TEESWORKS

DORMAN POINT ENVIRONMENTAL STATEMENT

VOLUME 2: CHAPTER K BELOW GROUND HERITAGE

DECEMBER 2020

Dorman Point

Volume 2: Environmental Statement (December 2020)

Chapter K: Below Ground Heritage

December 2020

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K1.0 Introduction

K1.1 This Chapter of the Environmental Statement ('ES') has been prepared by Prospect on behalf of the applicant, South Tees Development Corporation ('STDC'). It assesses the proposed development described in Chapter B and it considers the effects of the proposed development on below ground heritage assets.

K1.2 The baseline situation is considered before the likely environmental effects of the development are identified, both during construction and operational phases of the development. Mitigation measures to reduce any adverse environmental effects are identified as appropriate, before the residual environmental effects are assessed.

K1.3 This Chapter is supported by the following technical appendices:

1 **Appendix K1:** Dorman Point, Redcar Desk-Based Heritage Assessment;

2 **Appendix K2:** Energy Recovery Facility, Cleveland Iron and Steel Works, Written Scheme of Investigation – Archaeological Recording and Watching Brief;

3 **Appendix K3:** Correspondence between Nansi Rosenberg and Neil Cookson (NEAR) 10th – 12th November 2020; and

4 **Appendix K4:** Designated and Non-Designated Heritage Assets Plan.

About the Author

K1.4 Nansi Rosenberg BA (Hons), MA, MCIfA is the primary author of this report. As Managing Director and Principal Consultant of Prospect Archaeology since 2010, and working as a heritage professional since 1991, Nansi has extensive knowledge and experience of archaeological and built heritage issues across the United Kingdom. Nansi holds a BA(Hons) in Archaeology from the University of Durham and an MA (Distinction) in Archaeology and Heritage from the University of Leicester. She is a full Member of the Chartered Institute for Archaeologists with specialist competence in Project Management.

K2.0 Policy Context

Ancient Monuments and Archaeological Areas Act 1979 (AMAAA)

K2.1 The Act is the primary legislation protecting archaeological remains within the United Kingdom. It identifies as a duty of the Secretary of State the need to compile and maintain a schedule of ancient monuments of national importance, to allow for their preservation, so far as possible, in their current (at the time of scheduling) state.

K2.2 A statement setting out current Government policy on the identification, protection, conservation and investigation of nationally important (both scheduled and nationally important non-scheduled) ancient monuments was published in October 2013 (DCMS 2013).

K2.3 Where works to scheduled monuments are proposed for development-related purposes, the Secretary of State has particular regard to the following principles:

1 Only in wholly exceptional cases will consent be granted for works could result in substantial harm to, or loss of, the significance of a Scheduled Monument; and

2 In cases that would lead to less than substantial harm to the significance of a Scheduled Monument the harm will be weighed against the public benefits of the proposal (DCMS 2013, para 20).

K2.4 This legislative position is directly reflected in the National Planning Policy Framework (NPPF) (Reference 21) which states that "*Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss…"* (NPPF, para 195), and "*Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use*" (NPPF, para 196).

K2.5 Where consent is granted for works that could result in harm to, or loss of, the significance of a Scheduled Monument, conditions are expected to be imposed that provide for recording of information that adds to our understanding of the significance of that monument. Those conditions are likely to be designed to ensure that:

- the project design seeks to further the objectives of relevant international or national research frameworks;
- use is made of appropriately skilled teams with the resources to fully implement the project design to relevant professional standards (such as those published by the Institute for Archaeologists);
- the project design provides for the full analysis, publication and dissemination of the results, including the deposition of reports in the relevant Historic Environment Record (HER), to a set timetable; and
- provision is made in the project design for the conservation and deposition of the site archive with a local museum or other public depository willing to receive it (DCMS 2013, para 21).

Planning (Listed Buildings and Conservation Areas) Act 1990

K2.6 Section 66 of the Planning (Listed Buildings and Conservation Areas) Act (1990) highlights the importance of built heritage and Listed Buildings within the planning system. With regard to the Local Planning Authority's (LPA) duty regarding listed buildings in the planning process, it states that:

"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".

K2.7 In addition, Section 72 of the Act emphasises the value of Conservation Areas in built heritage planning. In relation to the duties and powers of the LPA, it provides that:

"*With respect to any buildings or other land in a conservation area, special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area".*

The National Planning Policy Framework (NPPF) 2019

K2.8 This replaces all previous Planning Policy Guidance notes (PPGs) and Planning Policy Statements (PPSs) and revises the NPPF 2012.

K2.9 Section 16 provides policy on 'Conserving and enhancing the historic environment'. Planning decisions have to be made from a position of knowledge and understanding with respect to the historic environment. Paragraph 189 states:

"In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impacts of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation".

K2.10 In paragraph 192, it is made clear that a balance must be sought, on the one hand sustaining and enhancing the significance of heritage assets and the positive contribution that they can make to communities, and on the other in considering the positive contribution that a new development could make to local character and distinctiveness.

K2.11 The impact on a heritage asset should be assessed in terms of the significance of that asset; the greater the significance, the greater weight should be given in that assessment. Any harm to, or loss of, the significance of a designated asset should require clear and convincing justification. Where substantial harm or loss is predicted, approval should be given only in exceptional circumstances for Grade II listed buildings, parks or gardens. For heritage assets of higher importance (Grade II* & I listed buildings and parks & gardens, scheduled monuments, protected wreck sites, battlefields and World Heritage Sites) approval for proposed developments that cause substantial harm should be 'wholly exceptional' (para 194). In all cases the harm must be weighed against the public benefit (para 195).

K2.12 As a footnote to para 194, the NPPF states that:

"Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets."

K2.13 As is reflected in the DCMS 2013 statement on Government policy, it is made clear that undesignated heritage assets of national importance should be afforded the same consideration as designated assets of equivalent significance:

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset" (para 197);"

K2.14 In addition, para 187 states that:

"Local planning authorities should maintain or have access to a historic environment record. This should contain up-to-date evidence about the historic environment in their area and be used to:

a) assess the significance of heritage assets and the contribution they make to their environment; and

b) predict the likelihood that currently unidentified heritage assets, particularly sites of historic and archaeological interest, will be discovered in the future. This replaces all previous Planning Policy Guidance notes (PPGs) and Planning Policy Statements (PPSs)."

K2.15 Among the core planning principles, provision is made to "*conserve heritage assets in a manner appropriate to their significance, so that they can enjoyed for their contribution to the quality of life of this and future generations*" (CLG 2012, para 17).

K2.16 Section 12 provides policy on 'Conserving and enhancing the historic environment'. Planning decisions have to be made from a position of knowledge and understanding with respect to the historic environment. Paragraph 128 states: "*In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impacts of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation*".

K2.17 In paragraph 131, it is made clear that a balance must be sought, on the one hand sustaining and enhancing the significance of heritage assets and the positive contribution that they can make to communities, and on the other in considering the positive contribution that a new development could make to local character and distinctiveness.

K2.18 The impact on a heritage asset should be assessed in terms of the significance of that asset; the greater the significance, the greater weight should be given in that assessment. A distinction is made between 'substantial' and 'less than substantial' harm. Where substantial harm or loss to is predicted, approval should be given only in exceptional circumstances for Grade II listed buildings, parks or gardens. For heritage assets of higher importance (Grade II* & I listed buildings and parks & gardens, scheduled monuments, protected wreck sites, battlefields and World Heritage Sites) approval for proposed developments that cause substantial harm should

be 'wholly exceptional' (para 132). In all cases the harm must be weighed against the public benefit (paras 133 & 134).

K2.19 As is reflected in the DCMS 2013 statement on Government policy, it is made clear that undesignated heritage assets of national importance should be afforded the same consideration as designated assets of equivalent significance:

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset" (para 135);

"Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets" (para 139).

National Planning Practice Guidance (2014)

K2.20 The National Planning Practice Guidance (NPPG) was published by the Department for Communities and Local Government in March 2014 and provides guidance for planners and communities which will help deliver high quality development and sustainable growth in England. In terms of heritage, guidance entitled 'Conserving and enhancing the historic environment' sets out information with respect to the following:

- the recognition of the appropriate conservation of heritage assets forming one of the 'Core Planning Principles' that underpin the planning system;
- what the main legislative framework for planning and the historic environment is (Planning (Listed Buildings and Conservation Areas) Act 1990; Ancient Monuments and Archaeological Areas Act 1979; and Protection of Wrecks Act 1973);
- a definition of 'significance';
- why significance is important in decision-taking;
- the considerations of designated and non-designated assets;
- the identification of non-designated heritage assets; and
- the considerations for when applications for planning permission are required to consult or notify English Heritage.

Non-Statutory Guidance

K2.21 English Heritage Conservation Principles Policies and Guidance (EH 2008) defines the setting of historic assets as:-

"...the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape..."

K2.22 EH draws a distinction between 'setting' and 'context' (paragraphs 76 and 77) and the document makes it clear that whereas 'setting' involves a localised area, 'context' is a wider concept involving "*any relationship between a place and other places, relevant to the values of that place*".

K2.23 Heritage values are considered under four main headings:

1 Evidential Value derives from the potential for a place to yield evidence about past human activity;

2 Historical Value derives from the ways in which past, people and events can be connected through a place to the present;

3 Aesthetic value derives from the ways in which people draw sensory and intellectual stimulation from a place; and

4 Communal value derives from the meanings of a place for the people who relate to it.

Local Policy Guidance

K2.24 The Redcar & Cleveland Local Plan (Adopted 2018) contains policies relating to the Historic Environment. There are no Conservation Areas or Designated Heritage Assets that would be affected by this proposal. Policy HE3 'Archaeological Sites and Monuments' is relevant, however. It states:

Development that would adversely affect archaeological sites or monuments that are designated heritage assts or their settings, or archaeological sites of equivalent significance will only be approved in the most exceptional circumstances and in accordance with this policy and other heritage policies in this plan.

Development that may affect a known or possible archaeological site, whether designated or non-designated, will require the results of a desk-based assessment to be submitted as part of the planning application. An archaeological evaluation may also be required to identify the most appropriate course of action.

Development that affects a site where archaeology exists or where there is evidence that archaeological remains may exist will only be permitted if:

a. The harm or loss of significance is necessary to achieve public benefits that outweigh that harm or loss. Harm or loss may be avoided by preservation in situ or refusal: or

b. Where in situ preservation is not required, appropriate satisfactory provision is in place for archaeological investigation, recording and reporting to take place before, or where necessary during, development. Where archaeological investigation, recording and reporting has taken place it will be necessary to publish the findings within an agreed timetable.

K3.0 Assessment Methodology & Significance Criteria

Assessment Methodology

K3.1 There are three designated (built) heritage assets within 1000m of the site boundary, but none are intervisible with the site, nor do they have significant shared views. Their designations do not rely on their settings in respect of the site and they would suffer neither direct nor indirect impacts from development of this site. These built heritage assets are briefly discussed in the Baseline Conditions section below, Table K4.2 and in Appendix K.1. As such, built heritage has been scoped out of this Environmental Assessment.

K3.2 Buried heritage (archaeology) has been considered through a desk-based assessment and two site visits on 10th June 2020 and 3rd November 2020. A full list of referenced sources is provided and references are given. Staff at RCBC gave advice and information about known archaeological sites of interest in the vicinity of the study area, and where relevant, these were further investigated. It was not possible to view original archive material due to the Covid-19 health and safety restrictions. Additional sources consulted included:

- information available on a variety of internet sites including, The National Archives (http://discovery.nationalarchives.gov.uk/) and the Archaeology Data Service (http://ads.ahds.ac.uk/); the Heritage Gateway (www.heritagegateway.org.uk); and data from Pastscape (www.pastscape.org.uk) as well as the National Archives Discovery Catalogue. A full list of sites accessed can be found in the Bibliography section;
- cartographic sources held by the Ordnance Survey and Promap (www.promap.co.uk); and
- Site visits undertaken by Nansi Rosenberg and Aaron Goode.

K3.3 The historical development of the site has been established through reference to these sources and is described in the Baseline Conditions section of this report.

K3.4 The sensitive receptors identified through assessment of the known and potential heritage assets for which effects are assessed are identified in Table K3.1. The archaeological significance attributed to each receptor is based on the significance criteria identified in Table K3.2

Table K3.1 Sensitive Receptors

Sensitive Receptor	Archaeological Significance
Eston Iron Works remains	Medium
Open Hearth furnaces remains	Low
Cleveland Steel Works blast furnace bases	Medium
Cleveland Steel Works other remains	Low

Significance Criteria

K3.5 Each area of archaeological potential has been assessed for its archaeological significance in geographical terms (i.e. the archaeological receptors value/sensitivity) as shown at **Error! Reference source not found.**2, although it should be noted that there is no statutory definition for these classifications.

Table K3.2 Archaeological Significance (Sensitivity)

Archaeological Significance	Factors for assessing value of archaeological assets
International (Very High)	World Heritage Sites (including nominated sites).

Archaeological Significance	Factors for assessing value of archaeological assets
	Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.
National (High)	Scheduled Monuments (including proposed sites), Listed Buildings Grade I and II*(some Grade II) Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives.
Regional (Medium)	Designated or undesignated assets that contribute to regional research objectives.
Local (Low)	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Negligible	Assets with very little or no surviving archaeological interest.
Unknown	The importance of the resource has not been ascertained.

Impact Assessment

K3.6 This assessment uses the baseline data to describe the survival and extent of archaeological receptors that may be affected by the development proposals. The assessment has paid careful attention to the attribution of levels of significance to both potential archaeological receptors and to potential effects arising from the development.

Magnitude of Change

K3.7 The determination of magnitude of change is based on the level of impact and the current state of survival/condition of the asset, as shown in Tables K.3.3 and K3.5 below.

Table K3.3 Factors in the Assessment of the Magnitude of Impact - Heritage

Magnitude	**Assessment criteria**
Substantial	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting.
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.
Minor	Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting.
Negligible	Very minor changes to archaeological materials or setting.
Neutral	No change.

K3.8 There are a number of variables in determining magnitude of change. These include the sensitivity or vulnerability of a site to change (for example, depth of alluvium, or the presence of

made-ground), the nature of past development or management effects, and the differing nature of proposed development processes such as piling and topsoil stripping.

Significance of Effects

K3.9 This section sets out the method used in the EIA for assessing the potential significance of environmental effects for each receptor. The significance of potential environmental effects is determined by two variables:

- The value and/or sensitivity of the receptor (Archaeological Significance); and
- The magnitude of change.

Table K3.4 Significance of Effects Matrix

Magnitude of Change / **Magnitude of Change**		**No Change**	**Negligible**	**Minor**	**Moderate**	**Substantial**	**No Change**
Archaeological Significance	Very High	Neutral	**Moderate**	**Substantial**	**Substantial**	**Substantial**	Very High
	High	Neutral	Minor	**Moderate**	**Substantial**	**Substantial**	High
	Medium	Neutral	Negligible	Minor	**Moderate**	**Substantial**	Medium
	Low	Neutral	Negligible	Negligible	Minor	**Moderate**	Low
	Negligible	Neutral	Negligible	Negligible	Negligible	Minor	Negligible

K3.10 The significance of the environmental effect is assessed using the matrix shown in Table K3.4 The Significance of the archaeological resource/receptor is correlated against the magnitude of the change on that resource/receptor in order to determine whether the overall significance of the effect on the receptor will be Neutral, Negligible, Minor, Moderate or Substantial. Moderate and Substantial Effects are considered significant in EIA terms and are identified in bold.

K3.11 Depending on the nature of the change, the significance of the effect on the environment can range from Adverse to Beneficial and be of a defined duration. For instance, the loss of archaeological remains is always classed as Adverse, while the interpretation of an extant archaeological feature might be seen as Beneficial. Tables K3.4 and K3.5 provide a general guideline as to how the significance of environmental effects are defined.

K3.12 The assessment is then repeated once the proposals to mitigate the change have been put in place.

Table K3.5 Significance of Impact

Impact Assessment	Definition
Substantial Adverse	The development fails to satisfy the subject environmental objective and results in a major deterioration of the environmental context
Moderate Adverse	The development partly satisfies the subject environmental objective but fails to contribute to the environmental context
Minor Adverse	The development partly satisfies the subject environmental objective but fails to fully contribute to the environmental context
Negligible/neutral	The development satisfies the subject environmental objective but neither contributes to nor detracts from the environmental context

Impact Assessment	Definition
Minor Beneficial	The development satisfies the subject environmental objective and contributes to the environmental context
Moderate Beneficial	The development satisfies the subject environmental objective and contributes to the environmental context
Substantial Beneficial	The development satisfies the subject environmental objective and results in a major contribution to the environmental context

Consultation

K3.13 Neil Cookson of North East Regional Research Ltd (NEAR) has been consulted as advisor to RCBC (Appendix K.3). The areas of primary archaeological importance within the site; the Cleveland Iron Works Blast Furnace bases, have already been agreed as part of the work undertaken for the Grangetown Prairie application (planning reference R/2020/0318/FFM) and a scope of works for investigation has been approved (Appendix K.2). This outlines the need to clean and record the extant blast furnace bases and the approach to be taken with regard to further monitoring of the site for sub-surface remains in the area of the Cleveland Iron & Steel Works (HER 5633) and the Eston Iron Works (HER 5631). The work on the area of primary importance is expected to start imminently. Monitoring (watching brief) will be undertaken during all remediation work in the area of the former Cleveland Iron & Steel Works (HER 5633).

Assumptions and Limitations

K3.14 It has not been possible to view original archive material due to Covid-19 restrictions. The baseline data is based on that provided by Redcar & Cleveland Historic Environment Record (HER), the National Heritage List for England (NHLE), and the author's personal research in the Prospect Archaeology library and internet sources.

K3.15 It is noted that a remediation strategy for part of the site has been submitted to RCBC and approved as part of a separate planning application (planning reference R/2020/0318/FFM, approved 30/09/2020). Although planning permission has been granted for this work, it has not yet been implemented, therefore for completeness, the current application also seeks permission for remediation works. The remediation strategy, prepared by Arcadis in June 2020, sets out the required remediation and preparation works, which will require the removal of any buried archaeology on the site. It is assumed that any remediation required as part of this application would reflect that set out in the Arcadis Remediation Strategy and would therefore require removal of archaeological remains. As such, these works are considered within the assessment sections of this chapter.

K3.16 Where standing buildings are present on site there would be no remediation, but it is assumed that archaeological remains beneath those buildings would be removed in their entirety.

K4.0 Baseline Conditions

Existing Conditions

K4.1 The assessment of existing conditions has been based on a 'study area' extending 1000m from the boundary of the site. This enables the significance of existing and potential archaeological features to be considered in their local, regional and national contexts.

K4.2 The source of the monuments (shown at Appendix K4 and listed in Tables K4.1 & K4.2) noted below are from the HER and the NHLE and have the prefixes HER and NHL respectively. Additional information on the historic development of the site and surrounding area has been collated from historic mapping, online resources, and the personal library of the author. Known and suspected archaeological remains are summarised and discussed in the following sections.

Designated Heritage Assets

K4.3 There are three designations within the study area (see Table K.4.1 and Appendix K.4), although none within the site itself. All three assets lie within the settlement of South Bank and date to the 19th and 20th centuries. None would be directly affected by the proposed development and the site does not contribute to a significant setting for any of the buildings.

Table K4.1 Designated heritage assets within 1km of the Site

NHL ref no.	Name / description	Designation	Distance from Site
1160408	Baptist Church	LB II*	848m
1329634	War Memorial	LB II	930m
1329635	Church of St John the Evangelist	LB II	820m

Undesignated Heritage Assets

K4.4 A study area of 1km around the site has been identified for assessment. This allows judgements to be made on the potential for as yet unknown heritage assets to exist within the site. This is a particular requirement for remains dating to those periods for which surveys and mapping are not available, i.e. Prehistoric – early Post-medieval periods. Heritage assets as identified in the HER are listed in table K4.2 and shown at Appendix K4. Those falling within the site are marked in bold.

Table K4.2 Undesignated Heritage Assets within 1km of the site

HER no.	Name / description	Date / Period
810	King George's Square War Memorial (NHL 1329634)	c. 1920
1253	Baptist Church Redcar Road East (NHL 1160408)	1905
1831	Cleveland Ironworks, 2 surviving Bessemer blast furnaces	20th C
3633	Imperial Brickworks	19th century
4358	Eston Junction Railway Station	19th century
4360	Eston Grange (Grangetown) Railway Station	19th century
4782	Grangetown Signal Box	20th century
4880	Low Grange Farm Pillbox	WWII
5234	South Bank Asda Commemorative Monument	19th century
5341	Cargo Fleet Offices	20th century

HER no.	Name / description	Date / Period
5602	Normanby Jetty to South Gare	19th century
5608	Clay Lane Jetty	19th century
5612	Eston Jetty	19th century
5615	Tees Tilery	19th century
5618	Clay Lane Slag Works	19th century
5619	Clay Lane Iron Works	19th century
5620	Clay Lane Oron Works Tramway	19th century
5621	South Bank & Normanby Brickworks	19th century
5624	Antonien Works (Phosphate Manure)	19th century
5625	South Bank Iron Works	19th century
5626	Eston Branch Railway	19th century
5627	Furnace Row, terrace houses	19th century
5628	Gas Works	19th century
5629	Cleveland Iron Works	19th century
5630	Church of St John the Evangelist (NHL 1329635)	1893-95
5631	Eston Iron Works	19th century
5632	Spoil Ground	19th century
5633	Cleveland Steel Works	19th century
5646	Old Clay Pits	19th century
5647	Lackenby Station	19th century
5649	Brick Field	19th century
5652	Un-named Spoil Ground	19th century
5653	Brick Yard	19th century
5654	Annealed Concrete Works	19th century
5658	Reservoir	19th century
5659	Lackenby Iron Works	19th century
5908	North East Railway (Darlington Section)	19th century
6153	Low Grange Farm, Eston - farmstead	19th century
6297	94-100 Normanby Road (co-op)	20th century
6298	Normanby Road Methodists Church	19th century
6299	Princess Alice Public House, Normanby Road	19th century
6300	South Bank Workmens' Institute	20th century
6301	The Commercial Public House, Normanby Road	19th century
6302	The Erimus Public House< Normanby Road	19th century
6304	South Bank	19th century
6578	Boundary stone West of Church Lane	19th century
6579	Boundary stone West of Church Lane	19th century

Pre-Industrial Periods (10,000BC – 1750AD)

K4.5 There are no assets within the study area relating to the pre-Industrial period. No further assessment of the pre-Industrial period is made in this report.

Industrial – Modern Periods (1750 – present)

K4.6 The first detailed mapping of the site, the Ordnance Survey 1st edition map of 1857, shows clearly how the site is largely farmland called The Pastures, on the southern bank of the Tees Estuary. The edge of the dry land is delineated by the Middlesbrough and Redcar Railway with Eston Junction Station (HER 4358), Eston Junction and Lackenby Station (HER 4360) already present. Holme Beck and the Eston Branch head south-east along the western side of the site, separated by a Bridle Road and the Knitting Wife Beck heads north into the Tees Estuary on the eastern side of the site.

K4.7 Within the western part of the site, Eston Iron Works (HER 5631) was established by Henry Bolckow and John Vaughan in 1851, initially comprising 3 blast furnaces, 54 feet high (Rowe & Green 2007). The partnership already owned an iron and engineering works on the Tees at Middlesbrough, blast furnaces at Witton Park, and they were mining ironstone near Middlesbrough (Reference 14). Workers housing was provided in Furnace Row (HER 5627) to the west of the site. To the south of that, a more traditional farmstead, Clay Lane Farm, represented an earlier economy of the area.

K4.8 Over the course of the following forty years, reclamation of the Tees estuary and the expansion of industrial processing transformed the area. Bernhard Samuelson and John Vaughan built the South Bank Iron Works (HER 5652) just north of the site in 1853, the works becoming operational the following year. By 1863, Samuelson had sold South Bank to Elwon, Malcolm & Co and opened a much larger ironworks at Newport (Reference 7). Elwon, Malcolm & Co had already built the Clay Lane Iron Works (HER 5619) in 1858, and Lackenby Iron Works (HER 5659) was constructed in 1871 (Reference 20).

K4.9 The Engineer Magazine recorded that in 1876 Bolckow, Vaughan & Co were close to completing their new Reversing Engines works at the New Cleveland Steel Works which replaced the Eston Iron Works (Reference 15). Bolckow, Vaughan & Co Ltd also acquired the South Bank Steelworks in 1879.

K4.10 The massive change to the landscape imparted by the huge Cleveland Iron and Steel Works (HERs 5619 & 5633) can be seen in the comparison of the 1857 and 1895 Ordnance Survey maps. From a largely agricultural landscape in the mid-19th century with just a small iron works, the landscape becomes entirely dominated by the industrial concerns of Bolckow, Vaughan & Co. The Cleveland Iron Works, which incorporated both the Clay Lane and Bessemer Blast Furnaces, covered a large area of often undifferentiated buildings on the early maps, with multiple internal railways concentrated on the north-western part of the site, the railways feeding south and west to the mainlines. The 1:2500 1895 map provides sufficient detail to identify a total of 11 blast furnaces present within or just outside the western side of the site (eight belonging to Cleveland Iron Works and three later labelled Bessemer Blast Furnaces of the Cleveland Steel Works).

K4.11 In the southern part of the site, allotment gardens are shown, associated with the terrace housing of the newly established Grangetown settlement, a small section of which fell within the red line boundary. Station Road connected the settlement with Grangetown Station to the north-east. Further housing, including a terrace called Eston Grange, and allotment gardens were present adjacent to Station Road, within the site. Boundary stones marked the edge of Holme Beck to the south of the site (HERs 6578 & 6579). Further boundary stones are shown to the east of the site. Eston Low Farm (later Low Grange Farm) was constructed in the later 19th century, indicating a continuing agricultural need locally (HER 6153).

K4.12 To the north of the site, reclamation of the mudflats is shown by 1895 with internal railways taking waste to create spoil grounds (HER 5632 & 5652). The South Bank Iron Works, and

Antonien Works (Phosphate Manure) are shown on the 25" 1895 map. The latter was later shown as 'Basic Slag Works' (HER 5624). Slag from the various ironworks was processed here and at other locations (e.g. Clay Lane Slag Works HER 5618) to be used in the construction of reclamation walls and also for making 'Scoria Blocks' which were used in paving roads and alleyways (Reference 20).

K4.13 Jetties were constructed through the mud beyond the site from the newly reclaimed land to carry rail lines to wharves on the Tees bank. Eston Jetty (HER 5612) and Clay Lane Jetty (HER 5608) terminated at their respective wharves. The jetties and wharves are no longer shown by 1915 when reclamation had extended the dry land to its current boundary although raised railways and conveyors continued to move materials to and from the riverside. Reclamation walls (HERs 5604 and 6046) are shown north and south along the riverbank from Eston and Clay Lane Wharves.

K4.14 Towards the end of the 19th century, numerous additional brick and tile works were established in the area. Imperial Brickworks (HER 3633), South Bank and Normanby Brick Works (HER 5621; also identified as South Bank & Normanby Gas Works HER 5622) and Tees Brick & Tile Works (HER 3634) were all established prior to the end of the 19th century. A further un-named brick yard was also present north-east of Lackenby Station on the 1895 Ordnance Survey map.

K4.15 In addition to Grangetown, the workers' settlement of South Bank (HER 6304) was also present by the publication of the 1895 map. These settlements comprised housing, shops, and, increasingly, supporting facilities such as pubs (HERs 6295, 6299, 6301 & 6302), churches (HERs 879, 1253, 5630 & 6298), a police station (HER 6294), a political club (HER 6293), a school (HER 6292), and a working men's institute (HER 6300).

K4.16 Bolckow, Vaughan & Co Ltd acquired the Clay Lane works in 1900, becoming the largest producers of steel in Great Britain. Changes to the works included the construction of the North Steel Mill, housing open hearth furnaces, to the east of the existing steelworks. By 1915, some of the blast furnaces had been removed but the site continued to expand with travelling cranes, storage and warehousing facilities added. Grangetown also saw an expansion in facilities with the addition of sports pitches, including a bowling green partially sitting within the site.

K4.17 In 1914, Bolckow, Vaughan & Co had a workforce of 18,000 and were specialising in 'Cleveland pig iron, hematite, ferro-manganese and spiegeleisen steel rails and plates, tramrails, ironstone, coal, coke and by-products such as sulphate of ammonia, benzol, toluol, xylol, sol, naphtha and motor spirit; also fire brick and plate bricks, ground annealed slag and artificial stone. The manufacture of steel is carried on by the acid and basic processes, both Bessemer and Siemens' (Reference 14).

K4.18 In the 1920s, Bolckow, Vaughan & Co had again extended the steelworks with the addition of the South Steel Plant in the southern part of the site (now the site of the Torpedo Ladle Workshop), housing a further 10 open hearth furnaces, replacing the Grangetown sports facilities and some of the housing. Further industrial buildings, including the No 5 Rolling Mill, the laboratories, an engineering works, cranes, railways, cooling ponds and pumping stations had been constructed on the eastern side of the site were built in the 1920s, with Station Road forming the boundary of the Cleveland Steel Works. Knitting Wife Beck was also straightened and partially culverted. However, in 1929, Bolckow, Vaughan & Co Ltd were effectively bankrupt, forcing them to accept a takeover by Dorman Long, who already operated the Britannia Works.

K4.19 The works flourished following the take over and the company was renowned for the construction of steel bridges across the world, including the Tyne Bridge and Sydney Harbour Bridge. During the 1950s, the Bessemer blast furnaces were converted for the production of

ferro-manganese and speigeleisen, used in refining steel from the open-hearth furnaces. The furnaces had been rebuilt in the 1930s and were rebuilt again in the 1950s. Coke ovens were also built in the 1950s, to the south of the blast furnaces.

K4.20 The large number of steelworks and associated industries owned by Dorman Long & Co were linked by railways, conveyors and roads. The spread of sites and complexity of the rail system are evident in the simplified plans included in the internal publication 'A Technical Survey of Dorman Long Steel' 1959.

K4.21 With the nationalisation of the steel industry in 1967, Dorman Long was absorbed into the newly created British Steel Corporation. Privatisation in 1988 saw the company rebranded as British Steel plc. The last two surviving Bessemer blast furnaces at Teesside Steelworks (HER 1831) were No. 5, constructed in 1937 and closed in 1986, and No. 4, built in 1991 and closed in 1993. Merger with Koninkljke Hoogovens in 1999 saw the works under the ownership of Corus which was then bought by Tata Steel in 2007. Corus closed the Teesside blast furnace in 2009 but it was then bought by Sahaviriya Steel Industries (SSI) in 2011, reopening in 2012, but by 2015 SSI UK had gone into liquidation and the plant finally closed.

Site Visit and Monitoring

K4.22 A site visit was made on 10th June 2020 and a further visit made on 3rd November 2020 specifically to look at the remains of the blast furnace bases.

K4.23 Three upstanding furnace bases were seen to be present, in a poor state of repair. Two of these are possibly 19th century, the third is probably 20th century. The area to the east was considered to have low archaeological potential as development in this area did not occur until the 20th century when it was used initially for storage and later being partly developed as an engineering works and with large slag and iron storage pits. The areas to the north, south and west may contain remains of other elements of the 19th century Cleveland Iron Works and Eston Iron Works.

K4.24 Monitoring of site investigations test pits was undertaken by NAA in August 2020 and it is understood to have identified subterranean brick arches which may be the remains of flues associated with the 1850s Eston Iron Works (N Cookson pers. com.)

Future Baseline

K4.25 No alterations to the baseline conditions relating to below ground heritage are anticipated.

K5.0 Potential Effects

Embedded Mitigation

K5.1 There are no embedded mitigation measures relevant to below ground heritage.

Major Hazards and Accidents

K5.2 The potential for major hazards and accidents has been considered and is not considered relevant to this chapter. All archaeological work would be undertaken in accordance within the constraints of the remediation programme and would follow site established health and safety procedures and a separately prepared Risk Assessment and Method Statement (RAMS) that would require approval by RCBC before any archaeological work is commenced.

Phasing

K5.3 All archaeological remains are expected to be removed during the site preparation works and there would be no further impacts during subsequent phases of development. All archaeological mitigation would therefore need to be undertaken in advance of or during the site preparation/construction phase.

During Construction

K5.4 It is assumed that all archaeological remains would be removed through remediation and/or creation of development platforms. The potential effects for all sensitive receptors would range between **Moderate** and **Substantial Adverse** which would be significant in EIA terms**.** This conclusion is based on an understanding of archaeological sensitivity and the magnitude of change for each receptor.

During Operation

K5.5 Following the construction works, it is anticipated that no further effects would occur during the operational stage as the below ground heritage assets would have been removed.

Table K5.1 Potential Effects

Heritage Asset	Archaeological Significance	Magnitude of change during construction	Magnitude of change during operation	Unmitigated Impact (Construction only)
Eston Iron Works remains	Medium	Substantial	Not applicable	Substantial Adverse
Open Hearth furnaces remains	Low	Substantial	Not applicable	Moderate Adverse
Cleveland Steel Works blast furnace bases	Medium	Substantial	Not applicable	Substantial Adverse
Cleveland Steel Works other remains	Low	Substantial	Not applicable	Moderate Adverse

K6.0 Mitigation and Monitoring

K6.1 As it is understood that remediation is required to make the site safe for development, and this area is believed to contain significant contamination, there is no potential for preservation of below ground assets in situ. As there is no potential for preservation in situ, the only mitigation possible is preservation by record.

K6.2 The mitigation measures proposed initially focus on cleaning and recording of the area of the Cleveland Iron Works blast furnaces to allow an assessment of their date, state of preservation, and significance. A further programme of mitigation relating to the blast furnaces may be required following the initial cleaning and recording.

K6.3 In addition to the work focusing on the remains of the blast furnaces, a watching brief will be maintained during remediation in the area to the north, west and south of the blast furnaces, where the potential for other remains relating to the Eston Iron Works and Cleveland Iron Works may survive below the current ground surface. Where substantial and significant remains are identified, a programme of archaeological excavation and recording will be undertaken. The area to the east is not believed to have any archaeological potential.

During Construction

K6.4 Archaeological investigation and recording will be undertaken prior to and during remediation and site preparation works. This will comprise a watching brief during all ground operations with focused evaluation / excavation of features identified in the area of the blast furnaces. A written scheme of investigation (WSI) will be prepared for the wider site (an existing WSI has been prepared for the blast furnaces and immediate environs, Appendix K.2) for approval by NEAR as advisors to RCBC. This will likely be secured by way of a planning condition.

During Operation

K6.5 No mitigation or monitoring is required during the operational phase of the development.

K7.0 Residual Effects

During Construction

K7.1 All archaeological remains would be preserved by record. Whilst the loss of the heritage asset is considered an adverse impact and permanent, the addition to historical and archaeological understanding offsets the negative effect to have a residual effect that is between Negligible and Minor Adverse. This is not considered significant in EIA terms. Table K7.1 below looks at the sensitive receptors in detail.

During Operation

K7.2 There are no further effects during the operational phase of the proposed development.

Table K7.1 Potential Residual Effects

Heritage Asset	Significance	Magnitude of change	Mitigated Impact
During Construction			
Eston Iron Works remains	Medium	Minor	Minor Adverse
Open Hearth furnaces remains	Low	Minor	Negligible
Cleveland Steel Works blast furnace bases	Medium	Minor	Minor Adverse
Cleveland Steel Works other remains	Low	Minor	Negligible
During Operation– no significant effects			

K8.0 Summary & Conclusions

K8.1 Four areas of below ground archaeological potential have been identified. These comprise the foundations and sub-structures of the following: Eston Iron Works, Cleveland Steel Works blast furnaces, Cleveland Steel Works, Open Hearth furnaces, other elements of the Cleveland Steel Works.

K8.2 In each case, the potential survival of significant archaeology should be established through monitoring and review of site investigations and, where necessary, archaeological evaluation.

K8.3 The proposed development would remove all elements of the archaeological record.

K8.4 Mitigation measures comprising the excavation and recording of archaeological features and deposits would ensure impacts are no greater than Minor Adverse which is not significant in EIA terms.

Table K8.1 Summary of Effects

Receptor	Impact	Potential Effects	Additional Mitigation and Monitoring	Residual Effects
During Construction				
Eston Iron Works remains	Substantial	Substantial Adverse	Archaeological investigation and recording	Minor Adverse
Open Hearth furnaces remains	Substantial	Moderate Adverse	Archaeological investigation and recording	Negligible
Cleveland Steel Works blast furnace bases	Substantial	Substantial Adverse	Archaeological investigation and recording	Minor Adverse
Cleveland Steel Works other remains	Substantial	Moderate Adverse	Archaeological investigation and recording	Negligible
During Operation – no significant effects				

K9.0 Abbreviations & Definitions

1 ES – Environmental Statement
2 STDC – South Tees Development Corporation
3 AMAAA – Ancient Monuments and Archaeological Areas Act 1979
4 NPPF – National Planning Policy Framework 2019
5 RCBC – Redcar & Cleveland Borough Council
6 NEAR – North East Archaeological Research Ltd
7 HER – Redcar & Cleveland Historic Environment Record
8 NHLE – National Heritage List for England

K10.0 References

1 Ordnance Survey 1:1,250 1953, 1958-74

2 Ordnance Survey 1:2,500 1894-95, 1899, 1915, 1929, 1954, 1959-69

3 Ordnance Survey 1:10,000 1980, 1993

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5 Russian mapping 1:10,000 1975

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10 http://www.heritagegateway.org.uk/gateway/

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14 https://www.gracesguide.co.uk/Bolckow,_Vaughan_and_Co

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16 https://www.old-maps.co.uk

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18 www.flickr.com

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20 Rowe, P & Green, G 2007 *The Nineteenth Century Industrial Archaeology of Redcar and Cleveland*

21 DCMS 2019 National Planning Policy Framework