation areas are considered when determining planning applications, in line with sections 66(i) and 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990:

- Section 66(i): *In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State, shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.*
- Section 72: *In the exercise, with respect to any buildings or other land in a conservation area, of any powers under any of the provisions mentioned in subsection (2), special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area.*
- PPG15 Section 4.14: *The desirability of preserving or enhancing the [conservation] area should also, in the Secretary of State's view, be a material consideration in the planning authority's handling of development proposals which are outside the conservation area but would affect its setting, or views into or out of the area.*

Section 11.6.6 below addresses the indirect impacts (on setting) of the proposed development on listed buildings and conservation areas. The methodology for this is set out in Section 11.4.8.3 below.

### 11.3.3 *Structure Plan and Local Plan Protection*

The study area falls within Cheshire County Council (CCC) and Ellesmere Port and Neston Borough Council, with a small section of rail line within Chester City Council. The Cheshire Structure Plan and the relevant Local Plans set out the relevant policies and proposals for the development and use of land in their area. These plans guide and inform the planning decisions taken by the authority. Policies specific to the protection and management of the historic environment are contained in these documents, in line with the advice of PPG15 and PPG16 outlined above.

## 11.4 Method Of Assessment

### 11.4.1 *Introduction*

The archaeological work was undertaken in accordance with the Institute of Field Archaeologists *Standards and Guidance for Archaeological Desk-Based Assessment*, (2001), *Standard and Guidance for Archaeological Field Evaluation* (2001) and *Code of Conduct* (2006).

### 11.4.2 *Study Area*

Data has been gathered for a study area of 1km radius (“the “Study Area”), centred on the proposed development site. This allows the development to be set in its historic and archaeological context. The study area with the proposed development site is shown on Figure 11.1(a) (b) and (c). A further 6km area was assessed for impacts upon the setting of Listed Buildings, Conservation Areas and Scheduled Ancient Monuments.

### 11.4.3 *Site Visit*

The proposed development site was visited on December 15th 2004 as part of this study, and again during the field evaluation at Grinsome Farm in August 2006.

### 11.4.4 *Data Sources*

Data was collected from the following sources:

**Table 11.3: Data Sources Consulted and Information Obtained**

Source	Data Obtained/ Viewed
Cheshire County Archaeology Sites and Monuments Record (SMR)	County list of known sites and monuments of archaeological interest (SMR)
English Heritage National Monuments Record (NMR)	County list of known sites and monuments of archaeological interest (NMR) Scheduled Ancient Monuments Listed Buildings Historic Parks and Gardens Registered Battlefields
Cheshire County Records Office	Historic Maps Historic Records
Landmark Mapping	Historic Maps

### 11.4.5 Consultation

During data collection, the Cheshire County Archaeological Development Control Officer was consulted and asked to provide initial comments regarding the potential impact of the proposed scheme and recommendations for further work. The Officer was also consulted following the results of the evaluation in 2006. His comments are incorporated into the recommendations section (11.6.7) of this ES.

### 11.4.6 Field Evaluation

Supplementing the desk based assessment, during August 2006 a field evaluation was undertaken consisting of 10 machine-excavated trenches measuring 20m by 2m. All trenches were excavated under archaeological supervision to the first horizon of archaeological interest, or to the natural subsoil. Trenches were then inspected, hand cleaned and recorded in line with a method statement that had been agreed with Cheshire County Council.

### 11.4.7 Gazetteer

A gazetteer has been compiled, using information from the sources identified above. Within this gazetteer, each identified archaeological site has been allocated a unique reference number, e.g. 'RSK Site 1'. The gazetteer includes a summary of the known archaeological resource within the study area, the importance of the known sites, the likely impact of the scheme and the proposed mitigation. The gazetteer is included as Table 11.10; with Figure 11.1 (a) (b) and (c) showing the location of each of the sites.

### 11.4.8 Assessment Criteria

#### 11.4.8.1 Sensitivity of Receptor (Importance)

The 'importance' of each site within the gazetteer has been determined to provide a framework for comparisons between different sites. The categories of importance do not reflect a definitive level of importance or value of a site, but a provisional one based on criteria such as the site's current status, the current knowledge about it, its survival and potential. The result is an analytical tool, which may inform later stages of archaeological assessment and mitigation. Table 11.4 outlines the criteria used in determining archaeological sensitivity.

**Table 11.4: Criteria Determining Archaeological Sensitivity (Importance)**

Receptor Sensitivity	Category	Examples
High	A	Internationally and nationally important resources such as: <ul style="list-style-type: none"> <li>• Scheduled Ancient Monuments; and</li> <li>• Listed Buildings.</li> </ul>
Medium	B	Regionally important resources of a well defined extent, nature, date and significance such as: <ul style="list-style-type: none"> <li>• burial sites; and</li> <li>• dense scatters of finds.</li> </ul>
Low	C	Locally important resources, such as: <ul style="list-style-type: none"> <li>• field systems; and</li> <li>• ridge and furrow.</li> </ul>

Receptor Sensitivity	Category	Examples
<b>Negligible</b>	D	Sites of known low archaeological or historical import, or where remains are known to have been significantly destroyed, such as: <ul style="list-style-type: none"> <li>• Post Medieval quarries;</li> <li>• ponds; and</li> <li>• field boundaries.</li> </ul>
<b>Unknown</b>	E	Resources of uncertain character, extent and/or date, such as: <ul style="list-style-type: none"> <li>• single find spots; and</li> <li>• unidentified features on aerial photographs.</li> </ul>

#### 11.4.8.2 Impact Magnitude

The criteria in Table 11.5 below have been used to determine the magnitude of the impact of the development on each site.

**Table 11.5: Criteria Determining Magnitude of Archaeological Impact**

Magnitude	Examples
<b>Large</b>	Complete destruction of the site or feature. Change to the site or feature resulting in a fundamental reduction in our ability to understand the resource and its historical context and setting.
<b>Medium</b>	Change to the site or feature resulting in an appreciable reduction in our ability to understand the resource and its historical context and setting.
<b>Small</b>	Slight change to the site or feature resulting in a small reduction in our ability to understand the resource and its historical context and setting.
<b>Negligible</b>	No material change to the site or feature. No real reduction in our ability to understand the resource and its historical context and setting.
<b>Uncertain</b>	The extent or nature of the deposits is unknown, or construction techniques have not yet been determined.

#### 11.4.8.3 Significance of Impact

The significance of impact on the archaeological and cultural heritage resource has been determined by combining the relative importance of the resource (or site) with the predicted magnitude of change.

This impact can be either:

*Direct:* The physical damage to sites, whether recorded or as yet undiscovered. Any direct impacts would be permanent and irreversible; or

*Indirect:* This includes visual impacts on archaeological sites or features, impacts on the appreciation of the inter-relationships between sites, impacts on the relationship of a site to the wider landscape and impacts on significant views from and to sites. Other possible indirect impacts include preventing public access, or those caused by disturbance from vibration, drainage or other changes in hydrology.

In this case the indirect impact of the proposed developments has been assessed in terms of visual impact on those statutory protected sites within a 6km radius, the Zone of Theoretical Visibility (ZTV) identified within Section 12 of this ES, Landscape and Visual Impact. This ZTV only takes account of the ground level and topography, and does not take into account any intervening low level screening which may result from belts of woodland, lines of trees or man-made structures such as buildings. Also within this 6km area elevated ground to the east and southeast, urban conurbation to the north and industrial facilities to the west would restrict these views to the various receptors. Therefore the results of the ZTV show potential worst-case scenario visibility.

The assessment of indirect impacts with regard to Cultural Heritage receptors has been limited to the Statutorily Protected Sites (SAMs and Grade I and II\* Listed Buildings). Conservation Areas have also been assessed. As most of the Grade II\* listed buildings fall within the Conservation Areas, these have not then been considered individually. The viewpoint data and assessment of significance of impact is taken in conjunction with the work undertaken in Section 12 of this ES.

The criteria in Table 11.6 have been used to determine the significance of impact.

**Table 11.6: Criteria Determining Significance of Impact**

Significance of Impact	Description
Very Significant	Large to small impact on sites of High importance
Significant	Large to small impacts on sites of Medium importance
Moderate	Large to Medium impacts on sites of Low importance or Minor impacts on sites of High or Medium importance
Slight	Small impacts upon sites of Low importance
None	Negligible impacts on sites of Negligible importance
Unknown	The significance of the impact cannot currently be determined as the impact upon the site, or the importance of the site, is uncertain

## 11.4.9 Limitations Of The Assessment

### 11.4.9.1 Desk-Based Assessment

The monuments data from the SMR and NMR consists of secondary information derived from varied sources, only some of which were directly examined during the compilation of the DBA. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate. There are several limitations to the data set retrieved through such sources, generic to any DBA, which include the following:

- Where the known archaeological data relates to chance findspots, the full extent, date and nature of these known sites is often uncertain;
- The visibility of archaeological features as cropmarks depends on local geology and land use;
- A number of site records, especially older records such as antiquarian finds, excavations or observations often fail to accurately locate sites; and,

- Any walkover survey is limited as archaeological remains can survive with no above ground signature, and are therefore impossible to detect from a non-intrusive visual site inspection.

#### 11.4.9.2 *Field Evaluation*

Trial trench locations were targeted to the area of archaeological potential, but within that were dictated by physical obstacles, namely the presence of woodland and numerous services. Consequently no trenches were excavated on the summit of the raised area formerly occupied by Grinsome Farm.

#### 11.4.9.3 *Impact Assessment*

As with most archaeological assessment, due to the dataset limitations identified above, it is possible that previously unrecorded archaeological sites would survive within the area of any proposed greenfield development. There is, therefore, often an element of uncertainty over the nature, frequency and extent of the archaeological resource that may be expected to survive. This limitation is addressed within the staged approach to archaeology described in Section 11.5.

Additionally, due to the buried and invisible nature of archaeological sites, there is always an element of uncertainty regarding the survival, condition, nature and extent of the known sites identified within the development area. Grading of archaeological sensitivity and significance of impact may therefore be revised for known archaeological sites, following further assessment and evaluation. However, the mitigation strategies proposed have taken the above points into consideration and the later phases of the staged approach would help verify the impact assessments made.

## 11.5 **Baseline Overview**

### 11.5.1 *Introduction*

The study area is located within the Parish of Ince, which is bordered by the River Gowy and looks out over the Manchester Ship Canal and on to the Mersey Estuary. The village of Ince and the surrounding area has evidence of human activity from the Bronze Age through to the present period, and Ince is well known for its Medieval standing manorial remains located at Ince Manor (RSK Site 18). The name Ince is derived from the ancient word 'Ynys' or island and probably refers to a dry area or areas within the wetland marshes. The village of Ince is itself located on a ridge of high ground, whereas the Roman Fortlet (RSK Site 19) and Grinsome Farm (RSK site 25) are located on what can be considered small islands of high ground, which would have been surrounded by marsh at some point.

### 11.5.2 *Scheduled Ancient Monuments*

According to the NMR and SMR there are two Scheduled Ancient Monuments (SAMs) within the study area. These are the Roman Fortlet (**RSK Site 19**) and the Medieval Ince Manor Monastic Grange and Fishpond (**RSK Site 18**). Neither of these SAMs are located within the proposed development site; both are c.500m to the west.

The Roman fortlet was discovered in 1994 following review of aerial photography. It consists of a double ditched rectangular enclosure and is located on an area of raised ground close to the estuary and may have been a look out post for sea and river traffic, as its position provides a commanding view.

A monastic community, probably part of St Werburgh's Abbey, Chester, ran the Ince Manor Monastic Grange and Fishpond. Its remains date to the 13th/14th century. Ince Manor is one of only two examples in Cheshire of standing manorial buildings belonging to an abbey.

### **11.5.3 Listed Buildings**

The NMR and SMR records show 14 Listed Buildings within the study area. These consist of the K6 Telephone Kiosk (**RSK Site 1**), Cross College on Ince lane (**RSK Site 2**), Lural Farm and the farm outbuildings (**RSK Sites 3 and 4**), Rock House Farm (**RSK Site 5**), a Barn on Ince Lane (**RSK Site 6**), Proffits Lodge (**RSK Site 7**), part of a boundary wall (**RSK Site 8**), Lower Green Farm with a Shippon (**RSK Sites 9 and 10**), an outbuilding attached to Village Green Farm (**RSK Site 11**), a Coronation Lamp Post and Lantern (**RSK Site 12**), a house (**RSK Site 13**) and the Manchester Ship Canal Magazine Building located on Ince Banks (**RSK Site 14**).

### **11.5.4 Historic Parks and Gardens and Registered Battlefields**

According to the NMR and SMR there are no Historic Parks and Gardens or Registered Battlefields within the study area.

### **11.5.5 Conservation Areas**

Ince village is designated as a conservation area in Ellesmere Port and Neston Local Plan.

### **11.5.6 Non-Scheduled Archaeological Sites and Monuments**

The NMR and SMR records 10 non-scheduled archaeological and cultural heritage sites within the study area. These are discussed, by period, below.

#### **11.5.6.1 Prehistoric**

An isolated find of a Bronze Age looped Spearhead was found in the area in the last century (**RSK Site 16**). The location and circumstance of this find was not properly recorded when it was found but it is thought to lie in the general vicinity of the proposed development.

#### **11.5.6.2 Roman**

There is one possible non-scheduled Roman site within the study area, a possible enclosure (**RSK Site 22**).

#### **11.5.6.3 Medieval**

There are two sites within the study area whose place names suggest a Viking influence: Grinsome Farm (**RSK Site 25**) and Holme Farm (**RSK Site 26**). Grinsome derives its name from Old Norse, *Grin* reflects the personal name *Grimr* and *Some* reflects *Holmr* meaning Island or Meadow (Dodgson 1972, 251-253). Holme, similarly derives its name from *Holmr*. The word Ince derives its name from the Brittonic Language, *Ynys*, meaning island, a term still used in Welsh (a Brittonic Language).

Grinsome Farm, now abandoned and cleared, is located on an outcrop of boulder clay and sandstone, which has formed a low island of raised ground, around which is the now reclaimed former wetlands.

#### *11.5.6.4 Post Medieval and Modern*

The majority of the archaeological and cultural heritage sites date from this period and they are primarily associated with the growth of industry, transport and associated infrastructure around the area in the 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> Centuries. These sites consist of a 17<sup>th</sup> century farm house with later 18<sup>th</sup> century alterations (**RSK Site 23**); the Manchester Ship Canal (**RSK Site 20**) which was opened to traffic in 1894; the disused West Cheshire Railway between Mouldsworth and Helsby (**RSK Site 21**) and the Ince and Elton Railway Station, part of the Birkenhead, Lancashire and Cheshire Junction Railway (**RSK Site 24**).

The Manchester Ship Canal forms the northern boundary of the proposed development. Its construction encouraged a range of industries to develop around it, which in turn changed the landscape and topography of the Ince-Stanlow area.

In addition to these sites, there are the possible locations of two World War II bombing decoy sites (**RSK Sites 15 and 17**).

#### *11.5.7 Archaeological Evaluation at Grinsome Farm*

In August 2006 an archaeological evaluation was carried out at the site of Grinsome Farm (RSK Site 25).

The site of Grinsome Farm was thought to have archaeological potential due to its location on a natural rise, which may have caused it to be a focus for activity from the prehistoric period onwards. In particular the name 'Grinsome Farm' given to a Post Medieval farm at the top of the rise suggests a Norse connection with the site, indicating that it may have been the focus for Viking activity.

The evaluation comprised the machine excavation of ten trenches, the equivalent of 300m of 2m wide trenching. The trenches were located as close as possible to the site of Grinsome farm on all sides of the rise up to the site (Figure 11.2). The site itself was not subject to evaluation as this lies within woodland. All excavated spoil from the trenches was surveyed by two metal detectorists who were present on site during the evaluation. The metal detectorists also carried out a sweep of the general area. The results of the evaluation are summarised in Table 11.7.

**Table 11.7: Trench Results Summary**

Trench No.	Dimensions	Archaeological Features
1	30m x 2m	Two modern postholes
2	30m x 2m	None
3	35m x 2m	None
4	35m x 2m	None
5	35m x 2m	A small rectangular pit, probably modern and a small posthole of uncertain date
6	30m x 2m	Three postholes, possibly in a curvi-linear/semi-circular arrangement. No dating evidence was recovered from the postholes
7	30m x 2m	One modern ceramic land drain
8	30m x 2m	None
9	30m x 2m	One modern service trench
10	15m x 2m	None

A small amount of finds were recovered during the evaluation. These comprised Post Medieval/modern pottery sherds and glass. In addition the metal detectorists recovered a small amount of scrap iron objects, likely to be associated with the agricultural use of the land, and one small fragment of bronze.

Overall the results of the evaluation do not provide evidence for any occupation of the immediate area around Grinsome Farm prior to its construction.

#### **11.5.8 Site Visit**

A visit to the sites of two sluice gates near the Manchester Ship Canal during the August 2006 field evaluation revealed that only one of these sluice gates is extant. It is located in very boggy and overgrown ground. This feature has been added to the gazetteer of sites (**RSK Site 27**).

#### **11.5.9 Aerial Photographs**

There is an existing aerial reconnaissance survey project for Cheshire and North West England, which aims to add to the Sites and Monuments records. A double ditched enclosure (RSK Site 19, referred to above) was discovered through this project in 1994, but no other sites have been recorded or observed within the study area since.

#### **11.5.10 Historic Landscape and Historic Map Regression**

As part of the desk based assessment, historic mapping for the proposed development area was reviewed. The results of this review are summarised below.

*1881 Ordnance Survey County Series, Cheshire, First Edition, 1:10,560*

The area of the proposed development is characterised by regular, rectangular fields. This field pattern is typical of later, post medieval enclosure common to the period of the Parliamentary Enclosure Acts. Background evidence suggest that the area would have been marshy until this period, when agricultural advancements introduced the widespread use of field drains which reclaimed large quantities of land from marsh.

This field pattern is very little changed from the modern base mapping, with the exception of the area now occupied by the industrial works (Quinn Glass).

Holme Farm and Grinsome Farm are both depicted. The fields immediately around Grinsome Farm take a slightly different pattern from the remainder of the development site, being more curved. This undoubtedly reflects the topography (Grinsome sits on a slight raise above the marsh) but also suggests a greater antiquity to the enclosure of the fields around Grinsome Farm.

The Manchester Ship Canal (RSK Site 20) is not shown on this mapping, but the railway line (RSK Site 21) is shown.

*1899 Ordnance Survey County Series, Cheshire, Second Edition, 10,560*

The field pattern is as described above, as is the depiction of Holme Farm and Grinsome Farm. The railway (RSK Site 21) is shown, as is the Manchester Ship Canal (RSK Site 20).

*1912 Ordnance Survey County Series, Cheshire, Third Edition, 10,560*

There is no change between this mapping and the 1899 base map described above. Again, neither map varies greatly from the modern base map.

### **11.5.11 Archaeological Potential**

#### *11.5.11.1 Prehistoric*

Although there is little evidence for prehistoric activity within the study area, a chance find of a Bronze Age Looped Spearhead (RSK Site 16) might suggest that there could be other surviving remains from this period within study area. The possibility of the spearhead being ritually deposited as a votive offering in what may have been a wetland area, may suggest that other items could also be found. Large numbers of Bronze Age items have been recovered from wetland areas, streams, rivers and inter tidal zones in numerous locations in Britain. Geomorphological studies suggest that the mean tide level for this period was up to 3m lower than present day levels, but it is likely that the area was probably still water logged. However, in the absence of any recorded sites for this period, the development area is considered to have a low potential for the presence of any prehistoric activity.

#### *11.5.11.2 Roman*

The location of the Roman fortlet on a small area of raised ground near to the estuary (RSK Site 19) and the possible enclosure (RSK Site 22) would suggest that there might be other Roman activity within the study area. However, as the land within the proposed development was probably marsh during this period, there is considered to be a low possibility for the presence of any Roman activity within the area of the proposed development.

#### *11.5.11.3 Medieval*

The Norse origin of the place names of the two farms (RSK Sites 25 and 26), suggests that both of these farms may have Viking origins or even that there was a small Viking settlement in the vicinity. Ingmund, after his expulsion from Ireland, was known to have reached an agreement with Ethelred to settle in the north of the Wirral, where other Viking place names still survive today (Higham 1993, 107). No archaeological

evidence for Anglo-Scandinavian activity has, however, been found within the study area.

Chester was a prosperous trading port during the later Medieval period and it is likely that the surrounding countryside was exploited throughout this period (Crosby 1996). The area around the proposed development site was thought to have been sparsely occupied in this period, but may have been exploited by the Ince Manor Grange (RSK Site 18). Records show that Elton Moss provided turf for the St Werburghs Abbey. Evidence for limited Medieval occupation and farming practice (e.g. ridge and furrow, ponds, lynchets) could be expected throughout the study area. Records from the period also indicate that in the 14<sup>th</sup> century initial costly attempts were made to drain and reclaim a marshy and waterlogged area around Ince and Frodsham.

It is considered that there is a low to medium possibility of locating any Medieval activity within the area of the proposed development.

#### *11.5.11.4 Post Medieval and Modern*

The study area was occupied during the Post Medieval period, when the area was subject to a reclamation programme through land drainage. In addition the construction of the Manchester Ship Canal (RSK Site 20) made an impact on the study area, as portions of land were used to dump waste material from construction work. Activity associated with the construction of the Manchester Ship Canal may survive within the proposed development. Evidence for other post medieval activity, such as land drains, is likely to survive throughout the area of the proposed development, but any such remains would be of negligible archaeological significance.

## **11.6 Assessment of Archaeological Impact**

### *11.6.1 Introduction*

Where possible, impacts associated with the development have been broken down into those in relation to Cheshire County Council (CCC) application site and those for the DBERR application site, in addition to being considered together. The DBERR application site is in reference to the RDF Plant, together with access road, rail link and canal berth site (excluding buildings), and landscape/ecological mitigation areas. The CCC application site refers to the remainder of the Resource Recovery Park, but also includes road, rail, landscaping and the whole berth site.

### *11.6.2 Summary of Generic Impacts*

The following activities associated with the construction of the proposed development could impact on known or potential archaeological remains:

- Topsoil stripping;
- Excavation work for the new railway line;
- Excavation work for footings;
- Pre-construction drainage works and fencing;
- Strengthening and upgrading of the quay area;
- Movement of heavy machinery; and
- Services, drainage and cabling.

### **11.6.3 Site Specific Impacts of CCC Application**

No Listed Buildings, Scheduled Ancient Monuments, Historic Parks and Gardens, Registered Battlefields or Conservation Areas would be directly affected by the proposed scheme.

Of the 27 sites of known archaeological and cultural heritage recorded within the study area, four sites (RSK Sites 16, 20, 25 and 27) are considered to be close enough to the proposed development site, for a potential direct impact upon them.

#### **11.6.3.1 RSK Site 16**

The stray find of a Bronze Age Looped Spearhead may have been found within the area of the proposed development. This find could be a ritually deposited votive offering to a water deity, a phenomenon common to this period. This site is, however, a stray find and the exact location of the find spot is unknown. Also, there is no recorded association with settlement activity or other find spots, in addition to which the proposals do not include any intrusive works at the recorded find spot location. The significance of impact of the proposed scheme upon any potential associated remains is therefore considered to be slight.

#### **11.6.3.2 RSK Site 20**

The Manchester Ship Canal forms the northern boundary of the site. A canal berth is located within the proposed development on the south side of the canal. A c.200m long by 11m wide stretch of this is due to be re-engineered as part of the proposed development. As this area of the canal has already been re-developed it is uncertain if the proposed scheme would impact upon the historic or archaeological interest of the site. The impact is direct on this site of low importance but small in magnitude and the significance of impact is considered to be slight.

#### **11.6.3.3 RSK Site 25**

The former location of Grinsome Farm falls within the area of the proposed development. This place-name may represent a potential settlement location from the Bronze Age through to the Medieval period. The recent archaeological evaluation at the site found no evidence for occupation of this site prior to the construction of the Post Medieval farm, although the wooded area on which the former farm was located was not evaluated. The proposed first phase of the development includes the construction of an access road and roundabout, this construction is likely to have a direct impact on the documented site of Grinsome Farm. The impact is therefore direct and large in magnitude, although the potential importance of the archaeological remains at this location remains uncertain. The overall impact on the site is therefore uncertain.

#### **11.6.3.4 RSK Site 27**

This is the location of a sluice gate through the sea bank. Two sluice gates were marked on the OS first edition mapping of the area, but one was destroyed by the construction of the Manchester Ship Canal. The remaining sluice gate is located on the north west corner of an area of woodland to the south of the Manchester Ship Canal. This would not be impacted upon by the proposed development.

#### ***11.6.4 Site Specific Impacts of DBERR Application***

No Listed Buildings, Scheduled Ancient Monuments, Historic Parks and Gardens, Registered Battlefields or Conservation Areas would be directly affected by the proposed scheme.

As with the CCC Application area, four sites (RSK Sites 16, 20, 25 and 27, described above) are considered to be close enough to the proposed development site for a potential impact. In all cases the potential impact is as described in Section 11.6.3 above.

#### ***11.6.5 Site Specific Impacts of Entire Site***

The impacts of the Entire Site are considered to be the same as for the CCC application described in Section 11.6.3 above.

#### ***11.6.6 Indirect Impacts of CCC Application, DBERR Application and Entire Site***

There are seven SAMs, three Grade I Listed Buildings (LB I), seven Grade II\* Listed Buildings (LB II\*), one Historic Park (HP) and ten Conservation Areas (CA) within a 6km radius of the proposed development. These are evaluated in Table 11.8 and shown on Figure 11.3 (a) and (b) and (c).

Where a potentially significant impact to the setting is anticipated, this is discussed further in the paragraphs following the table.

**Table 11.8: Statutorily Protected Sites within 6km Radius of the Proposed Development**

RSK Ref/ Site Type	Description	Location	Distance from site/comments on visual impact	Assessment of impact on setting
28  CA	Ince, Ellesmere Port and Neston	Approx centre point 344928 376505	1.6km from site. Considered by VP 3/3, 3/4 and 3/5 in Section 12, it lies within the ZTV for the CCC Application warehousing & ethanol plant, and RDF building and chimney for the DBERR Application..	The overall assessment of VP 3, from the edge of the village concluded that both the proposed CCC Application buildings in the foreground, mast lighting associated with the canal berth and the DBERR Application RDF plant set behind, would be new elements. The archaeological sites however are more central within the village and as such are screened by other buildings or landscape elements such as trees and boundary hedges. The settings of the listed buildings and SAM are therefore unaffected.  The views from and to the (from the village green) Conservation Area would be subject to a very small magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant. (Both Applications or Entire Site) based on worst-case
29 LB II* 56309	Church of St James, Pool Lane, Ellesmere Port	344986 376352	1.6km from site. Considered by VP 3/3 in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application.	
30 LB I 56301	Manor House of Abbey of St Werburgh, including old hall and monastery cottages, Marsh Lane, Ellesmere Port	344933 376548	1.6km from site. Considered by VP 3/4 in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application..	
18 SAM 13516	Ince Manor, monastic grange and fishpond	344924 376529	1.6km from site. Considered by VP 3/4 in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application.	
19 SAM 27589	Roman fortlet at Ince	344873 377081	1.6km from site. Considered by VP 3/7 in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application.	
31 CA	Elton, Chester	Approx centre point 345879 375494	1.5km from site Considered by VP2 in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application..	

RSK Ref/ Site Type	Description	Location	Distance from site/comments on visual impact	Assessment of impact on setting
				Conservation Area is therefore considered to be not significant.
32 SAM 13436	Moated site, fishpond and connecting channel, Elton	345535 374822	2.2km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol plant, and RDF building and chimney for the DBERR Application..	The majority of residential properties in Elton would have no views of the proposed site due to neighbouring houses or buildings, the Hooton-Helsby railway embankment and the large Quinn Glass production building'. This site, on the south side of the village, would benefit from this screening and its setting would be unaffected.
33 SAM 25689	Promontory fort on Helsby Hill	349266 375400	3km from site. Considered by VP 6/1 in Section 12, its north side lies within the ZTV for the CCC Application and RDF building and chimney for the DBERR Application..	The assessment of VP 6/1 concluded that 'from this location both the CCC Application buildings and DBERR Application RDF Plant would be seen as a further industrial development between Quinn Glass and Kemira and in this context would be seen as an extension and contiguous with the existing series of large industrial buildings and chimneys. The site is over 2.6 km from these locations and seen together with existing industrial complexes would be a noticeable change in the overall view. The judged magnitude of visual change from this viewpoint, from a landscape perspective, is medium. However, given that the views from the hillfort in the direction of Ince Marshes already include industrial development, there is considered to only a slight indirect impact on this monument.
34 CA	Thornton le Moors, Chester	Approx centre point 344175 374175	3.2km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the RDF building and chimney for the DBERR Application.	Although these sites have not been assessed by a specific viewpoint, they lie to the south-west of the proposed developments, further from the site than the Elton CA (RSK site 31 above). Consequently, screening from intervening landscape elements and neighbouring buildings would broadly screen the impact of the proposed development.
35 LB I 55431	Church of St Mary, Thornton le Moors	344157 374549	3.2km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application Ethanol facility, and DBERR Application RDF building and chimney.	The settings of the listed buildings is therefore unaffected and the views from and to the Conservation Area would be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
36	Stanlow Abbey	342779	3.7km to the west-north-west of	Although this site has not been

RSK Ref/ Site Type	Description	Location	Distance from site/comments on visual impact	Assessment of impact on setting
SAM 22590	– Cistercian monastery and grange.	377373	the site.	assessed by a specific viewpoint, screening from intervening landscape elements would broadly screen the impact of the proposed development and not affect the setting.
37 CA	Dunham on the Hill, Chester	Approx centre point 347156 372619	4.2km from site. Considered by VP 8/2 in Section 12, it lies within the ZTV for the CCC Application Ethanol facilities, and DBERR Application RDF building and chimney.	The assessment of VP 8 concluded that the CCC Application ETC and ethanol facilities and the DBERR Application RDF building and chimney would not be visible from this area, and that the new development would merge and appear contiguous when seen within the same context as other existing vertical elements such as electricity pylons, Kemira facility, Quinn Glass and Stanlow.  The views from and to the Conservation Area would hence be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
38 CA	Alvanley, Vale Royal	Approx centre point 349727 374041	4.2km from site. There is visual assessment from this area in Section 12, it lies within the ZTV for the RDF building and chimney.	Although this site has not been assessed by a specific viewpoint, screening from intervening landscape elements (including Helsby Hill) and neighbouring buildings would broadly screen the impact of the proposed development.  The setting and views from and to the Conservation Area would be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
39 LBII* 57163	Alvanley Hall Farmhouse, Manley Road, Alvanley	350353 373749	4.8km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the DBERR Application RDF chimney.	Although this site has not been assessed by a specific visual assessment, the only ZTV for this site relates to the RDF chimney for the DBERR Application. Due to the distance of this site from the proposed development, the setting would be unaffected.
40 CA	Ellesmere Port Docks, Ellesmere Port and Neston	Approx centre point 342183 377022	4.4km from site.	The expansive industrial facilities of Stanlow refinery lying between the docks and the proposed development broadly screen the impact of the proposed development.  The setting and views from and to the Conservation Area would be subject to a negligible magnitude of visual

RSK Ref/ Site Type	Description	Location	Distance from site/comments on visual impact	Assessment of impact on setting
				change, and the impact on the Conservation Area is therefore considered to be not significant.
41 SAM 25694	Hillfort on woodhouse Hill.	351067 375724	4.7km from site. There is no viewpoint from this area in Section 12, its western side lies within the ZTV for the CCC Application ETC ethanol facilities, and DBERR Application RDF building and chimney.	Although this site has not been assessed by a specific visual assessment, it is sited in a wooded area and is some distance from the proposed developments. The setting is therefore unaffected.
42 LB II* 55438	Wimbolds Trafford Hall, Ince Lane, Wimbolds Trafford	345114 372162	4.8km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application warehousing and ethanol facilities, and RDF building and chimney for the DBERR Application.	Although this site has not been assessed by a specific viewpoint, due to its distance from the proposed development and screening by other landscape features the setting would be unaffected.
43 CA and HP 5120	Frodsham (Castle Park Locality), Vale Royal. Grade II Registered Historic Park	Approx centre point 351502 377450	4.9km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and RDF building and chimney for the DBERR Application.	The Conservation Area and Historic Park are visually screened by a railway embankment and other landscape features.  The setting and views from and to the Conservation Area would be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
44 CA	Frodsham (Town), Vale Royal	Approx centre point 352001 378080	5.6km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and RDF building and chimney for the DBERR Application.	The Conservation Area is screened by a railway embankment, buildings and other landscape features.  The setting and views from and to the Conservation Area would be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
45 LB I 436341	Church of St Lawrence, Church Road, Frodsham	352122 377294	5.6 km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and RDF building and chimney for the DBERR Application.	The Conservation Area and listed building are screened by buildings and landscape features.  The setting of the listed building is therefore unaffected.  The setting and views from and to the

RSK Ref/ Site Type	Description	Location	Distance from site/comments on visual impact	Assessment of impact on setting
46 CA	Frodsham (Overton, St Lawrence's), Vale Royal	Approx centre point 352130 377266	5.6 km from site. There is no viewpoint from this area in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and RDF building and chimney for the DBERR Application.	Conservation Area would be subject to a negligible magnitude of visual change, and the impact on the Conservation Area is therefore considered to be not significant.
47 LBII* 436527	The Old Vicarage, Vicarage Lane, Frodsham	352295 377208	5.7km from site, this area is beyond the ZTV as outlined in Section 12.	A specific visual assessment, for this position has not been carried out. Due to its location within Frodsham, distance from the proposed development, and intervening screening elements the setting is not affected.
48 LB II* 55962	The Manor House, Church End, Hale	347096 382182	5.3km from site. Considered by VP 9/1 in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and DBERR Application RDF building and chimney.	From this location, set well back from the shoreline and screened by intervening landscape features, the setting is unaffected.
49 LBII* 56069	Parish Church of St John the Evangelist, Heath Road South	350881 380490	5.6km from site. Considered by VP 5 in Section 12, it lies within the ZTV for the CCC Application ETC warehousing and ethanol facilities, and the RDF building and chimney for the DBERR Application.	The analysis of VP 5 concluded that 'while this elevated viewpoint gives direct uninterrupted views toward the site, the extent of both the CCC Application warehousing and DBERR Application RDF Plant would be seen as a small element, and at this distance, barely a perceptible change in the existing view would be appreciated.  The setting of the church would therefore be unaffected.
50 SAM 30400	Standing Cross in St Lawrence's churchyard, Stoak	342346 373261	5.4km from site, this area is beyond the ZTV as outlined in Section 12 but contour mapping shows it is located within a topographical 'hollow'.	These archaeological features all benefit from screening, not only from landscape features such as trees and hedges but also the large expanse of industrial facilities associated with Stanlow Refinery.  The settings of the listed buildings and SAM are therefore unaffected  The setting and views from and to the Conservation Area would be unaffected
51 LB II* 55417	St Lawrence's church, Stoak	342365 373283		
52 CA	Stoak, Chester	Approx centre point 342206 373266		

This assessment has therefore found that two of the statutorily protected sites, the Roman fortlet at Ince (RSK Site 19) and the promontory fort at Helsby Hill (RSK Site 33) would be indirectly affected by the proposed development..

With RSK Site 19, there is a slight impact from the loss of views across agricultural fields. However, the site of the Roman fortlet does not survive with any above ground signature. In terms of affect on setting, there is therefore only an impact on the view from the monument (which is slight), with no impact on the view of the monument. The area has been enclosed as fields since the Roman period, with roads, tracks, hedges and buildings introduced to the landscape in which the fortlet was originally located. In conclusion, given that the impact on the view of the site is neutral, the views from the site small and the setting of the site already affected by industrial development, the existing screening is considered to provide sufficient mitigation for the indirect impact on this monument.

With RSK Site 33, there is a medium magnitude of visual change as the CCC Application buildings and DBERR Application RDF Plant would be visible between the existing industrial developments. However, in terms of the appreciation of the monument, there would be some decrease in visual quality of views from the monument, and no change in views of the monument. The existing tree and scrub screening on the hill is therefore considered to provide sufficient mitigation for the worst-case indirect impact on this monument.

#### ***11.6.7 Mitigation Measures***

A staged archaeological assessment is generally accepted as the most effective way to determine archaeological mitigation measures, gathering information about the archaeological resource before designing and implementing mitigation strategies. This staged approach is in line with the guidance given in Planning Policy Guidance Note 16, Archaeology and Planning. The accepted staged approach includes the following generic scope, outlined in Table 11.9, below.

**Table 11.9: Stages of Archaeological Assessment and Mitigation Measures**

Stage of Construction	Archaeological stage of work	Assessment	Mitigation
Prior to Construction	1	Desk based assessment	
	2	Field Walking	
	3	Geophysical Survey/ metal detecting	
	4	Trial trenching/ test pitting	
During Construction	5		Preservation 'in situ' or excavation
	6		Watching Brief
After construction	7		Post excavation

Assessment techniques (i.e. stages 1-4) are selected according to ground conditions, archaeological potential, development proposals and legislative requirements. In this case, suitable stage one to four assessment has been undertaken, or is proposed prior to construction.

The information obtained from the initial assessments is used to define a specific mitigation strategy. Typical options for mitigation measures in relation to direct impacts on the archaeological and cultural heritage resource are:

- *preservation in situ*: the preservation in situ of significant archaeological remains can be achieved through localised variations to the construction design or layout; and
- *excavation*: where preservation *in situ* is not feasible or desirable an alternative mitigation is pre-construction archaeological excavation.

Typically for development projects, any such mitigation required by the County Archaeology unit is agreed by planning condition with detailed method statements, known as Written Schemes of Investigation (WSIs), provided prior to the work being carried out. PPG16 (Paragraph 30) recommends the following wording for such a condition:

*"No development shall take place within the area indicated (this would be the area of archaeological interest) until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Planning Authority."*

In accordance with recommendations made by the Cheshire County Archaeological Development Control Officer, a comprehensive programme of mitigation would be undertaken. This scope of this mitigation is described in the following sections.

#### 11.6.7.1 Metal Detecting Survey CCC or DBERR Applications (or Entire Site)

A metal detecting survey would be undertaken in all areas that would be affected by ground breaking activities (including topsoil stripping) undertaken in connection with the proposed development, including the new roads and railway. This is due to the

possibility of further Bronze Age items being located in the area, as a stray find of Bronze Age Looped Spearhead (RSK Site 16) might be part of a number of ritually deposited votive offerings. The survey would be undertaken under the supervision of archaeologists and would aim to identify and recover any additional items and record any locations that may require further archaeological evaluation. This requirement is expected to form the basis of a planning condition.

Should the metal detecting survey highlight any specific areas, which may require further investigation, upon which the proposed scheme is likely to have an impact or on which the impact is uncertain, further evaluation and mitigation measures would be discussed and agreed with Cheshire County Council. The scope and extent of any such mitigation could only be decided upon based on what was found, however, if it could not be preserved in situ, this would involve archaeological excavation and recording.

If such measures were required then the archaeological work would be subject to a Written Scheme of Investigation discussed with, and approved by Cheshire County Council.

#### *11.6.7.2 Watching Brief in the area of new ditches – CCC or DBERR Applications (or Entire Site)*

A watching brief would be carried out on any new drainage ditches excavated within the development area. This is because organic deposits have previously been noted as surviving in the underlying alluvium. Any new ditches would therefore be assessed by an appropriately qualified archaeologist for palaeo-environmental evidence. Further mitigation or analysis of this material would be determined once this assessment has been made. This work would be subject to a Written Scheme of Investigation discussed with, and approved by Cheshire County Council; the requirement for a WSI is expected to be the basis of a planning condition.

#### *11.6.7.3 Watching Brief in the area of the Manchester Ship Canal – CCC or DBERR Applications (or Entire Site)*

An archaeological watching brief would be carried out during construction work, in the area of the Manchester ship canal (RSK Site 20) where elements of the original canal structure may be uncovered. The watching brief would consist of monitoring, by an appropriately qualified archaeologist, of all topsoil stripping and excavations associated with the construction of the proposed development. Any archaeological deposits, features or finds identified during the watching brief would be adequately recorded. Hand excavation, stratigraphic recording, drawn, written and photographic records would be undertaken, as appropriate. If significant finds are made during the watching brief a suitable programme of mitigation would be agreed with Cheshire County Council.

The watching brief would be subject to a Written Scheme of Investigation that has been discussed with, and approved by, Cheshire County Council. The requirement for a WSI is expected to form the basis of a planning condition.

#### *11.6.7.4 Archaeological Protection of the Sluice Gate – CCC or DBERR Applications (or Entire Site)*

The sluice gate (RSK Site 27) is to be fenced during construction by temporary, high visibility fencing and signed as a site of archaeological interest not to be disturbed. The site lies outside of current proposals, and this is to ensure its protection from accidental damage.

#### 11.6.7.5 Grinsome Farm – CCC or DBERR Applications (or Entire Site)

The proposed access road and roundabout has a potentially direct impact on the site of Grinsome Farm. This area has been discussed with Cheshire County Council following the evaluation trenching that was undertaken around the farm. As the area is currently wooded, it is not proposed to undertake any pre-construction field evaluation to mitigate this currently uncertain impact. However, Cheshire County Council has requested that following clearance of the site, topsoil stripping be undertaken under direct archaeological supervision, ahead of the general development programme. This advanced stripping would be undertaken to a depth that would provide adequate archaeological visibility, within the areas of potential impact (i.e. removal of subsoil, or strip to the first archaeological horizon within the areas that would be excavated to a greater depth than this during construction). The advance strip watching brief would be directed by an appropriately qualified archaeologist, working to a Written Scheme of Investigation that has been approved by Cheshire County Council. This requirement is expected to be agreed by planning condition.

#### 11.6.7.6 Post Excavation – CCC or DBERR Applications (or Entire Site)

On completion of any archaeological fieldwork, a comprehensive programme of post-excavation assessment, analysis, reporting and publication would be implemented. The post-excavation programme would be subject to a Written Scheme of Investigation that has been discussed with, and approved by Cheshire County Council. Again, it is expected that any such work would be required by planning condition.

### 11.7 Residual Impacts

After the programme of staged assessment and mitigation has been implemented the vast majority of the known archaeological and cultural heritage features would remain unaffected by the scheme. Sites where a direct impact is currently predicted would be preserved *in situ* or, if not desirable and feasible, by record. Full consultation would be maintained with the relevant archaeological curator throughout all stages of archaeological assessment and mitigation. Consequently, there would be a neutral residual impact on the cultural heritage resource.

### 11.8 Cumulative Impacts

The developments being considered in terms of cumulative impacts as part of this EIA are listed within Table 1.4 in Section 1. It is considered that, in terms of archaeology and cultural heritage, the cumulative impacts of the other developments would be no greater than that of each individual development as there are no archaeological resources common to these sites that would be adversely affected.

**Table 11.10: Gazetteer of Archaeological Sites**

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
1		351184		LB II	SJ	45776	75572	K6 Telephone Kiosk	Telephone Kiosk	Modern	High	Negligible	Negligible	None	None
2		55408		LB II	SJ	45768	75584	Cross College	Cross College, Ince Lane	Post Medieval	High	Negligible	Negligible	None	None
3		55412		LB II	SJ	45826	75525	Laural Farm, Farm Buildings	Laural Farm, Farm Buildings, Ince Lane	Post Medieval	High	Negligible	Negligible	None	None
4		55411		LB II	SJ	45804	75536	Laural Farm	Laural Farm, Ince Lane	Post Medieval	High	Negligible	Negligible	None	None
5		55409		LB II	SJ	45832	75561	Rock Farmhouse	Farmhouse, Ince Lane	Post Medieval	High	Negligible	Negligible	None	None
6		55410		LB II	SJ	45832	75538	Barn	Barn, Ince Lane	Post Medieval	High	Negligible	Negligible	None	None
7		56289		LB II	SJ	44999	76755	Proffits Lodge	The Cottage ,Kinseys Lane	Post Medieval	High	Negligible	Negligible	None	None
8		56299		LB II	SJ	45004	76494	Boundary Wall	Boundary Wall between Square and Manor House entrance	Post Medieval	High	Negligible	Negligible	None	None
9		56317		LB II	SJ	45104	76399	Shippon	Shippon, Lower Green Farm	Post Medieval	High	Negligible	Negligible	None	None
10		56316		LB II	SJ	45104	76410	Lower Green Farm house		Post Medieval	High	Negligible	Negligible	None	None
11		56315		LB II	SJ	45050	76434	Outbuilding	Attached to Village Green Farm	Post Medieval	High	Negligible	Negligible	None	None
12		56313		LB II	SJ	45020	76448	Lamp Post	Coronation Lamp Post	Post	High	Negligible	Negligible	None	None

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
									and Lantern	Medieval					
13		56314		LB II	SJ	45041	76461	Dwellings	1,2 and 3 The square	Post Medieval	High	Negligible	Negligible	None	None
14		56330		LB II	SJ	47480	77860	Magazine Building	Manchester Ship Canal, Magazine Building, Ince Banks	Post Medieval	High	Negligible	Negligible	None	None
15	4225/0/2				SJ	47100	76600	WW2 Bombing Decoy	Documentary Site of WW2 Bombing Decoy	Modern	Low	Negligible	Negligible	None	None
16	1014	69549			SJ	47000	77000	Find Spot	Approximate location of Bronze Age looped spearhead	Post Medieval	Medium	Unknown	Unknown	Unknown	Metal Detector Survey
17	4225/0/1				SJ	47200	76700	WW2 Bombing Decoy	Documentary Site of WW2 Bombing Decoy	Modern	Low	Negligible	Negligible	None	None
18			13516	SAM	SJ	44920	76520	Ince Monastic Grange	Ince Monastic Grange and Fishpond	Medieval	High	Negligible	Negligible	None	None
19			27589	SAM	SJ	44870	77080	Roman Fortlet	Roman Fortlet	Roman	High	Negligible	Negligible	None	Slight (on setting). None otherwise.
20		1340801			SJ			Manchester Ship Canal	Manchester Ship Canal	Post Medieval	Medium	Negligible	Negligible	None	Watching Brief
21		1370520			SJ			West Cheshire Railway Line	Disused Branch Line of West Cheshire Railway	Post Medieval	Low	Negligible	Negligible	None	None
22		69350			SJ	47770	76160	Enclosure	Possible enclosure Site	Roman	Uncertain	Negligible	Negligible	None	None
23		509867			SJ	45660	75680	Greenbank Farm House	Late Farmhouse with C17th and C18th alterations	Post Medieval	Low	Negligible	Negligible	None	None

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
24		499981			SJ	45600	75800	Ince and Elton Railway Station	Ince and Elton Railway Station	Post Medieval	Low	Negligible	Negligible	None	None
25					SJ			Place Name Grinsome Farm	Place Name – Location of Grinsome Farm	Viking	Low	Unknown	Unknown	Unknown	An archaeological evaluation has been carried out at this site. Watching Brief during topsoil stripping also required.
26					SJ			Place Name Holme Farm	Place Name – Holme Farm	Viking	Low	Negligible	Negligible	None	None
27					SJ	46020	77310	Sluice gate to the east of Holme Farm	A sluice gate through the former sea bank noted on the first edition OS mapping and found to be extant during a visit made to the site during August 2006	Post Medieval	Medium	None	None	None	Archaeological recording if this feature or the sea bank are to be impacted upon by the proposed development. Protective fencing.
28				CA		344928	376505	Ince, Ellesmere Port and Neston			High	None	None	None	None
29				LB II*		344986	376352	Church of St James, Pool Lane, Ellesmere Port			High	None	None	None	None
30				LB II		344933	376548	Manor House of Abbey of St Werburgh, including old hall and monastery cottages, Marsh Lane, Ellesmere			High	None	None	None	None

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
								Port							
31				CA		345879	375494	Elton, Chester			High	None	None	None	None
32			SAM 13436	SAM		345535	374822	Moated site, fishpond and connecting channel, Elton			High	None	None	None	None
33			SAM 25689	SAM		349266	375400	Promontory fort on Helsby Hill			High	None	None	None	Slight (on setting). None otherwise.
34				CA		344175	374175	Thornton Moors, Chester			High	None	None	None	None
35				LB 55431		344157	374549	Church of St Mary, Thornton Moors			High	None	None	None	None
36			SAM 22590	SAM		342779	377373	Stanlow Abbey – Cistercian monastery and grange.			High	None	None	None	None
37				CA		347156	372619	Dunham on the Hill, Chester			High	None	None	None	None
38				CA		349727	374041	Alvanley, Vale Royal			High	None	None	None	None
39				LBII* 57163		350353	373749	Alvanley Hall Farmhouse, Manley Road, Alvanley			High	None	None	None	None

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
40				CA		342183	377022	Ellesmere Port Docks, Ellesmere Port and Neston			High	None	None	None	None
41			SAM 25694	SAM		351067	375724	Hillfort on woodhouse Hill.			High	None	None	None	None
42				LB II* 55438		345114	372162	Wimbolds Trafford Hall, Ince Lane, Wimbolds Trafford			High	None	None	None	None
43				CA and HP 5120		351502	377450	Frodsham (Castle Park Locality), Vale Royal. Grade II Registered Historic Park			High	None	None	None	None
44				CA		352001	378080	Frodsham (Town), Vale Royal			High	None	None	None	None
45				LB II 436341		352122	377294	Church of St Lawrence, Church Road, Frodsham			High	None	None	None	None
46				CA		352130	377266	Frodsham (Overton, St Lawrence's), Vale Royal			High	None	None	None	None
47				LBII* 436527		352295	377208	The Old Vicarage, Vicarage Lane,			High	None	None	None	None

RSK No	SMR Number	NMR Number	SAM Number	Status	NGR Grid Square	NGR East	NGR North	Site Name	Description	Period	Importance	Magnitude – DBERR Application	Magnitude – CCC Application	Significance	Recommendations
								Frodsham							
48				LB II* 55962		347096	382182	The Manor House, Church End, Hale			High	None	None	None	None
49				LBII* 56069		350881	380490	Parish Church of St John the Evangelist, Heath Road South			High	None	None	None	None
50			SAM 30400	SAM		342346	373261	Standing Cross in St Lawrence's churchyard, Stoak			High	None	None	None	None
51				LB II* 55417		342365	373283	St Lawrence's church, Stoak			High	None	None	None	None
52				CA		342206	373266	Stoak, Chester			High	None	None	None	None

## References: Sources of Information

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Institute of Field Archaeologists, 2000 *Code of Conduct*

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*Cheshire Sites and Monuments Records (SMR):*

County list of known archaeological sites and finds

Aerial Photographs

30/5/85 Run 10 2685/146

30/5/85 Run 10 2685/147

30/5/85 Run 10 2685/148

30/5/85 Run 10 2685/149

4/7/83 Run 15/9 30770

4/7/83 Run 15/9 30771

14/8/93 Line 12 Geonex 8893/079

14/8/93 Line 12 Geonex 8893/080

HSL/UK/71/111 Run 17 0105

*National Monuments Records:*

County list of known sites and monuments of archaeological interest (NMR)

Scheduled Ancient Monuments

Listed Buildings

Historic Parks and Gardens

Registered Battlefields

*Cheshire County Record Office:*

Crosby, A., 1996 *History of Cheshire*, Phillimore & Co. Ltd.

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1646 Map of Cheshire by John Speed

1777 Map of Cheshire by Burdett

1819 Map of Cheshire by Greenwood

Tithe Map for Stoak Parish

Tithe Map for Elton Parish

Tithe Map for Thornton Parish

*Ordnance Survey Maps:*

1881 1st Edition Scale 1:10,000 Sheets 24 and 32

1899 2nd Edition Scale 1:10,000 Sheets 24 and 32

1912 3rd Edition Scale 1:10,000 Sheets 24 and 32

*Landmark Historic Mapping:*

- Ordnance Survey Maps

1881 Cheshire 1:10,560

1882 Cheshire 1:10,560

1894 Lancashire and Furness 1:10,560

1896 Lancashire and Furness 1:10,560

1899 Cheshire 1:10,560

1911 Cheshire 1:10,560

1912 Cheshire 1:10,560

1913 Cheshire 1:10,560

1929 Cheshire 1:10,560

1938 Cheshire 1:10,560

1954 1:10,560

1968 1:10,560

1975 1:10,000

1991 1:10,000

1999 1:10,000