

# **Great Yarmouth Third River Crossing**

## **Application for Development Consent Order**

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### **Document 6.2: Environmental Statement Volume II: Technical Appendix 9A: Legislation, Policy and Guidance**

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#### **Planning Act 2008**

#### **The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (“APFP”)**

APFP regulation Number: 5(2)(a)

Planning Inspectorate Reference Number: TR010043

Author: Norfolk County Council

Document Reference: 6.2 – Technical Appendix 9A

Version Number: 0 – Revision for Submission

Date: 30 April 2019

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# 1 Legislation, Policy and Guidance

1.1.1 Tables 1.1 to 1.3 summarise the applicable legislation, policy and guidance to Chapter 9: Cultural Heritage.

Table 1.1: Summary of National Legislation

Legislation	Summary	Chapter Reference
<b>Ancient Monuments and Archaeological Areas Act 1979</b>	<p>The Ancient Monuments and Areas Act 1979 defines Ancient Monuments as heritage assets which can be either Scheduled Monuments (SM) or "<i>any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it</i>".</p> <p>The Act states that consent must be obtained from the Secretary of State for works which include the demolition, destruction, damage, removal, repair or alteration that to a SM or assets being considered for adoption as an SM.</p> <p>Development affecting the setting of a SM is dealt with wholly under the planning system (where the effect on setting is a material consideration) and does not require Scheduled Monument Consent (SMC). Geophysical prospection (including the use of a metal detector) on a Scheduled Monument</p>	<p>Chapter 9: Cultural Heritage identifies all areas designated as Scheduled Monuments within a 1km buffer of the boundaries of the Principal Application Site and 250m of the Satellite Application Sites (see Section 9.5). There will be no direct physical impacts on any Scheduled Monuments and no impacts on any settings as a result of the Scheme. Therefore, they are not discussed further in Chapter 9.</p> <p>A description of all Scheduled Monuments in the study areas is provided in The Historic Environment Desk-Based Assessment (HEDBA, Appendix 9B).</p> <p>The location of the Scheduled Monuments is shown on Figure 9.1.</p>



Legislation	Summary	Chapter Reference
	<p>requires prior consent from Historic England.</p> <p>Section 33 of the Planning Act 2008 removes the requirement for consent under section 2(3) or (3) of the Ancient Monuments and Archaeological Areas Act 1979, to the extent that development consent is required or given to that development, but see the Infrastructure Planning (Decisions) Regulations 2010 below.</p>	
<p><b>The Planning (Listed Buildings and Conservation Areas) Act 1990</b></p>	<p>The Act sets out the legal requirements for the control of works to listed buildings. Grade I buildings are those of exceptional interest. Grade II* are particularly significant buildings of more than special interest. Grade II are buildings of special interest, which warrant every effort being made to preserve them.</p> <p>Listed Building Consent must be obtained from the Local Planning Authority where works to demolish, alter or extend a listed building are proposed and which would affect its character as a building of special architectural or historic interest.</p> <p>The Act imposes a duty on Local Planning Authorities</p>	<p>Chapter 9: Cultural Heritage identifies all Listed Buildings and Conservation Areas within a 1km buffer of the boundaries of the Principal Application Site and 250m of the Satellite Application Sites (see Section 9.5). The Listed Buildings and Conservation Areas identified as Sensitive Receptors are identified in Section 9.6 and the assessment of Effects, Mitigation and Residual Effects are presented in Section 9.8.</p> <p>The HEDBA (Appendix 9B) identifies the potential impacts and effects on all Listed Buildings and Conservation Areas in the Study Areas and the results summarised in Annex A.</p> <p>The location of the Listed</p>

Legislation	Summary	Chapter Reference
	<p>to determine which parts of their area are areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance, and to designate these areas as Conservation Areas. Consent must be obtained for the demolition of buildings in a Conservation Area.</p> <p>Further, when exercising any functions under the planning acts (including the grant of planning permission for new development), Local Planning Authorities and the Secretary of State (as the case may be) must pay special attention to the desirability of preserving or enhancing the character or appearance of Conservation Areas. This duty does not apply to decisions to grant development consent under the Planning Act 2008, but an equivalent duty is applied under the Infrastructure Planning (Decisions) Regulations 2010 below. Section 33 of the Planning Act 2008 removes the requirement for listed building consent, to the extent that development consent is required or given to that development, but again see the Infrastructure</p>	<p>Buildings and the Conservation Areas are shown on Figure 9.1.</p> <p>The Scheme would not have any direct, physical impacts on any Listed Buildings or Conservation Areas.</p>

Legislation	Summary	Chapter Reference
	<p>Planning (Decisions) Regulations 2010, below for further information on how these matters are addressed under the Planning Act 2008.</p>	
<p><b>The Infrastructure Planning (Decisions) Regulations 2010</b></p>	<p>The regulations ensure that decisions under the Planning Act 2008 have regard to the desirability of preserving Listed Buildings, Conservation Areas and Scheduled Monuments. It states that:</p> <p><i>(1) When deciding an application which affects a listed building or its setting, the decisionmaker (a) must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses.</i></p> <p><i>(2) When deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.</i></p> <p><i>(3) When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving</i></p>	<p>Chapter 9: Cultural Heritage identifies all Designated Heritage Assets (Scheduled Monuments, Listed Buildings and Conservation Areas) within a 1km buffer of the boundaries of the Principal Application Site and 250m of the Satellite Application Sites (see Section 9.5). Those identified as Sensitive Receptors are identified in Section 9.6 and the assessment of Effects, Mitigation and Residual Effects are presented in Section 9.8.</p> <p>The HEDBA (Appendix 9B) identifies the potential impacts and effects on all Designated Heritage Assets in the Study Areas and the results summarised in Annex A.</p> <p>The locations of the Designated Heritage Assets are shown on Figure 9.1.</p> <p>The Case for Scheme is presented in Document 7.1</p> <p>The Scheme would not</p>

Legislation	Summary	Chapter Reference
	<i>the scheduled monument or its setting.</i>	have any direct, physical impacts on any Listed Buildings, Conservation Areas and Scheduled Monuments. There would no significant effects on the setting of Scheduled Monuments or Conservation Areas. The assessment has determined that the Scheme would result in significant effects on two Listed Buildings due to a change in their setting.
<b>Planning Act 2008, Section 33</b>	Where development requires a DCO under the Planning Act 2008, section 33 disapples the need for Scheduled Monument Consent, Listed Building Consent or planning permission for the development.	<p>Chapter 9: Cultural Heritage identifies all Designated Heritage Assets (Scheduled Monuments, Listed Buildings and Conservation Areas) within a 1km buffer of the boundaries of the Principal Application Site and 250m of the Satellite Application Sites (see Section 9.5).</p> <p>The assessment has established that no Scheduled Monuments, or Listed Buildings would be directly physically impacted by the Scheme.</p>

Table 1.2: Summary of Policy

Policy	Summary	Chapter Reference
<p><b>National Policy Statement for National Networks (NPS NN) (December 2014)</b></p>	<p>The Historic Environment is referred to in paragraphs 5.120 to 5.142 of the NPS NN.</p> <p>Paragraphs 5.120 and 5.121 present and introduction to the historic environment and provides a definition of it.</p> <p>The NPS NN identifies heritage assets as “<i>Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest.... Heritage assets may be buildings, monuments, sites, places, areas or landscapes. The sum of the heritage interests that a heritage asset holds is referred to as its significance. Significance derives not only from a heritage asset’s physical presence, but also from its setting [Setting of a heritage asset is the surroundings in which it is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that</i></p>	<p>The Cultural Heritage assessment as presented in ES (Chapter 9) and in HEDBA (Appendix 9B) adheres to the policies set out in NPS NN, where relevant.</p> <p>The assessment identifies all designated heritage assets within a 1km study area of the boundaries of the Principal Application, in line with Paragraph 5.126. Non-designated heritage assets are identified within a 500m area, in adherence with Paragraph 5.125 and 5.126, using information held by the Historic Environment Record (in line in Paragraph 5.127). Designated and non-designated heritage assets are identified within a 250m study area of the Satellite Application Sites (see Section 9.5).</p> <p>The value and importance of the heritage assets is presented, in line with Paragraph 5.122 and to contribute to Paragraph 5.129. This include, where required, the contribution of the setting to the value of the asset.</p> <p>Heritage assets identified as Sensitive Receptors are identified in Section 9.6 and the assessment of</p>

Policy	Summary	Chapter Reference
	<p><i>significance or may be neutral]</i>” (Paragraph 5.122)</p> <p><i>“Some heritage assets have a level of significance that justifies official designation (Paragraph 5.123).</i></p> <p><i>“Non-designated heritage assets... that are demonstrably equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets” (Paragraph 5.124)</i></p> <p><i>“The Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan process by local authorities, including ‘local listing’, or through the nationally significant infrastructure project examination and decision making process) on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets.” (Paragraph 5.125).</i></p> <p><i>“Where the development is subject to EIA the</i></p>	<p>Effects, Mitigation and Residual Effects are presented in Section 9.8, in adherence to Paragraphs 5.126 and 5.127.</p> <p>Effects on below-ground heritage assets are assessed in adherence to DMRB guidance, which is currently the only available guidance for this topic.</p> <p>The effects on the designated above ground and built heritage resource applies the substantial harm test in Section 9.9 and in the HEDBA (Appendix 9B Section 9), The Case for Scheme is presented in Document 7.1. Together, they inform the policies that the Secretary of State must apply in paragraphs 5.129 to 5.134.</p> <p>The HEDBA (Appendix 9B) has identified all heritage assets (both designated and non-designated) in a 500m and 1km buffer of the Principal Application Site and 250m buffer of the Satellite Application Sites. A summary of the importance/sensitivity, and the potential impact and effects of the Scheme on all identified heritage assets in the study areas</p>



Policy	Summary	Chapter Reference
	<p><i>applicant should undertake an assessment of any likely significant heritage impacts of the proposed project as part of the Environmental Impact Assessment and describe these in the environmental statement.” (Paragraph 5.126)</i></p> <p><i>“The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance and no more than is sufficient to understand the potential impact 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 a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation (Paragraph 5.127).</i></p> <p>Paragraph 5.128 sets out the parameters for the</p>	<p>are reported and summarised and presented in Appendix 9B Annex A. The HEDBA has been prepared in adherence with NPS NN.</p> <p>A WSI is presented in document reference 6.9 and outlines how the evaluation of buried heritage assets would be undertaken to ensure any heritage assets that would be lost as result of the Scheme will be recorded, to adhere to 9.141 and 9.142.</p>

Policy	Summary	Chapter Reference
	<p>Secretary of State to identify and assess the particular significance of any heritage asset that may be affected.</p> <p><i>“In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.”</i> (Paragraph 5.129).</p> <p><i>“The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, [and] the contribution of their settings”</i> (Paragraph 5.130)</p> <p><i>“When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset’s conservation. The more important the asset, the greater the</i></p>	



Policy	Summary	Chapter Reference
	<p><i>weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.” (Paragraph 5.131).</i></p> <p><i>“Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm</i></p>	

Policy	Summary	Chapter Reference
	<p><i>to the significance of the heritage asset, the greater the justification that will be needed for any loss.”</i> (Paragraph 5.132).</p> <p><i>“Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, consent should be refused unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.”</i> (Paragraph 5.133).</p> <p><i>“Where the proposed development 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 securing its optimum viable use.”</i> (Paragraph 5.134).</p> <p>Paragraphs 5.135 and 5.137 relate to impacts on World Heritage Sites and Conservation Areas, and Paragraph 5.138 to assets that have been damaged or neglected. None are relevant to this assessment.</p> <p><i>“Where the loss of significance of any heritage asset has been</i></p>	

Policy	Summary	Chapter Reference
	<p><i>justified by the applicant based on the merits of the new development and the significance of the asset in question, the Secretary of State should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced” (Paragraph 5.136).</i></p> <p><i>“A documentary record of our past is not as valuable as retaining the heritage asset and therefore the ability to record evidence of the asset should not be a factor in deciding whether consent should be given” (Paragraph 5.139).</i></p> <p><i>“Where the loss of the whole or part of a heritage asset’s significance is justified, the Secretary of State should require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part). The extent of the requirement should be proportionate to the importance and the impact.” (Paragraph 5.140)</i></p> <p><i>“The Secretary of State may add requirements to the development consent</i></p>	

Policy	Summary	Chapter Reference
	<p><i>order to ensure that this is undertaken in a timely manner in accordance with a WSI that meets the requirements of this section and has been agreed in writing with the relevant Local Authority (or, where the development is in English waters, with the Marine Management Organisation and English Heritage) and that the completion of the exercise is properly secured.” (Paragraph 5.141).</i></p> <p><i>“Where there is a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the Secretary of State should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.” (Paragraph 5.142)</i></p>	
<p><b>National Policy Statement for Ports (2012)</b></p>	<p>The NPS for Ports states the requirements for Port and related infrastructure. Similar to the NPS NN, an applicant is required to provide a description of the significance of affected heritage assets affected by a scheme and the level of detail should be</p>	<p>The requirements regarding the cultural heritage assessment as set out in the NPS for Ports follow the same methodology for those for the NPS NN. The key additional policies for the NPS for Port are presented below.</p>

Policy	Summary	Chapter Reference
	<p>proportionate to the importance of the heritage asset.</p> <p>The NPS for Ports states that the <i>possibility of damage to buried features from underwater disposal of dredged material should be taken into account</i> (Paragraph 5.12.9).</p> <p><i>In considering applications, the decision-maker should seek to identify and assess the significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of evidence provided with the application; any designation records; Rapid Coastal Zone Assessments by English Heritage where relevant; the Historic Environment Record and similar sources of information; the heritage assets themselves; the outcome of consultations with interested parties; where appropriate and when the need arises to understand the significance of the heritage assets, expert advice</i> (Paragraph 5.12.10).</p>	<p>The geoarchaeological assessment (Appendix 9C) examined the potential for potentially significant archaeological and palaeoenvironmental remains within the River Yare. It concluded that there was very limited potential for any to be present and to be impacted by the Scheme due to previous dredging activities. This satisfies the policy set out in Paragraph 5.12.9.</p> <p>The assessment presented in Chapter 9 and in Appendix 9B has drawn from the data sources listed in Paragraph 5.12.10. The results of the Norfolk Rapid Coastal Zone Assessment Survey, undertaken in 2004, is recorded in the Historic Environment Record database, which was used for the assessment.</p>
<b>National Planning Policy Framework (2019)</b>	The National Planning Policy Framework (NPPF) sets out the polices to	In adherence to the policies set out in Paragraph 189, 193, 194,

Policy	Summary	Chapter Reference
	<p>conserve and enhance the historic environment in Chapter 16. The policies set support those set out in the NPS NN.</p> <p>Further guidance to the NPPF is provided in the Planning Policy Guidance. Chapter 16 brings together the way plan making and decision making should adopt a positive strategy to ensure the conservation and enjoyment of the historic environment and how to approach consideration of the potential impacts of development on such assets.</p> <p><i>In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution.... 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 (Paragraph 189).</i></p> <p>Paragraphs 190 and 192 outlines the policies for local authorities in relation</p>	<p>196 and 197, the HEDBA (Appendix 9B) identifies all heritage assets (both designated and non-designated) in a 500m and 1km buffer of the Principal Application Site and 250m buffer of the Satellite Application Sites and presents a summary of the importance/sensitivity, and the potential impacts, effects and harm.</p> <p>Chapter 9 Cultural Heritage Section 9.5 identifies all the designated assets relevant to the ES and describes their value, including the contribution of the setting to the value (where necessary). Heritage assets identified as Sensitive Receptors are identified in Section 9.6 and the assessment of Effects, Mitigation and Residual Effects are presented in Section 9.8. Section 9.8 also outlines the level of harm for the designated assets due to change in setting. The chapter therefore conforms to the policies set out in Paragraphs 189, 193, 194, 196 and 197.</p> <p>Chapter 9 and the HEDBA (Appendix 9B) present information to support the policies set out in Paragraphs 190 and 192</p>

Policy	Summary	Chapter Reference
	<p>to heritage assets and the historic environment when assessing and determining applications.</p> <p><i>When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to its conservation ... irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm (Paragraph 193).</i></p> <p><i>Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification... (Paragraph 194).</i></p> <p><i>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... (Paragraph 195).</i></p>	<p>The Case for the Scheme (Document 7.1) presents information in adherence to the policies set out in Paragraph 194 and 196.</p> <p>In line with Paragraph 199, a Written Scheme of Investigation (WSI) is presented in Document 6.9 and outlines how the evaluation of buried heritage assets would be undertaken to ensure any heritage assets that would be lost as result of the Scheme will be recorded.</p>



Policy	Summary	Chapter Reference
	<p><i>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 (Paragraph 196).</i></p> <p><i>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 directly or indirectly affect 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 (Paragraphs 197).</i></p> <p><i>Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible... (Paragraph 199)</i></p>	



Policy	Summary	Chapter Reference
	<p>Policies contained within the following paragraphs not relevant to the assessment or this Scheme: 185, 186, 187, 188, 191, 198, 200, 201 and 202.</p>	
<p><b>East Inshore and East Offshore Marine Plans Objective 5 Heritage assets and seascape, Policy SOC2 (2014)</b></p>	<p>To conserve heritage assets, nationally protected landscapes and ensure that decisions consider the seascape of the local area.</p> <p>Policy SOC2 states: <i>“Proposals that may affect heritage assets should demonstrate, in order of preference:</i></p> <ul style="list-style-type: none"> <li><i>a) that they will not compromise or harm elements which contribute to the significance of the heritage asset</i></li> <li><i>b) how, if there is compromise or harm to a heritage asset, this will be minimised</i></li> <li><i>c) how, where compromise or harm to a heritage asset cannot be minimised it will be mitigated against or</i></li> <li><i>d) the public benefits for proceeding with the proposal if it is not possible to minimise or mitigate compromise or harm to the heritage asset.”</i> </li></ul>	<p>Chapter 9: Cultural Heritage Section 9.8 and Appendix 9B Section 9 identifies the designated heritage assets which have the potential to be harmed by the Scheme.</p> <p>The assessment has not identified any designated assets which could be subject to substantial harm, although there will be less than substantial harm and significant effects on two heritage assets due a change in setting: Grade I Nelson’s Monument and Grade II Gasholder. The assessment demonstrates that the Scheme will harm the elements which contribute to the value of these assets minimally through a change in the setting, but will not compromise their overall value significantly.</p> <p>There are no appropriate mitigation measures proposed to reduce the harm, therefore in line with Policy SOC2 d) the public benefits for the scheme are presented in the Case for the Scheme (Document 7.1).</p>

Policy	Summary	Chapter Reference
<p><b>Great Yarmouth Local Plan: Core Strategy 2013-2030, Policy CS10: Safeguarding local heritage assets (2015)</b></p>	<p>The character of the borough is derived from the rich diversity of architectural styles and the landscape and settlement patterns that have developed over the centuries. In managing future growth and change, the Council will work with other agencies, such as the Broads Authority and Historic England, to promote the conservation, enhancement and enjoyment of this historic environment by conserving and enhancing the significance of the borough's heritage assets and their settings, such as Conservation Areas, Listed Buildings, Scheduled Ancient Monuments, archaeological sites, historic landscapes including historic parks and gardens, and other assets of local historic value.</p>	<p>In adherence to the Great Yarmouth Local Plan, The HEDBA (Appendix 9B) has identified heritage assets (both designated and non-designated) in a 500 m and 1 km Study from the limits of the Principal Application Site and 250m from the Satellite Application Site. A summary of the importance/sensitivity, the impacts and the effects for each heritage asset is presented in Appendix 9B Annex A.</p>
<p><b>Great Yarmouth Draft Local Plan Part 2, Policy E8-dp</b></p>	<p>Development will be supported where it conserves, enhances or complements the area's historic environment and heritage assets. Particular care will be taken in relation to formally designated assets such as listed buildings, conservation areas, scheduled ancient monuments, registered</p>	<p>The assessment has not identified any heritage assets which could be subject to substantial harm, although there will be less than substantial harm and significant effects on two heritage assets due a change in setting: Grade I Nelson's Monument and Grade II Gasholder. The assessment demonstrates</p>

Policy	Summary	Chapter Reference
	<p>parks and gardens, etc., and their settings, but all buildings, structures and areas, etc. of heritage significance and value will, as appropriate, be conserved and/or used as cues for strengthening local distinctiveness</p>	<p>that the Scheme will harm the elements which contribute to the value of these assets minimally through a change in the setting, but will not compromise their overall value significantly.</p> <p>There are no appropriate mitigation measures proposed to reduce the harm, therefore in line with Policy SOC2 d) the public benefits for the scheme are presented in the Case for the Scheme (Document 7.1).</p>
<p><b>Great Yarmouth Borough-Wide Local Plan, Policy BNV2: Areas of archaeological significance (2001)</b></p>	<p>Policy BNV2 is retained as a Saved Policy in the Great Yarmouth Local Plan. Within ‘areas of known archaeological significance’ and ‘areas of potential archaeological significance’ the council will not determine any application for built development unless the application is accompanied by an archaeological evaluation undertaken by a recognised archaeological field unit to a written brief approved by the council. Planning permission will only be granted if the evaluation reveals that any archaeological remains:</p> <ul style="list-style-type: none"> <li>▪ Would be unaffected by the proposed development; or</li> <li>▪ Are not of sufficient</li> </ul>	<p>The HEDBA (Appendix 9B) and the geoarchaeological assessments (Appendix 9C) have established the potential for below ground archaeological remains within the Principal Application Site. Due to the urban nature and constraints presented in the Principal Application Site, no pre-consent evaluation works could be completed, however a programme of post-consent archaeological investigation has been devised, in consultation with the NCC Historic Environment Team, and presented in the WSI (document reference 6.9). Any subsequent archaeological works required would be set out</p>

Policy	Summary	Chapter Reference
	<p>importance to warrant their physical preservation in situ; or</p> <ul style="list-style-type: none"> <li>Could be sympathetically preserved in conjunction with the proposed development, or taking account of the importance of the remains and the need for the development, where preservation in situ would not be feasible or merited.</li> </ul> <p>Can be excavated and preserved by record by the implementation of a programme of archaeological work in accordance with a Written Scheme of Investigation which has been submitted to and approved by the Council</p>	<p>in further WSIs and in the Final CoCP.</p>
<p><b>Great Yarmouth Borough-Wide Local Plan, Policy BNV8 Buildings of Local Importance (2001)</b></p>	<p>Policy BNV8 is retained as a Saved Policy in the Great Yarmouth. There will be a strong presumption against the demolition of any buildings which are of local importance (including those of architectural, historical, social, cultural or religious interest or significance) and every effort will be made to find alternative uses for these buildings whilst retaining their essential character</p>	<p>The HEDBA (Appendix 9B) has identified two sets of late 19<sup>th</sup> century terraced housing of local value which required demolition as part of the Scheme. The properties require demolishing to enable the Scheme to be delivered (see Chapter 2 Scheme Description). A programme of Historic Building Recording is provided in the WSI (Document 6.7) in order to allow preservation by record.</p>

Table 1.3: Summary of Guidance

Guidance	Summary	Chapter Reference
<p><b>DMRB, Volume 11, Section 3, Part 2; Appendix 8 (DMRB: HA208/07) (2007)</b></p>	<p>The document sets out the framework for the environmental assessment process in relation to cultural heritage. The resource is sub-divided into three sub-topics: archaeological remains, historic buildings and historic landscapes (set out in detail in Annexes 5, 6 and 7). The guidance sets out the mechanism for assessing value/importance of assets, magnitudes of impacts and resultant significance of effects.</p>	<p>The chapter follows the assessment framework set out in the DMRB for cultural heritage. The methodology for assessment used in the chapter is outlined in Section 9.4.</p>
<p><b>Highways Agency Scheme Assessment Reporting Volume 5, Section 1, Part 2 (TA37/93) (1993)</b></p>	<p>The document sets out the general requirements for the reporting of the scheme assessments.</p>	<p>The chapter follows the requirement for reporting as set out in the document.</p>
<p><b>Historic England The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Policy Notes 3 (second edition) (2017)</b></p>	<p>The purpose of the good practice advice is to give assistance and provide guidance concerning the assessment of the setting of heritage assets. It states the statutory obligation on decision-makers to have special regard to the desirability of preserving listed buildings and their settings. It also sets out the policy objectives in respect to NPPF.</p>	<p>The approach to assessment of settings and the impacts and effects on heritage assets follows the guidance provided in the document.</p> <p>The guidance has been used to adopt a stepped approach for settings assessment, which is presented as a summary in Section 9.4 and in detail in Appendix 9B, Annex C.</p>
<p><b>Historic England Preserving Archaeological Remains.</b></p>	<p>The purpose of the document is to assist local authorities, archaeological</p>	<p>A WSI is presented in document reference 6.9 and outlines how the</p>

Guidance	Summary	Chapter Reference
<b>Decision-taking for Sites under Development (2016)</b>	and other consultants, owners and applicants when taking decisions about how the significance of archaeological remains can be sustained and managed through retention within a development, a process colloquially termed preservation <i>in situ</i> .	evaluation of buried heritage assets would be undertaken to identify the presence, extent and value of any heritage assets within the Principal Application Site. Based on the results of this, a programme of archaeological mitigation will be determined and presented in further WSIs and in the Final CoCP. This will include, where required, any measures to allow for remains to be preserved in-situ, in adherence to the Historic England guidance.
<b>Chartered Institute for Archaeologists (CIfA) Code of Conduct (2014)</b>	The Code of Conduct promotes those standards of conduct and self-discipline required of a member of CIfA in the interests of the public and in the pursuit of the study and care of the physical evidence of the human past.	The chapter and the supporting Appendices follows and adheres to the standards and guidance set out by CIfA. It has been prepared by staff employed in a CIfA Registered Archaeological Organisation
<b>CIfA Standard Guidance for historic environment desk-based assessments (2017)</b>	This guidance seeks to define good practice for the execution and reporting of desk-based assessment, in line with the regulations of CIfA; in particular the Code of conduct.	The HEDBA (Appendix 9B) was prepared in adherence to the standards and guidance set out by CIfA. It has been prepared by staff employed in a CIfA Registered Archaeological Organisation.

# Great Yarmouth Third River Crossing

## Application for Development Consent Order

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### Document 6.2: Environmental Statement Volume II: Technical Appendix 9B: Historic Environment Desk-Based Assessment

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#### Planning Act 2008

#### The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (“APFP”)

APFP regulation Number: 5(2)(a)

Planning Inspectorate Reference Number: TR010043

Author: Norfolk County Council

Document Reference: 6.2 – Technical Appendix 9B

Version Number: 0 – Revision for Submission

Date: 30 April 2019



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## 1 Executive Summary

- 1.1.1 WSP has been commissioned by the Applicant to carry out a historic environment desk-based assessment (HEDBA) of the proposed Great Yarmouth Third River Crossing, which would see the construction, operation and maintenance of the new crossing of the River Yare. The Scheme consists of a new dual carriageway road, including a road bridge across the river, linking the A47 at Harfrey's Roundabout on the western side of the river to the A1243 South Denes Road on the eastern side. The Scheme would feature an opening span double leaf bascule (lifting) bridge across the river, involving the construction of two new 'knuckles' extending the quay wall into the river to support the bridge. The Scheme would include a bridge span over the existing Southtown Road on the western side of the river, and a bridge span on the eastern side of the river to provide an underpass for existing businesses, enabling the new dual carriageway road to rise westwards towards the crest of the new crossing. The Scheme also includes the installation of Variable Message Signs (VMSs) in Satellite Application Sites on key routes in Great Yarmouth.
- 1.1.2 This desk-based study assesses the impact on buried heritage assets (archaeological remains) and above ground heritage assets (structures and landscapes of heritage interest) within or immediately around the Application Sites. It also considers the impact of the Scheme on the historic character and setting of designated assets within and beyond the site (e.g. views to and from listed buildings and conservation areas).
- 1.1.3 There are 124 designated heritage assets in a 1km Study Area around the Principal Application Site. They consist of four Scheduled Monuments, four Grade I Listed Buildings, eight Grade II\* Listed Buildings, 102 Grade II Listed Buildings and six Conservation Areas. No World Heritage Sites, Registered Battlefields, Registered Parks or Gardens or Protected Wreck sites have been identified within 1km of the Principal Application Site.
- 1.1.4 A total of 135 non-designated heritage assets are recorded within the 500m Study Area around the Principal Application Site. Of these, 125 are non-designated buried heritage assets, comprising both findspots and monuments, and 10 are non-designated built heritage assets. 15 of the non-designated heritage assets have been identified during the course of this assessment and the remaining 120 were previously recorded by the Norfolk Historic Environment Record (NHER).
- 1.1.5 A total of 18 buried heritage assets have been identified within the Principal Application Site of 19<sup>th</sup> century to 20<sup>th</sup> century date, of which eight are identified as being of low importance and the remainder negligible. The impacts will be moderate to major adverse and the effects moderate adverse

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on the low value assets before mitigation, reducing to minor adverse with mitigation.

- 1.1.6** There is a potential for currently unknown buried archaeological assets to be present within the Application Sites, including deeply stratified deposits which may not have been disturbed by modern development. Due to the proximity of the Principal Application Site to the River Yare and the medieval shoreline, there is potential for buried remains associated with maritime activity, and for high level of preservation of remains, such as wood, in waterlogged deposits. The importance of such remains is unknown and may range from Negligible to High value. Any early prehistoric artefacts of Palaeolithic date would be classed as being of international significance and Very High value. The impacts on buried assets within the Principal Application Site would be major adverse and the effects would therefore vary from slight to very large adverse.
- 1.1.7** The assessment has established that there is greater likelihood for buried assets on the west side of the River Yare of medieval, post-medieval and modern date. The sensitivity of these assets is predicted, based on the current evidence, to be negligible to medium. The magnitude of impact prior to mitigation is considered to be moderate to major, the effects slight to large on any below ground heritage assets prior to the implementation of mitigation measures. These could be reduced to neutral through mitigation by preservation in-situ and to slight to moderate through preservation by record.
- 1.1.8** The assessment has identified that the potential for unknown below ground archaeological remains on the east side of the River Yare varies from that predicted to the west. The land mass here is of a more recent date and historically has been part of the Naval base and then a port. Therefore, there is a higher likelihood for below ground remains of post-medieval and modern date of negligible to low sensitivity. The magnitude of impact prior to mitigation is considered to be moderate to major and for this side of the Application Site. The effects would be slight (not significant) effect before mitigation, reducing the neutral through mitigation through preservation in-situ, although the effects would remain slight with preservation by record.
- 1.1.9** The construction phase will require the demolition of two sets of terraced housing located within the Principal Application Site on the western side of the River Yare (WSP04 and WSP06). Both terraces are of late 19th century date and are judged to be of low importance. As the assets will be removed entirely, the impacts before mitigation would be major adverse and the effects moderate adverse, without mitigation. There is a potential for the effects to be reduced through a programme of historic building recording which will allow for preservation by record and would reduce the effects to slight adverse.



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- 1.1.10** The construction and operation phase will result in significant effects on Grade I Listed Nelson's Monument (NHLE 1246057) and the Grade II Listed Gas Holder (NHLE 1096789) due to changes in the setting. The Scheme will have moderate adverse impacts on their settings due to the visual intrusion, particularly from the bridge, the control tower and the plant room, which will present a major change in the skyline. Both are visually dominant features in the local area and this contributes to the importance of each asset. The effects on Nelson's Monument, a Grade I Listed Building of high value, will be moderate adverse, due to the distance and varying level of impact on the views towards the monument. The effect on the Grade II listed Gas Holder, a medium value asset, is also predicted to be moderate adverse due to the proximity of the Gas Holder to the bridge. The impacts identified would have a Less than Substantial Harm on these assets, however, as the value of the assets and the interests which inform the value would remain largely unchanged.
- 1.1.11** There will be adverse impacts on the settings of three non-designated built heritage assets during construction and operation period (Fish Wharf 1877 Extension Building (WSP01), Late 19<sup>th</sup> century terraces off Southtown Road (WSP03) and Late 19<sup>th</sup> century terraces off St Anne's Road (WSP05). All are low value assets and the setting represents a minor contribution to the value: the effects are therefore slight adverse effect.
- 1.1.12** The Scheme includes six Satellite Application Sites for the installation of VMS. The Satellite Application Sites on North Quay, Fullers Way and Yarmouth Way are located within the medieval town, as defined by the remain of the town walls, and there is a potential for buried remains in these locations, although they are predicted to have been heavily disturbed. The amount of ground disturbance associated with the installation of VMS is predicted to be minimal.
- 1.1.13** There are no designated heritage assets located within the Satellite Application Sites and none are located within a 250m of the Satellite Application Sites on A47 South, Gapton Hall Road and Acle New Road. There are 25 designated heritage assets within 250m of the of the Satellite Application Sites in North Quay (one Scheduled Monument; one Grade I, two Grade II\* and 21 Grade II Listed Buildings), 37 in Fuller's Way (one Scheduled Monument; two Grade I, two Grade II\* and 32 Grade II Listed Buildings) and 80 in Yarmouth Way (three Scheduled Monuments; four Grade I, five Grade II\* and 68 Grade II Listed Buildings). The Satellite Application Sites on North Quay and Fuller Way are located in the St Nicholas and Northgate Conservation Area. The Satellite Application Site on Yarmouth Way lies between the King Street and the Hall Quay South Quay Conservation Areas.
- 1.1.14** The Satellite Application Site on North Quay is located 30m from an extant section of the Scheduled Monument Town Walls (NHLE 1003782). The

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positioning of the VMS close to an upstanding part of the monument may result in it causing a slight visual distraction when approaching the monument from the north along North Quay, although due to the size of the VMS compared to the monument and the presence of other many other visual distractions, the impacts are judged to be neutral, and the effects neutral.

- 1.1.15** The Tolhouse structure was built in the mid-12th century as a merchant's house and is Grade I Listed. It is located approximately 50m from the Satellite Application Site on Yarmouth Way. The position of the VMS will mean limited intervisibility between the asset and the VMS and there will be negligible impact on the Grade I Listed Building. The effects on the high value heritage asset would be slight adverse.

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## 2 Introduction

### 2.1 Project Background

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- 2.1.1** The Applicant has undertaken a HEDBA to assess the heritage impact of the proposed Scheme. The HEDBA forms part of DCO application and is a technical appendix to an Environmental Statement (ES) (document reference 6.1).
- 2.1.2** The Scheme involves the construction, operation and maintenance of a new crossing of the River Yare in Great Yarmouth in the Principal Application Site (centred at TG 52469 05894). The Scheme consists of a new dual carriageway road, including a road bridge across the river, linking the A47 at Harfrey's Roundabout on the western side of the river to the A1243 South Denes Road on the eastern side. The Scheme would feature an opening span double leaf bascule (lifting) bridge across the river, involving the construction of two new 'knuckles' extending the quay wall into the river to support the bridge. The Scheme would include a bridge span over the existing Southtown Road on the western side of the river, and a bridge span on the eastern side of the river to provide an accommodation underpass for existing businesses, enabling the new dual carriageway road to rise westwards towards the crest of the new crossing. VMS would be provided at six Satellite Application Sites locations around Great Yarmouth as part of the Scheme to assist the movement of traffic depending on whether the double leaf bascule bridge is open or closed.
- 2.1.3** This document will identify the known heritage resources and likely types of archaeological remains which may be encountered and the predicted impacts of the development upon them.
- 2.1.4** The document satisfies Regulations 5(2)(a) and 5(2)(m) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure Regulations) 2009 (the APFP Regulations).

### 2.2 Scope

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- 2.2.1** The report provides a baseline of known or potential buried heritage assets (archaeological remains) and above ground heritage assets (structures and landscapes of heritage interest) within the Principal Application Site, the Satellite Application Sites and their study areas. Professional expert opinion has been used to assess heritage significance, based on historical, architectural, artistic and archaeological taking into account past ground disturbance which may have compromised survival.



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2.2.2 The report assesses the impact of the Scheme on heritage assets (designated and non-designated), the historic character and setting of designated assets (e.g. views to and from listed buildings and conservation areas) within the Principal Application Site, the Satellite Application Sites and their study areas.

2.2.3 The report assesses the effects of the Scheme on all heritage assets the Principal Application Site, the Satellite Application Sites and their study area.

2.2.4 The report assesses the harm of the Scheme on designated heritage assets the Principal Application Site, the Satellite Application Sites and their study area

## 2.3 Aims and Objectives

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2.3.1 The aim of this report is to assess the impact of the Scheme and to provide a suitable strategy to mitigate any adverse effects, if required, as part of a DCO to develop the site. The aim is achieved through six objectives:

- Identify the presence of any known or potential heritage assets that may be affected by the proposals;
- Describe the value of such assets, in accordance with the National Policy Statement for National Networks (NPS NN) and National Planning Policy Framework (NPPF), taking into account factors which may have compromised asset survival;
- Determine the contribution to which setting makes to the value of any sensitive (i.e. designated) heritage assets;
- Assess the likely impacts upon the value of the assets arising from the proposals;
- Assess the impact of the Scheme on how designated heritage assets are understood and experienced through changes to their setting; and
- Assess the significance of effects and the level of harm resulting from the Scheme.

## 2.4 Outline of the Proposal Relevant to the Assessment

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2.4.1 If constructed, the Scheme would comprise the following principal elements which are relevant to the assessment:

- A new dual carriageway road, crossing the River Yare in an east-west orientation, comprising:
  - A new double-leaf bascule bridge providing an opening span to facilitate vessel movement within the river. This would include

- structures to support and accommodate the *operational* requirements of the bridge-opening mechanism, including counterweights below the level of the bridge deck. The bridge will be supported on driven piles;
- New substructures, supported by driven piles, to support the double leaf bascule bridge within the existing quays either side of the river and within the river itself, requiring new permanent “knuckle” walls, creating cofferdams in the waterway to accommodate their construction;
  - A new five-arm roundabout connecting the new dual carriageway road with Suffolk Road, William Adams Way and the western end of Queen Anne’s Road. Sections of the new five arm roundabout would be supported on driven piles where deep soft ground is encountered;
  - A single-span bridge over Southtown Road, with reinforced earth embankments joining that bridge to the new roundabout at William Adams Way. Southtown Road bridge and the reinforced earth embankments would be supported on driven piles;
  - A single-span bridge to provide an accommodation underpass on the eastern side of the river, with reinforced earth embankments joining that single span bridge to South Denes Road. The underpass and reinforced earth embankments would be supported on driven piles;
  - A new signalised junction connecting the new road with A1243 South Denes Road; and
  - Implementation of part of a flood defence scheme along Bollard Quay that is proposed to be promoted by the Environment Agency, and works to integrate with the remainder of the flood defence scheme.
- The closure of Queen Anne’s Road, at its junction with Suffolk Road, and the opening of a new junction onto Southtown Road providing vehicular and pedestrian access to residential properties and the MIND site at the eastern end of Queen Anne’s Road;
  - Revised access arrangements for existing businesses onto the local highway network;
  - Dedicated provision for cyclists and pedestrians which ties into existing networks;
  - A control tower structure located immediately south of the crossing on the western side of the river. The control tower would facilitate the 24/7 operation of the opening span of the new double-leaf bascule bridge;
  - A plant room located on the eastern side of the river for the operation of the opening span of the new double-leaf bascule bridge;
  - The demolition of an existing footbridge on William Adams Way;

- 
- Associated changes, modifications and/or improvements to the existing local highway network;
  - Additional signage, including VMS at discrete locations, to assist the movement of traffic in response to network conditions and the openings / closings of the double-leaf bascule bridge;
  - The relocation of existing allotments to compensate for an area to be lost as a result of the Scheme and other accommodation works including those at the MIND site; and
  - New public realm, landscape, ecology and sustainable drainage measures.

**2.4.2** Works to facilitate the construction, operation and maintenance of the above elements including:

- Creation of temporary construction sites and accesses from the public highway;
- Provision of new utilities and services and the diversion of existing utilities;
- Provision of drainage infrastructure, lighting and landscaping;
- Demolition of a number of existing residential and commercial / business properties; and
- Provision of small vessel waiting facilities to the north and south of the new crossing, either as floating pontoons or additional fendering to the existing berths, including any dredging and quay strengthening works that may be required.

**2.4.3** The double leaf bascule bridge is expected to be operational 24 hours per day and 365 days per year. It is anticipated that the bridge would open on average 15 times per day on a typical weekday. Individual opening durations would vary, however, traffic modelling undertaken for the Scheme has assumed that each opening will take on average approximately 5.5 minutes including vessel passage time. In its open position, the raised leaf bridge will be approximately 28m above Ordnance datum (AOD).

**2.4.4** The assessments within this assessment have been based upon a Scheme design that has been sufficiently developed to allow an assessment to be undertaken within the parameters of assessment identified in Table 2.1 below.

*Table 2.1: Parameters of Assessment*

Item	Parameters
<b>Control tower</b>	A maximum height of 20 metres AOD
<b>Road gradient</b>	A maximum of 5%.
<b>Finished road level tolerance</b>	The finished road level has a tolerance of +1.0 metre and -0.5 metres from that shown on the Engineering Section Drawings
<b>Double leaf bascule bridge clearance over water</b>	A minimum of 5.36m AOD to the underside of the double leaf bascule bridge when lowered. Unlimited headroom (air draught) to be provided when the bascule bridge is raised.
<b>Navigable channel width</b>	A minimum navigable channel width of 50m.
<b>Southtown Road bridge</b>	Minimum clearance of 5.3m above finished road level for traffic in accordance with the Design Manual for Roads and Bridges (DMRB)
<b>Accommodation underpass (eastern side of river)</b>	Minimum clearance of 4.9m above finished road level

## 2.5 Key Heritage Constraints

**2.5.1** A total of 18 buried heritage assets have been identified within the Principal Application Site of 19<sup>th</sup> century to 20<sup>th</sup> century date, of which seven are identified as being of low importance and the remainder negligible. There is a potential for currently unknown buried archaeological assets to be present within the Principal Application Site, including deeply stratified deposits which may not have been disturbed by modern development. Due to the proximity of the Principal Application Site to the River Yare and the medieval shoreline, there is potential for buried remains associated with maritime activity, and for high level of preservation of remains, such as wood, in waterlogged deposits. A detailed assessment of the below ground heritage resource is provided in Section 6 and the impacts and effects provided in Section 8.

**2.5.2** The Principal Application Site lies immediately adjacent to one designated heritage asset, the Grade II Dolphin Public House (NHLE 1096829) and non-designated built heritage assets of 19<sup>th</sup> century date. The construction and operation phase will result in significant effects on the setting of Grade I Listed Nelson’s Monument (NHLE 1246057) and the Grade II Listed Gas Holder (NHLE 1096789) due to changes in the setting. A detailed assessment of the built heritage resource is provided in Section 7, the impacts and effects in Section 8 and the Substantial Harm in Section 9.



## 3 Planning Framework

### 3.1 Statutory Protection

#### Scheduled Monuments

- 3.1.1 Nationally important archaeological sites (both above and below-ground remains) may be identified and protected under the Ancient Monuments and Archaeological Areas Act 1979. An application to the Secretary of State is normally required for any works affecting a Scheduled Monument. Prior written permission, known as Scheduled Monument Consent (SMC) is required from the Secretary of State for works physically affecting a scheduled monument. However, pursuant to section 33 of the Planning Act 2008, such consent is not required if any works affecting a Scheduled Monument form part of the development sought to be authorised through a DCO
- 3.1.2 Development affecting the setting of a scheduled monument is dealt with wholly under the planning system and does not require SMC.
- 3.1.3 Geophysical prospection (including the use of a metal detector) on a scheduled monument requires consent from Historic England.

#### Listed Buildings and Conservation Areas

- 3.1.4 The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the legal requirements for the control of development and alterations which affect buildings which are listed or in conservation areas. Buildings which are listed or which lie within a conservation area are protected by law. Grade I are buildings of exceptional interest. Grade II\* are particularly significant buildings of more than special interest. Grade II are buildings of special interest, which warrant every effort being made to preserve them. Pursuant to section 33 of the Planning Act 2008, listed building consent is not required if any works to a listed building form part of the development sought to be authorised through a DCO.

#### The Infrastructure Planning (Decisions) Regulations 2010

- 3.1.5 The Infrastructure Planning (Decisions) Regulations Act 2010 sets out the legislation for dealing with development consent for nationally significant infrastructure projects. In Regulation 3 (1) it states that when *“deciding an application which affects a listed building or its setting, the decisionmaker(b) must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses”*.



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- 3.1.6 Regulation 3 (2) states that when “*deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area*”.
- 3.1.7 Regulation 3 (3) states that when “*deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving the scheduled monument or its setting*”.

## 3.2 National Policy

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### National Policy Statement for National Networks

- 3.2.1 The National Policy Statement for National Networks (NPS NN) states the requirements that the SoS has for DCO applications and the matters that need to be considered by the SoS when determining an application (Ref. 1). The NPS NN clarifies that a heritage asset can be a building, monument, site, place, area or landscape and that the significance of the asset is a factor both its physical presence as well as its setting.
- 3.2.2 Within an ES, an applicant is required to “*undertake an assessment of any likely significant heritage impacts of the proposed project*’ (Paragraph 5.126) ... ‘*and describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance*” (Paragraph 5.127).

*“When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset’s conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II\* Listed Buildings, Registered Battlefields, and grade I and II\* Registered Parks and Gardens should be wholly exceptional”* (Paragraph 5.131).

*“Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss”* (Paragraph 5.132).

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*“Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, consent should be refused unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm” (Paragraph 5.133).*

*“Where the proposed development 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 securing its optimum viable use” (Paragraph 5.134).*

*“Where the loss of the whole or part of a heritage asset’s significance is justified, the SoS should require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part). The extent of the requirement should be proportionate to the importance and the impact” (Paragraph 5.140).*

### **National Policy Statement for Ports**

- 3.2.3** The NPS for Ports states the requirements for Port and related infrastructure (Ref. 2). Similar to the NPS NN, an applicant is required to provide a description of the significance of heritage assets affected by a proposed development and the level of detail should be proportionate to the importance of the heritage asset.

### **The East Inshore and East Offshore Marine Plans**

- 3.2.4** The East Inshore and East Offshore Marine Plans (EIEOMP) was published in 2014 (Ref. 3) and provides the approach to managing the resources, and the activities and interactions that take place within the coastline and seascapes along the east coast of England from Bridlington in the north to Felixstowe in the south. It is one of 11 plans that cover the seas around England, giving an area specific expression within the framework of the 2011 UK Marine Policy Statement (Ref. 4).
- 3.2.5** The policies relating to heritage assets and seascape are addressed in paragraphs 141 to 152 of the EIEOMP and are set out in order to achieve Objective 5 *“To conserve heritage assets, nationally protected landscapes and sure that decisions consider the seascape of the local area. This objective relates to the historic environment, nationally important landscapes and seascapes. It recognises the need to consider if developments are appropriate to the area they would be located in and have influence upon, and as far as possible do not compromise the value of such assets and characteristics”*.
- 3.2.6** Policy SOC2 is specific to heritage assets and states that:

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*“Proposals that may affect heritage assets should demonstrate, in order of preference:*

*a) that they will not compromise or harm elements which contribute to the significance of the heritage asset*

*b) how, if there is compromise or harm to a heritage asset, this will be minimised*

*c) how, where compromise or harm to a heritage asset cannot be minimised it will be mitigated against or;*

*d) the public benefits for proceeding with the proposal if it is not possible to minimise or mitigate compromise or harm to the heritage asset”*

### **National Planning Policy Framework**

**3.2.7** The Government issued the revised National Planning Policy Framework (NPPF) in February 2019 (Ref. 5) and supporting Planning Practice Guidance in 2014 (Ref. 6). The National Planning Policy for “Conserving and enhancing the historic environment” is found in Section 16, paragraphs 184-202. The section is split into two main considerations “Proposals affecting heritage assets” and “Considering potential impacts”. The NPPF follows and supports the guidance set out in the NPS NN.

## **3.3 Local Policy**

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**3.3.1** The Great Yarmouth Local Plan: Core Strategy was adopted in 2015 and sets out the overall planning strategy for the Borough until 2030 (Ref. 7). The Council’s approach to managing the historic environment is addressed in Policy CS10 – Safeguarding local heritage assets and in the Saved Policies from the 2001 Great Yarmouth Borough-Wide Local Plan - BNV2: Areas of archaeological significance and BNV8 Buildings of local importance.

**3.3.2** The Great Yarmouth Borough Council Strategic Planning Team are currently preparing the Local Plan Part 2 that will eventually sit alongside the Local Plan: Core Strategy. This is currently in consultation and is anticipated to be adopted in Spring 2020. The Council’s proposed approach to the historic environment and heritage is contained in Policy E8-dp (Ref. 8).

## 4 Methodology and Sources

### 4.1 Desk Based Assessment

**4.1.1** The assessment follows the format as set out in the Highway England Design Manual for Road and Bridges Volume 11 Section 3 Part 2 HA 208/07 Cultural Heritage (Ref. 9). The assessment has been carried out in accordance with the requirements of the NPS NN (Ref. 1), NPPF (Ref. 5) and to standards specified by the Chartered Institute for Archaeologists (Refs 10 and 11) and Historic England’s Guidance on Setting (Ref. 12) and Preserving Archaeological Remains (Ref. 13).

**4.1.2** In order to determine the full historic environment potential of the site, a broad range of standard documentary and cartographic sources, including results from any archaeological investigations, were examined. This included determination of the likely nature, extent, preservation and significance of any known or possible buried heritage assets that may be present within or adjacent to the Principal Application Site and the Satellite Application Sites.

**4.1.3** The table below provides a summary of the key data sources.

*Table 4.1: Summary of Data Sources*

Source	Data	Comment
<b>Historic England</b>	National Heritage List (NHL) with information on statutorily designated heritage assets.	Statutory designations (scheduled monuments; statutorily listed buildings; registered parks and gardens; historic battlefields) can provide a significant constraint to development.
<b>Norfolk County Council (NCC)</b>	Historic Environment Record (HER) Conservation Area Consultation	Primary repository of archaeological information. Includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources.
<b>British Geological Survey (BGS)</b>	Solid and drift geology digital map; online BGS geological borehole record data.	Subsurface deposition, including buried geology and topography, can provide an indication of potential for early human settlement, and potential depth of archaeological remains.
<b>Norfolk Record Office</b>	Historic maps (eg Tithe, enclosure, estate), published journals and local history	Baseline information on the historic environment

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## 4.2 Study Area

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4.2.1 The Study Areas which has been adopted for the assessment of cultural heritage features extends to:

- A 1 km buffer around the Principal Application Site for designated assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Park and Gardens, Registered Battlefields and Conservation Areas) to identify any heritage assets in the wider landscape which could be impacted through a change in setting;
- A 500m buffer around the Principal Application Site for non-designated cultural heritage assets to obtain an appropriate level of information to assess the potential for below ground remains within the Principal Application Site; and
- A 250m buffer around the Satellite Application Sites to identify any above ground assets in the immediate vicinity which could be impacted through a change in setting, and to assess the potential for below ground remains Satellite Application Site.

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## 4.3 Consultations

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4.3.1 The scope of the assessment has been discussed with the Acting Historic Environment Team Leader at NCC in October 2018. Following this consultation, additional built heritage assets have been identified for assessment, consisting of:

- Potential Fish Wharf 1877 Extension Building (WSP01);
- The late 19th century terraces off Southtown Road (WSP03 to WSP06); and
- Former 19th century maltings (WSP02).

4.3.2 A draft of this report was provided to Acting Historic Environment Team Leader at NCC and Historic England in December 2018 and comments were invited. Written comments were provided and have been incorporated into the final report.

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## 4.4 Site Visit

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4.4.1 An initial site visit was undertaken on the 14<sup>th</sup> July 2017 and a second one was completed on the 31<sup>st</sup> August and 1<sup>st</sup> September 2018. The purpose of the visit was to assess the current character of the Principal Application Site, the topography, presence of visible heritage assets and identify which could affect the survival of known assets. The wider area was also visited to

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assess the potential impact on cultural heritage assets outside of the proposed Principal Application Site. The site visits were extended to include the proposed locations of the VMS at the Satellite Application Sites.

- 4.4.2 The site visits were undertaken from Public Rights of Way only. This provided opportunity to assess the potential physical and visual impacts of the Scheme throughout the 1km Study Area. Access was limited on the east side of the River Yare in the Principal Application Site within the area of the operating port, however views were obtained from immediately outside and from the west side of the River Yare. There was no access to the interior of private residential properties within the Principal Application, however they were assessed externally.

## 4.5 Assessing Heritage Significance

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- 4.5.1 'Significance' lies in the value of a heritage asset to this and future generations because of its heritage interest, which may be historic, archaeological, architectural or artistic. Known and potential heritage assets within the Application Sites and its vicinity have been identified from national and local designations, HER data and expert opinion. The determination of the significance of these assets is based on statutory designation and/or professional judgement against the following values referred to in the NPPF (Ref. 5) and DMRB (Ref. 9).

- **Historic Interest:** the ways in which the asset can illustrate the story of past events, people and aspects of life (illustrative value, or interest). This can hold communal value when associated with the identity of the current community. Historical interest considers whether the asset is the first, only, or best surviving example of an innovation of consequence, whether related to design, artistry, technology or social organisation. It also considers an asset's integrity (completeness), current use / original purpose, significance in place making, associative value with a notable person, event, or movement.
- **Archaeological Interest:** the potential of the physical remains to yield evidence of past human activity and the interest in carrying out an expert investigation at some point in the future, and may apply to standing buildings or structures as well as buried remains. This includes above-ground structures and landscapes, earthworks and buried or submerged remains, palaeoenvironmental deposits, and takes into account date; rarity; state of preservation; diversity/complexity; contribution to published priorities (research value); supporting documentation; collective value and comparative potential, and sensitivity to change.
- **Architectural and Artistic Interest:** derive from a contemporary appreciation of an asset's aesthetics. The former is associated with the art or science of design, construction, craftsmanship and decoration of

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buildings and structures. The latter is derived from creative expression which might use, represent or influence historic places or buildings through art (contributing to their significance through their association with art), as well as the meaning, skill and emotional impact of works of art that are either part of heritage assets or assets in their own right.

- 4.5.2** These values encompass the criteria that Historic England are obliged to consider when statutorily designating heritage assets. There is no single defining criteria that dictates the overall asset significance; each asset has to be evaluated against the range of criteria listed above on a case by case basis. Unless the nature and exact extent of buried archaeological remains within any given area has been determined through prior investigation, significance is often uncertain.

## **4.6 Assessment Criteria**

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- 4.6.1** The importance/sensitivity of heritage asset will be assessed on a six-point scale, in adherence to DMRB (Ref. 9) Annexes 5, 6 and 7. The assessment of the importance/sensitivity of heritage assets will be based on professional judgment using experience of similar schemes and guided by the criteria set out in Table 4.2.



*Table 4.2: Criteria to Assess the Value of Heritage Assets*

Heritage Asset Description	Significance
<ul style="list-style-type: none"> <li>• World Heritage Sites</li> </ul>	Very High
<ul style="list-style-type: none"> <li>• Scheduled Monuments</li> <li>• Grade I Listed buildings</li> <li>• Grade II* Listed buildings</li> <li>• Other listed buildings which can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade.</li> <li>• Conservation Areas containing buildings of great importance</li> <li>• Undesignated structures of clear national importance.</li> <li>• Undesignated below ground heritage assets of clear national importance</li> </ul>	High
<ul style="list-style-type: none"> <li>• Grade II Listed Buildings</li> <li>• Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations</li> <li>• Conservation Areas containing buildings that contribute significantly to its historic character</li> <li>• Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings</li> <li>• Known buried heritage assets of regional importance</li> </ul>	Medium
<ul style="list-style-type: none"> <li>• Locally Listed buildings</li> <li>• Historic (unlisted) buildings of modest quality in their fabric or historical association.</li> <li>• Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings</li> <li>• Known buried heritage assets of local importance</li> </ul>	Low
<ul style="list-style-type: none"> <li>• Buildings of no architectural or historical note; buildings of intrusive character</li> </ul>	Negligible



Heritage Asset Description	Significance
<ul style="list-style-type: none"> <li>• Buildings with some hidden (i.e. inaccessible) potential for historical significance</li> <li>• Unknown buried heritage assets</li> </ul>	Uncertain

**4.6.2** The assessment of the magnitude of impact (i.e. change) is the identification of the degree of the effect of the Scheme on the heritage assets. There is no standard scale of comparison against which the severity of effects on heritage assets may be judged, because of the great variety of resources and assets. The assignment of a magnitude of impact is a matter of professional judgement (Table 4.3).

*Table 4.3: Magnitude of Impact Criteria*

Impact	Description
<b>Major</b>	<ul style="list-style-type: none"> <li>• Change to most or all key archaeological materials or key historic building elements, such that the resource is totally altered.</li> <li>• Comprehensive changes to setting.</li> </ul>
<b>Moderate</b>	<ul style="list-style-type: none"> <li>• Changes to many key archaeological materials or key historic building elements, such that the resource is clearly modified.</li> <li>• Considerable changes to setting that affect the character of the asset.</li> </ul>
<b>Minor</b>	<ul style="list-style-type: none"> <li>• Changes to key archaeological materials or key historic building elements, such that the asset is slightly altered.</li> <li>• Slight changes to setting.</li> </ul>
<b>Negligible</b>	Very minor changes to archaeological materials or historic building elements or setting.
<b>No Change</b>	No change.

**4.6.3** The significance of effect on designated and non-designated heritage assets has been derived from a consideration of the sensitivity/value of the receptor and the magnitude of the impact upon it, as illustrated by the matrix presented in Table 4.4.

**Table 4.4: Impact Vigilance**

		Magnitude of Impact				
		Major	Moderate	Minor	Negligible	No Change
Value	Very High	Very Large	Large/Very Large	Moderate / Large	Slight	Neutral
	High	Large/Very Large	Moderate / Large	Moderate / Slight	Slight	Neutral
	Medium	Moderate/ Large	Moderate	Slight	Neutral / Slight	Neutral
	Low	Slight / Moderate	Slight	Neutral / Slight	Neutral / Slight	Neutral
	Negligible	Slight	Neutral / Slight	Neutral / Slight	Neutral	Neutral
	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

#### 4.7 Assessing the Contribution of Setting to the Significance of Heritage Assets

4.7.1 The definition of setting used here is taken from the NPPF (Ref. 5) and NPS NN footnote 96 (Ref. 1) as ‘the surroundings in which an asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral’. Historic England’s guidance (Ref. 12) considers that the importance of setting lies in what it contributes to the significance of the heritage asset. This depends on a wide range of physical elements within, as well as perceptual and associational attributes pertaining to, the heritage asset’s surroundings.

4.7.2 Historic England discusses several other general considerations including: cumulative change; change over time; appreciating setting; buried assets and setting; designated settings; setting and urban design; and setting and economic and social viability and has provided a stepped approach to the assessment and importance of setting to heritage assets. The guidance has been used to adopt a stepped approach for settings assessment, which is summarised below and presented in detail in Annex B.

- Step 1: asset identification. The NPS NN and NPPF requires an approach that is proportional to the significance of the asset, and for this reason only the settings of the most sensitive (i.e. designated) heritage assets are considered in this assessment. A scoping exercise filters out

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those assets which would be unaffected, typically where there are no views to/from the site.

- Step 2: assess the contribution of setting. This stage assesses how setting contributes to the overall significance of a designated asset.
- Step 3: assess change. This considers the effect of the proposals on asset significance due to a change in the setting. It is noted however that it can be difficult to quantify such change to the overall significance of a designated heritage asset (for example, significance would rarely be downgraded from 'high' to 'medium' due to changes in setting). For this reason, the impact is reported in this assessment in terms of the extent to which the proposals would change how the asset is understood and experienced (i.e. substantial harm, less than substantial harm).
- Step 4: mitigation. This explores the way to maximise enhancement and avoid or minimise harm. This is typically considered at the design stage (i.e. embedded design mitigation).
- Step 5: reporting. Making and documenting decisions and outcomes. This reports the assessment of effects.

**4.7.3** Assessment of the contribution of the setting to the value and the asset and the sensitivity is based on a five-point scale: Very Substantial, Substantial, Moderate, Minor and Negligible. The assessment of the level of harm on the asset's setting is determined by the degree of change to the elements of the setting which positively contribute to the assets value.

## **4.8 Assessment of Harm**

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**4.8.1** The NPS NN and NPPF outline the requirement to assess the magnitude of harm on the historic environment resulting from a development (see Section 3.2 above). Substantial harm to or loss of a Grade II Listed Building or a Grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, Grade I and II\* Listed Buildings, Registered Battlefields, and grade I and II\* Registered Parks and Gardens should be wholly exceptional.

**4.8.2** Justification for any harm should be clear and convincing. Where any harm to the significance of a designated heritage asset would be less than substantial, the harm should be weighed against the public benefits of the proposal. Proposals involving substantial harm to (or total loss of) significance should be refused unless it can be demonstrated that the harm or loss is necessary to achieve substantial public benefit that outweighs that harm or loss.

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- 4.8.3** Guidance for the assessment for substantial harm is provided in National Planning Policy Guidance 2014 *Conserving and Enhancing the Historic Environment*. This states that the assessment of magnitude of harm is determined by the impact of the development on the value and significance of the heritage asset. The value of the asset is drawn from its architectural, historic, archaeological, and artistic interest, and also by the contribution of the asset's setting.
- 4.8.4** The assessment of the magnitude of harm is not dependent on overall value or importance of the heritage asset but reflects the magnitude of impacts on those elements which contribute to the asset's importance. The magnitude of harm is based on professional judgement but must take into account the policies set out in NPS NN and NPPF. An assessment of harm is expressed on a three-point scale: Minor Harm and Harm (both constitute "Less than Substantial Harm") and Substantial Harm. Further guidance for the assessment of harm due to a change in setting is provided in Annex B and in Table B.4.

## **4.9 Limitations and Assumptions**

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- 4.9.1** This assessment draws upon the records held on the National Heritage List for England (NHLE) and Norfolk Historic Environment Record (NHER<sup>1</sup>). The data does not represent a full record of all surviving archaeological receptors, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

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<sup>1</sup> Historic Environment Data was provided digitally by the NHER in May 2018 to support the assessment work. This represents the full and unabridged data.

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## 5 Historic Environment Baseline

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### 5.1 Application Site Location

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5.1.1 The Principal Application Site is located approximately 800m to the south of the town centre of Great Yarmouth (centred at NGR 652469 305894). The Scheme will extend eastwards from the A47, across the River Yare to the Southgate Road. The area on the west side of the River Yare is a mix of residential and commercial properties. The land on the east is an operating port.

5.1.2 The Scheme also the installation of variable message signs at six Satellite Application Sites at the following locations:

- A47 South (NGR 652017 305445);
- Gapton Hall Road (NGR 651519 306413);
- North Quay (NGR 652222 308150);
- Fuller Way (NGR 652289 307983);
- Acle New Road (NGR 651542 308848);
- Yarmouth Way (NGR 652502 307289).

### 5.2 Topography

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5.2.1 The topography of the Principal Application Site is flat and low lying and varies in height from 0 m to 2 m Above Ordnance Datum (AOD). The topography of the Satellite Application Site is summarised below:

- A47 South: 0m AOD
- Gapton Hall Road: -1 m AOD
- North Quay: 2m AOD
- Fuller Way: 8 m AOD
- Acle New Road: - 1 m AOD
- Yarmouth Way: 4m AOD

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## 5.3 Geology

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### Principal Application Site

- 5.3.1 A full description of the geology of the Principal Application Site is described and presented in Wessex Archaeology 2018 borehole log review and deposit modelling report (Ref. 14). The following is a summary of that information.
- 5.3.2 The Principal Application Site is situated on bedrock geology of the Crag Group - Sand and Gravel. This is a sedimentary bedrock that formed approximately 5 million years ago in the Quaternary and Neogene periods. The local environment was previously dominated by shallow seas. These rocks were formed in shallow seas with mainly siliciclastic sediments (comprising of fragments or clasts of silicate minerals) deposited as mud, silt, sand and gravel.
- 5.3.3 The Principal Application Site contains multiple superficial geological deposits. Deposits on the eastern bank of the River Yare consist of clays and silts of the Breydon Formation and sands and gravels of the North Denes Formation. The eastern bank has deposits of sand of the Happisburgh Glacigenic Formation, peat of the Breydon Formation and clays and silts, also of the Breydon Formation. The River Yare itself flows over deposits of clay and silt (Ref. 15).

### Satellite Application Sites

- 5.3.4 The underlying solid geology at the Satellite Application Sites is the Crag Group - Sand and Gravel. The superficial deposits sealing the solid geology varies across the Satellite Application Sites. At the A47 South, it is overlaid by Breydon Formation – Peats and at Gapton Hall Road and Acle New by Breydon Formation Clay and Silts. At Fuller Way and Yarmouth Way, the superficial deposits are recorded as Blown Sand, and at North Quay as North Denes Formation – Sand and Gravel (Ref. 15).

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## 5.4 Overview Heritage Assets

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### Historic Environment Gazetteer

- 5.4.1 A gazetteer of all heritage assets within the Study Area is presented in Annex A. The gazetteer includes the asset name, its designation, a description of the asset and the location. It also presents the value of the asset, a summary of the potential impacts and effects as a result of the Scheme, and highlights those where further archaeological mitigation is required.
- 5.4.2 The contents of the gazetteer have been drawn from the Historic England's NHLE (pre-fixed by NHLE) and from NHER (pre-fixed by NHER). It also

includes heritage assets identified during the preparation of this report (pre-fixed by WSP).

### Designated Heritage Assets

- 5.4.3 No World Heritage Sites, Registered Battlefields, Registered Parks or Gardens or Protected Wreck sites have been identified within 1km of the Principal Application Site or 250m of the Satellite Application Sites.

#### Principal Application Site

- 5.4.4 The Grade II listed Dolphin Public House (NHLE 1096829), an early 20th century building, is located adjacent to the Principal Application Site. The Scheme would therefore have no direct physical impacts Dolphin Public House.

- 5.4.5 Designated heritage assets in the wider (1km) Study Area consist of:

- Four Scheduled Monuments:
  - Town Walls (NHLE 1003782);
  - Nos 6, 7, and 8, Row 111 South Quay (NHLE 1003958, and also Grade II Listed Building NHLE 1245916);
  - Merchant's House, Row 117, South Quay (NHLE 1004020, see also Grade II\* below); and
  - Greyfriars Franciscan Friary (NHLE 1017910).
- Four Grade I Listed Buildings:
  - The Tollhouse (NHLE 1245560);
  - Remains of the Church of the Greyfriars (NHLE 1245915);
  - St Georges Theatre (NHLE 1245919); and
  - Nelson's Monument (NHLE 1246057).
- Eight Grade II\* Listed Buildings:
  - Great Yarmouth Potteries (NHLE 1245561);
  - Custom House (NHLE 1245800);
  - 25, South Quay (NHLE 1245803);
  - Old Merchant House (NHLE 1245917, see also Scheduled Monument above);
  - The Hippodrome (NHLE 1245922);
  - St Nicholas Hospital Main Entrance Range (NHLE 1245984);
  - Old White Lion Public House (NHLE 1271278); and



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- The Winter Gardens (NHLE 1271608).
  - 102 Grade II Listed Buildings, including:
    - Hotels and Public Houses;
    - Residential properties;
    - Churches;
    - Public and Leisure facilities; and
    - Industrial buildings.
  - Six Conservation Areas:
    - Camperdown;
    - Gorleston Extension;
    - King Street;
    - Seafront;
    - Hall Quay and South Quay; and
    - St George's.

#### Satellite Application Sites

- 5.4.6 There are no designated heritage assets located within the Satellite Application Sites and none are located within a 250m of the Satellite Application Sites on A47 South, Gapton Hall Road and Acle New Road.
- 5.4.7 There are 25 designated heritage assets within 250m of the of the Satellite Application Sites on North Quay. They comprise:
- One Scheduled Monument:
    - Medieval Town Walls (NHLE 1003782).
  - One Grade I Listed Building:
    - St Nicholas (priory) Middle School (NHLE 1245978).
  - Two Grade II\*Listed Building:
    - Vicarage (NHLE 1096809); and
    - Church of St Nicholas (NHLE 1096813).
  - 21 Grade II Listed Buildings
- 5.4.8 There are 37 designated heritage assets within 250m of the of the Satellite Application Sites on Fuller's Way. They comprise:



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- One Scheduled Monument:
    - Medieval Town Walls (NHLE 1003782).
  - Two Grade I Listed Building:
    - Fishermens Hospital Including Gate Piers and Railings (NHLE 1096820); and
    - St Nicholas (priory) Middle School (NHLE 1245978).
  - Two Grade II\* Listed Building:
    - Vicarage (NHLE 1096809); and
    - Church of St Nicholas (NHLE 1096813).
  - 32 Grade II Listed Buildings.

**5.4.9** There are 80 designated heritage assets within 250m of the of the Satellite Application Sites on Yarmouth Way. They comprise:

- Three Scheduled Monuments
  - Medieval Town Walls (NHLE 1003782);
  - Greyfriars Franciscan Friary (NHLE 1017910); and
  - Nos 6, 7 and 8 and Row 111, South Quay (NHLE 1003958).
- Four Grade I Listed Building:
  - The Tolhouse (NHLE 1245560);
  - Remains of The Church of The Greyfriars (NHLE 1245915);
  - St Georges Theatre (NHLE 1245919); and
  - 4, South Quay (NHLE 1271611).
- Five Grade II\* Listed Building:
  - Custom House (NHLE 1245800);
  - Old Merchants House (NHLE 1245917);
  - 25, South Quay (NHLE 1245803);
  - Town Hall (NHLE 1246969); and
  - Old White Lion Public House (NHLE 1271278).
- 68 Grade II Listed Buildings

**5.4.10** The Satellite Application Sites on North Quay and Fuller Way are located in the St Nicholas and Northgate Conservation Area. The Satellite Application on Yarmouth Way lies between the King Street and the Hall Quay South Quay Conservation Areas.

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## Non-designated Heritage Assets

### Principal Application Site

- 5.4.11** There are 122 non-designated heritage assets recorded on the NHER in the 500m study area (see Figure 2). The vast majority of these assets in the Study Area represent World War II structures, camps and bomb crater sites, with the remaining sites comprising finds and structures which reflect the important Naval and shipping history of the town. The majority of the remaining recorded assets date to the post medieval period. Within the wider study area there is evidence of buried urban and riverfront remains dating to the Medieval period, as well as a single find-spot of a Neolithic scraper (HER 12936).
- 5.4.12** The assessment has identified fifteen additional non-designated heritage assets within and immediately around the Principal Application Site based on an assessment of historic mapping and completion of the site walkover. On the east side of the scheme they relate to the historic Fish Wharf area (WSP01, WSP09 and WSP10), while on the west they are 19<sup>th</sup> century residential properties (WSP03 to WSP08, WSP11 to WSP13, WSP15), a former Maltings building (WSP02) and the site of early 20<sup>th</sup> century timber yard and saw mill (WSP14).
- 5.4.13** A total of 17 non-designated heritage assets (below and above ground) lie within the Proposed Scheme:
- Site of late 19th century icehouse and three salt stores (HER 55685);
  - Site of late 19th century Fish Wharf (WSP10);
  - Site of wharf side buildings (WSP09);
  - The Site of three buildings on west side of Southtown Road (WSP11, WSP12 and WSP13);
  - Site of Marsh House (WSP15);
  - The Route of Norfolk and Suffolk Joint Railway (HER 13575);
  - Routes of Great Yarmouth urban railways (HER 13576);
  - Site of a 20th century timber yard and saw mill (WSP15);
  - Site of World War II defences (HER 27697);
  - Site of World War II craters (HER 27700, 43589, and 43741);
  - Site of World War II anti invasion defences at Southtown (HER 42355 and 42353); and
  - Site of World War II road blocks (HER 43304).

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### Satellite Application Sites

**5.4.14** There are 111 non-designated assets within 250m of the Satellite Application Sites. Six non-designated heritage assets are located within the Satellite Application Sites or immediately adjacent to them. They comprise:

- A47 South:
  - World War II Light Anti-Aircraft Battery (HER 19084).
- North Quay:
  - Post-medieval fish curing buildings (NHER 55641); and
  - Medieval to post-medieval houses (NHER 13371).
- Fullers Way:
  - Post-Medieval wells and an oven (NHER 4278).
- Acle New Road:
  - World War II crater (NHER 27628); and
  - World War II road block (NHER 27630).

## **5.5 Archaeological and Historical Background**

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### **Introduction**

**5.5.1** The archaeological and historic background is based on a review of the data provided by the NHER, information held by the Norfolk Archives and from a review of secondary sources. It is focussed on the Principal Application Site as this represents the main area of potential impact on the historic environment. A description of the archaeological remains recorded in the Satellite Application Sites and the 250m Study Area is provided in Section 5.5.29 to 5.5.42 below.

### **Prehistoric Period (800,000 BC–AD 43) and Roman (ad43 – 410)**

**5.5.2** A deposit model for soils in Great Yarmouth has been created by the Great Yarmouth Archaeological Map project using data from 142 boreholes which were drilled by the Norfolk County Laboratory. The model shows that the area where Great Yarmouth now stands started out as the mouth of a large estuary. Since the last Ice Age, a south bound current has laid a spit of sand across the north of the estuary, from the north end to the south. The sand spit blocked off the estuary, leading to the formation of the peat in the Broads. The sand spit was breached by the sea, and left as either a low tidal island or a shoal until about 1300 years ago, gradually rising to become permanently dry.



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- 5.5.3 Evidence for human activity dating to the Palaeolithic period has been recorded along the Norfolk coast line. Dredging activity off the coast at Great Yarmouth has recovered numerous objects from the Palaeolithic, including handaxes and mammoth teeth (NHER 51516) and a flint handaxe was found in Caister on Sea in 1993, approximately 6km north of the Principal Application Site (NHER 30179).
- 5.5.4 The Mesolithic landscape saw the gradual rise in temperatures and an increase in woodlands. The landscape was populated by transient hunter-gather groups, and evidence for their presence in the archaeological record is represented by flint finds. The Neolithic and Bronze Age periods saw the gradual reduction in the woodlands, following the introduction of farming and increase in permanent settlement sites. The Neolithic and Bronze Age is also characterised by the use of funerary monuments, such as barrows, however the Iron Age saw a decline in their use. The Iron Age saw the continued rise of permanent settlement sites, and by the end of this period England was divided into different a series of different territories, with Great Yarmouth lying in the territory held by the Iceni.
- 5.5.5 After the Roman invasion of *Britannia* in AD43, the Iceni were initially allowed to maintain control of their territory. Following the uprising led by Boudicca in AD 61, however, the kingdom was annexed and the area brought under Roman control. An administrative centre to control this territory was established at Caistor St Edmund (*Venta Icenorum*), approximately 30km west of Great Yarmouth, to the south of Norwich.
- 5.5.6 There is very little evidence for settlement activity around the Principal Application Site in this period. The only evidence currently for prehistoric activity in Great Yarmouth is provided by a single find of a Neolithic scraper (NHER 12936), recovered at the junction of Boundary Road and Suffolk Road, adjacent to the Principal Application Site.

### Medieval (AD 410-1540)

- 5.5.7 The inclusion of Great Yarmouth (then known just as Yarmouth) in the Domesday Book of 1086 indicates the presence of a settlement here prior to the Norman conquest. Excavations have identified Fuller's Hill, located approximately 2km north of the Principal Application Site, as the likely location of the later Saxon settlement (e.g. NHER 32585).
- 5.5.8 The Domesday Book records that Yarmouth formed part of the manor of Gorleston and prior to the 1066 was held by Earl Gryth, a prominent land owner in both Norfolk and Suffolk in the late Anglo-Saxon period. Yarmouth also had a Church, held by Bishop Almer. Following the Norman Conquest, the manor passed to the King, and it is described as having 70 burgesses and 24 fishermen.

**5.5.9** In 1208, Great Yarmouth received its town charter and the settlement expanded rapidly. The economy of the town was driven by fishing, and by the end of the 13<sup>th</sup> century, three ecclesiastical centres had been established within the town, including the Dominican or Blackfriars Friary, located approximately 450m north of the Principal Application Site (NHER 4266). The extent of the medieval town is represented by the well-preserved remains of the defence walls (NHLE 1003782) which is designated as a Scheduled Monument. Construction of the walls began in the late 13<sup>th</sup> century, although they have been subjected to periodic remodelling, including during the refortification of the town in the 17<sup>th</sup> century during the Civil War.



*Plate 5.1: Surviving Section of Town Walls Scheduled Monument (NHLE 1003782)*

**5.5.10** The Principal Application Site is located approximately 450m south of the medieval town, and the construction of the walls in the 13<sup>th</sup> century meant that the town remained contained within the limits of the walls throughout the period. There are, therefore, few medieval remains recorded within the Study Area relating to the town. However, just outside the 500m study area, within the medieval walled town area, the remains of boats have been found on a buried shoreline at around 3m below the current ground level. An old landing place was also recorded below the Town Hall site in 1887. This suggests that buried medieval deposits may survive deep below the current ground level on either side of the River Yare within the study area.

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- 5.5.11** Settlement was not just limited to the walled town in the medieval period. A settlement known as Southtown was established at some point in the medieval period, on the western side of the River Yare (Ref. 16). Approximately 250m to the south of the Principal Application Site are the remains of the house of the Austin Friars comprising a church, priory and leper hospital located on Burnt Lane (NHER 60531). This friary was founded in the 13th century, although the earliest known buildings date to the 15th century. Much of the priory has now been destroyed, although the west gate is recorded to have still been standing up to the beginning of the last century. Remains from the structures have been recovered from the surrounding area, and some of the building materials have been re-used.
- 5.5.12** In 2013, a watching brief revealed beam slots and post holes associated with a late medieval timber-framed building located on Burnt Lane (NHER 60518). Finds recovered from these features included late medieval brick, roof tile and wall plaster that could be high status.
- 5.5.13** Further evidence for activity outside of Great Yarmouth is also provided by the discovery of pottery sherd during a pipeline work, approximately 300m to the north (NHER 21361).
- 5.5.14** By the early 14<sup>th</sup> century, Great Yarmouth and the surrounding area was thriving economically, driven largely by the port and the fishing industry. A combination of adverse climate change and the Black Death in the later 14<sup>th</sup> century resulted in rapid fall in the population living in Great Yarmouth. The decline continued into the 15<sup>th</sup> century with the dissolution of the monasteries and increased competition from the Netherlands on the fishing industry. The remaining population also struggled to manage the harbours, meaning that access to them was limited.

### **Post-Medieval Period (AD 1540 – 1900)**

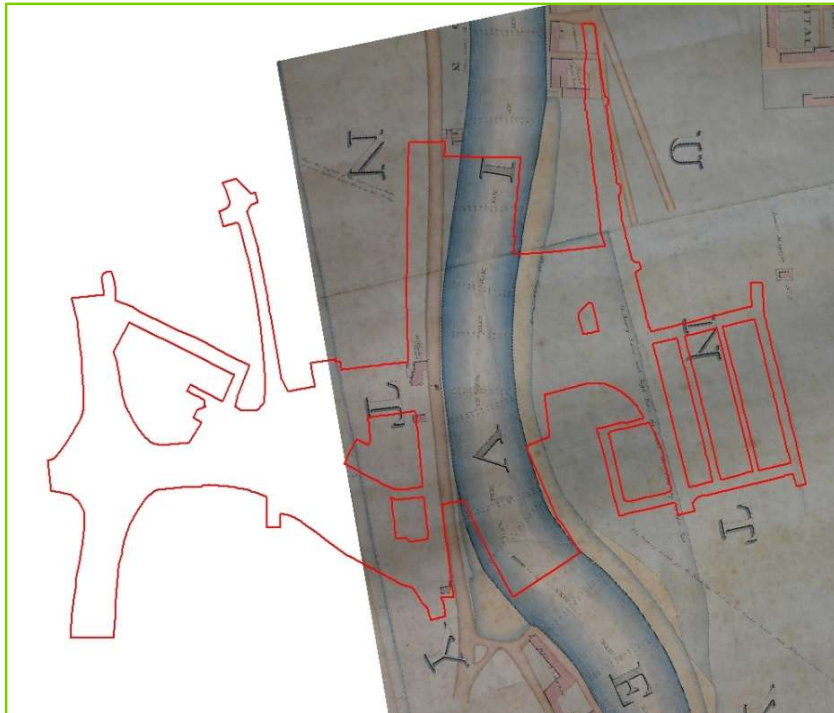
- 5.5.15** The settlement of Great Yarmouth underwent a period of significant redevelopment in the 16<sup>th</sup> century, with the creation of a new harbour and the creation of many new domestic dwellings within the town. Outside of walled town, Southtown had become part of the parish of Gorleston in the early 16<sup>th</sup> century, and the church and administration of the parish was based in the settlement of Gorleston. In mid-17<sup>th</sup> century, proposals were presented to incorporate Southtown into Great Yarmouth, and a description of the settlement taken at the time describes it as *“convenient for merchants of all sorts, coopers, fishermen, ship-carpenters, firkin makers, ship-chandlers, sail makers, curers of red herrings, curers of white herring, coal and wood mongers, pully makers, cable makers, smiths or any other trades, which do particularly belong to navigation”* (Ref. 16).
- 5.5.16** Southtown was eventually taken into the Borough of Great Yarmouth in 1681, and Southtown Road, which runs along the west side of the River



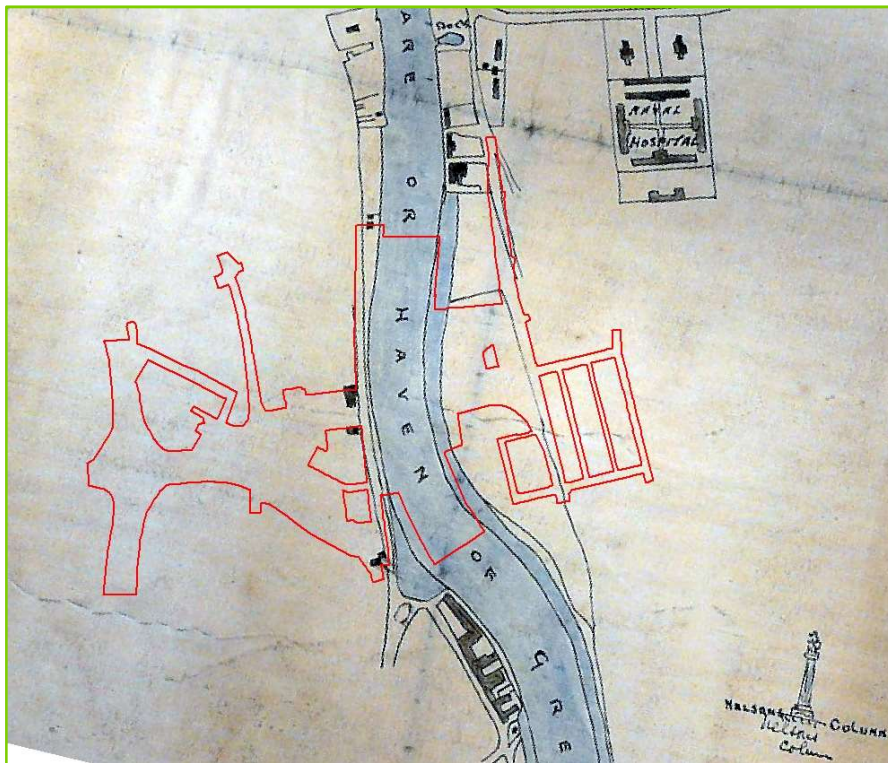
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Yare to Gorleston, through the Principal Application Site, was turnpiked in 1775. The first houses were built along Southtown Road soon after. The first shipbuilding yard is recorded in Southtown in 1782, and grew to be an important part of the local economy in the 18<sup>th</sup> and 19<sup>th</sup> centuries. The settlement at this time was focussed around the Haven Bridge crossing, approximately 1km to the north of the Principal Application Site (Ref. 16).

- 5.5.17** The east side of the Principal Application Site lay in the area known as South Denes, which was occupied by a Naval base up until the mid in the mid-18<sup>th</sup> century. The early 19<sup>th</sup> century mapping shows the spit of land to the east of the river south of Great Yarmouth as forming the naval base, with a number of military structures along the coastline, including the site of the South Star Battery (NHER 4238) approximately 250m to the east of the Principal Application Site. Other elements in the Study Area associated with the Naval base are the Grade I Listed Nelsons Monument (NHLE 1246057), also known as the Norfolk Pillar, and the Grade II\* and Grade II buildings forming St Nicholas Hospital, located 350m north-west (Main Entrance Range (NHLE 1245984) Main Block (NHLE 1245983), walls and railings (NHLE 1245986) and South Block (NHLE 1245985)). The Naval hospital was built for casualties from the North Sea squadron in the Napoleonic War, with the entrance range comprising guard rooms, an archway and service rooms. The main block became a naval barracks in 1818 and subsequently a general hospital.
- 5.5.18** The majority of the assets in the non-designated Study Area relate to the post-medieval period, primarily the late 18<sup>th</sup> to 19<sup>th</sup> century, and include villas and a lodge, both mileposts and boundary posts and two churches. There are also industrial areas with railways, a coal power station, gas works, potteries, fish curing works, workshop ranges, utility blocks and a rope walk. The early 19<sup>th</sup> century mapping suggests that the Principal Application Site lay outside the main areas of settlement of Southtown and Great Yarmouth. The earliest plans examined date to 1818 (Figure 5.2) and 1850 (Figure 5.3) and show three buildings on the west side of Southtown Road (WSP11, WSP12 and WSP13). No features are shown on the east side of the Principal Application Site, although the location of the Naval hospital and Battery are shown.



*Plate 5.2: Extract of Plan of Great Yarmouth, 1818*



*Plate 5.3: Extract from a Plan of Great Yarmouth, c. 1850*



5.5.19 Proposals to develop the east side of the Principal Application Site as Fish Wharf (WSP10) began in the mid-19<sup>th</sup> century and a plan held by the Norfolk Archives from 1866 show how the area was to be set out (Plate 5.4). This included three covered markets structures along the river side. To the east of the markets, ran the urban tramway (NHER 13576), and then a set of areas earmarked for “*swills and packages*”. The northern plot is marked as “*site of Refreshment Room*”, which later was occupied by the Dolphin Public House (NHLE 1096829). East of these, the land was divided into 39 plots to be let as fishing trade premises.

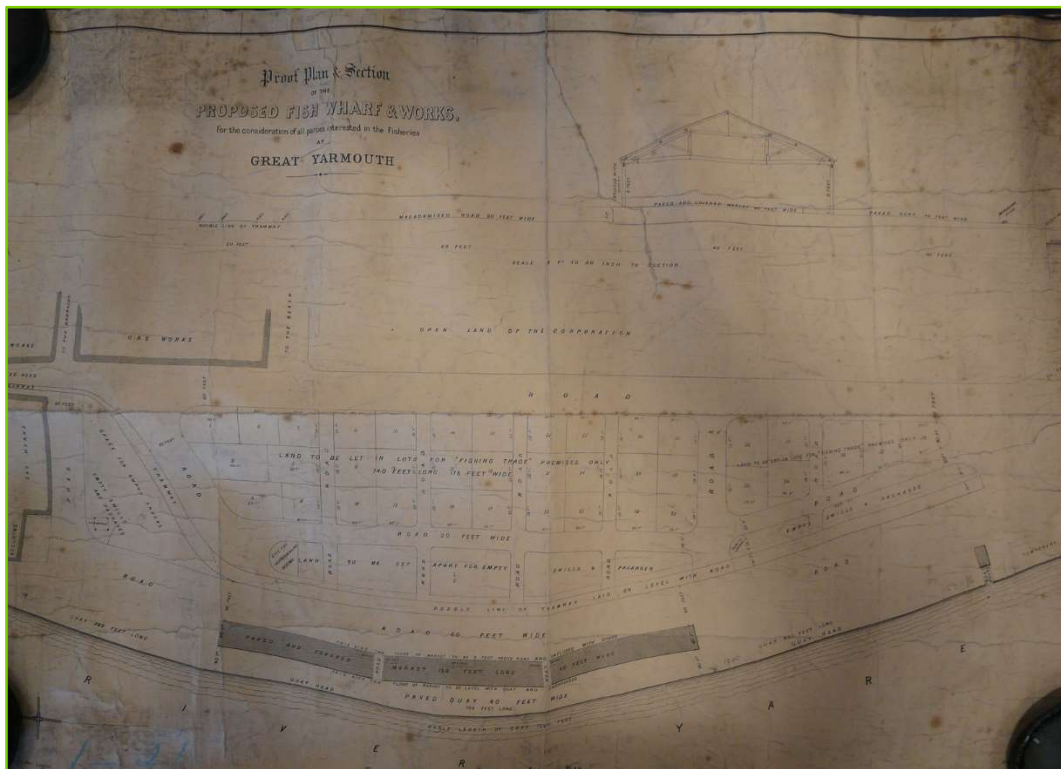
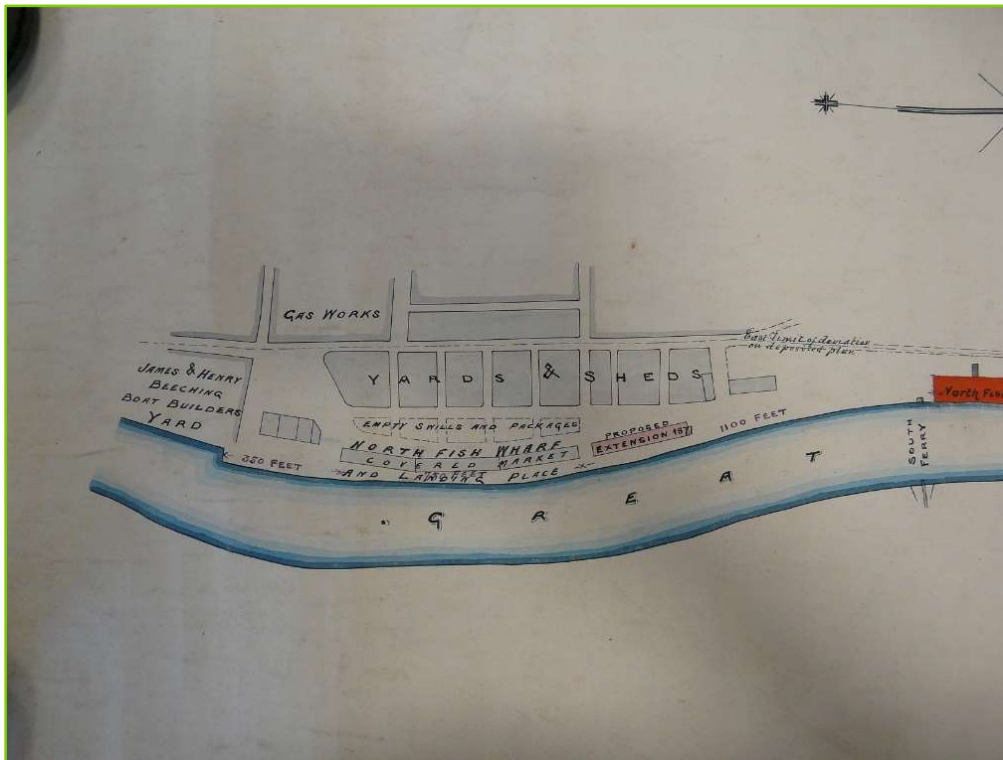


Plate 5.4: Proof Plan and Section of the Proposed Fish Wharf and Works 1866 (Norfolk Archives Ref. Y/PH 1200)



*Plate 5.5: Early 20<sup>th</sup> Century Image of the Fish Wharfs (Ref. 17)*

**5.5.20** The wharf proved to be a successful development and the main species of fish caught and traded in the wharf was herring (Ref. 17). Possibly as a result of the quick success of the market here, proposals were soon made for an extension of the site, with the addition of another building along the river side, as shown on a plan from 1877 (Plate 5.6). The extension building appears on the 20<sup>th</sup> century mapping and the position relates to a building which is still extant (WSP01).



*Plate 5.6: Teasdel's Plan of the Proposed Extension at Fish Wharfs, 1877 (Norfolk Archive Ref. Y/PH 1255)*

5.5.21 The latter half the 19th century also saw the encroachment of development down Southtown Road (Figure 5.7). On the west side, terraced housing (Brighton Terrace) has been built along Southtown Road, within the Principal Application Site (WSP06). The terraced housing along Southtown Road have a date stone of 1873. Most of the western side of the Principal Application Site occupies fields which are criss-crossed by drainage channels. The map also shows the route of a tramway running north-south along Southtown Road. The site of Marsh House is located at the north-west end of the Principal Application Site (WSP14). Other key features of note on the 1883 map are the Icehouses (NHER 55685), located within the eastern side of the Principal Application Site, and the Gas Works site, located adjacent to the eastern boundary of the Principal Application Site.





*Plate 5.7: 1883 Ordnance Survey Map*



*Plate 5.8: View South Down Southtown Road*

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### Modern Period (Post-1901 Onwards)

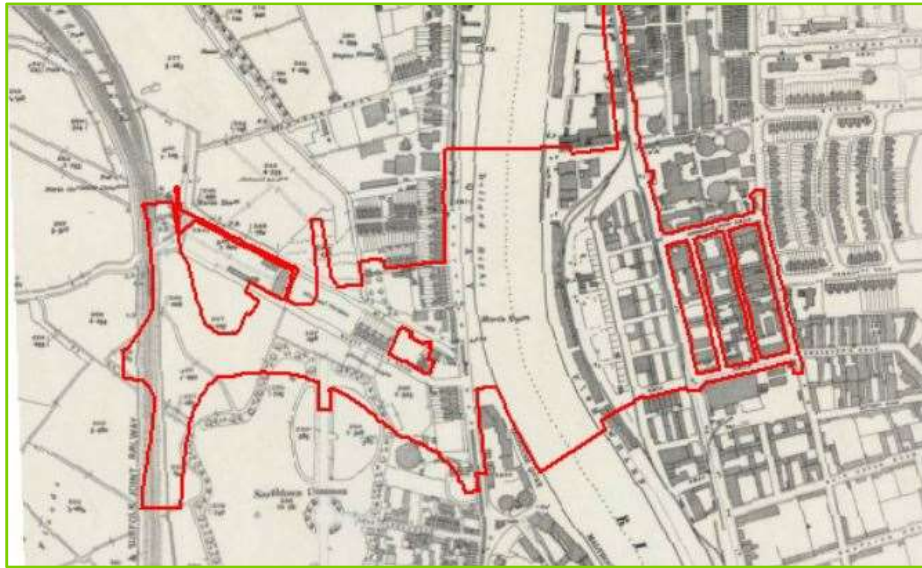
- 5.5.22** In the early 20<sup>th</sup> century, the fishing and maritime industry remained an important part of the local economy, however the development of the railway in the later 19<sup>th</sup> century, which provided improved access the coastline, resulted in the rapid growth of the town as a seaside resort. The early years of the 1900s saw the opening of a number of seafront buildings to provide entertainment to visitors, including the Hippodrome, a revolving tower, cinema, zoo, amusements and the Grade II Wooden Scenic Railway (NHLE 1436976). A 2.5km length of the historic seafront is now designated as a Conservation Area, and the southern boundary is located approximately 500m north-west of the Principal Application Site.
- 5.5.23** The 1906 Ordnance Survey Plan shows the extension has been completed on the Fish Wharfs (WSP01), and the redevelopment of the Gas Works site (Figure 6). The Dolphin Public House (NHLE 1096829) has also been built. The map also shows the continued development within the South Denes area, to the south and east of the Principal Application Site. This includes the site of a Coal Fired Power Station (NHER 55412), to the east of Fish Wharf, which was built in 1894 and remained in use until the late 1950s.
- 5.5.24** To the west, a row of terraced houses (WSP04) and a single detached building (WSP05) have been built on the southside of St Anne's Road (WSP04), while a further set of terraces have been built on the west side of Southtown Road (WSP03). The Midland and Great Northern Joint Railway line (NHER 13581) has opened by this date, and the route of it traverses through the eastern end of the Principal Application Site (now the route of the A47). Much of the Principal Application Site to the west at this time is still open, undeveloped land.



*Plate 5.9: Extract from the 1906 Ordnance Survey Map*

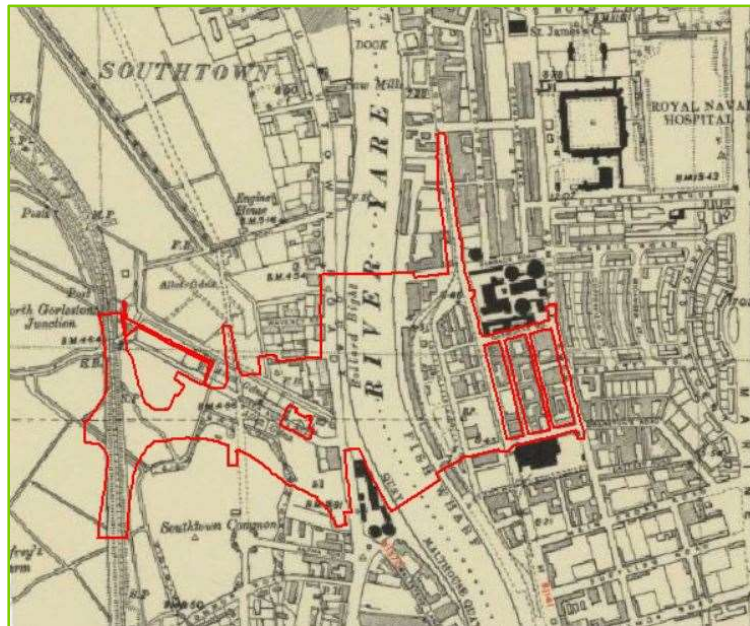
**5.5.25** The 1926 Ordnance Survey Map shows no visible changes within the Principal Application Site boundary. On the east side, the Gas Works have been redeveloped and the Grade II Listed Gas Tower (NHLE 1096789) has been built. The South Denes continues to be developed and there is a mix of residential and industrial buildings shown on the east side of the River Yare.





*Plate 5.10: Extract from the 1926 Ordnance Survey Map*

- 5.5.26** The strategic importance of Great Yarmouth as a port made it a target during World War II and the town suffered extensive bombing by the Luftwaffe. It also suffered as it was the last significant place the German bombers could drop bombs before returning home. The Study Area contains many records of World War II features, including air raid shelters (e. g. NHER 27373, 27375, 27602, 27375, 27387, 27347, 27319, 27679, 27676, 27674, 27673, 27671, 27669, 27695, 27694, 27693 and 43617), anti-aircraft battery (NHER 19084 and 32655), sea front defences (NHER 27645 and 27658), pillboxes (NHER 27364, 32661 and 32661), road blocks (NHER 43304, 27678, 27677, 27675 and 27670), fuel store (NHER 27639), barrage balloon sites (NHER 27363, 27363), and spigot mortar emplacement (NHER 43303). Within the Principal Application Site, there is evidence from aerial photographs for defences within the Fish Wharf in the form of barn wire fencing (NHER 27967) and anti-invasion defences at Southtown in the form of roadblocks (NHER 42353, 42355 and 43304). Most of these features recorded on the NHER have since been demolished, with modern development having removed all trace. The NHER also records the locations on bomb craters, three of which are located within the Principal Application Site (NHER 27700, 43589 and 43741).
- 5.5.27** The 1946 Ordnance Map (Figure 5.11) shows few visible changes within the Principal Application Site. Marsh House has been demolished (WSP14) and allotment gardens have been established to the west of Southtown Road. To the east, development southwards along South Denes has continued.



*Plate 5.11: Extract from the 1946 Ordnance Survey Map*

**5.5.28** During the later 20th century, the Fish Wharfs underwent redevelopment and the majority of the buildings established here from the later 19th century have been removed. Surviving elements include the Dolphin Public House (NHLE 1096829) and the 1877 extension (WSP01). On the west side, the main developments have been the infilling of open areas with domestic, commercial and industrial buildings, the closure of the Midland and Great Northern Joint Railway line (NHER 13581) and the building of the A47, William Adams Way and the roundabout junction.

### Satellite Application Sites

#### Introduction

**5.5.29** A summary of the heritage assets located within the 250m study area of the Six Satellite Application Sites for proposed VMS locations is presented below. They are discussed below by area and the key heritage assets are identified.

#### A47 South

**5.5.30** One non-designated heritage asset lies within the Satellite Application Site on the A47 South. This is a World War II Light Anti-Aircraft Battery (HER 19084). Further World War II sites are located around the VMS and include four air raid shelters between 200m and 250m to the east (NHER 43597, 43595 4359 and 43300), an emergency water supply tank 200m to the east (NHER 43312), a pillbox site immediately to the west (NHER 19949), a road block approximately 130m south-west (NHER 27570) and a bomb crater approximately 60m north (HER 27663).





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- 5.5.31 No designated heritage assets lie within 250m of the Satellite Application Site on the A47 South.

Gapton Hall Road

- 5.5.32 Non-designated assets identified around the Satellite Application Site on Gapton Hall Road comprise of the site of 19th century drainage mill, located 175m south-west (NHER 34996), probable post-medieval drains 140m south-west and 20m west (NHER 43474 and 43475), the route of the East Suffolk Railway 30m east (NHER 13574) and Midland and Great Northern Joint Railway 100m north-east (NHER 13581) and five World War II sites (railway block (NHER 42519), pill box (NHER 32662) structure (NHER 42531), and a bomb crater 175m north (NHER 43470)).

- 5.5.33 No designated heritage assets are recorded within the Satellite Application Site on Gapton Hall Road.

North Quay

- 5.5.34 The Satellite Application Site on North Quay is within the St Nicholas and Northgate Street Conservation Area. Immediately to the north is the Scheduled Monument medieval Town Walls (NHLE 1003782). One Grade I, two Grade II\* and 21 Grade II Listed Buildings lie within the 250m area to the south-east of the Satellite Application Site.

- 5.5.35 One buried non-designated heritage asset is located within Satellite Application Site on North Quay: post-medieval fish curing buildings (NHER 55641). The complex of small houses was demolished between 1945 and 1978. A number of the buildings were surveyed before demolition in the early 1970s. The site of a medieval to post-medieval houses is located adjacent to the Satellite Application Site (NHER 13371).

- 5.5.36 A further 37 non-designated heritage assets located within a 250m Study Area and include the site of Late Saxon settlement at Fuller's Hill, approximately 150m south (NHER 1032, 32585) and the potential site of a Leper Hospital, approximately 150m north (NHER 28934). The remainder relate to medieval and post-medieval occupation and World War Two and Cold War civil defences.

Fuller Way

- 5.5.37 The Satellite Application Site on Fullers Way lies within the St Nicholas and Northgate Street Conservation Area. The Scheduled Monument medieval Town Walls (NHLE 1003782) are located approximately 150m from the Satellite Application Site. Two Grade I, two Grade II\* and 32 Grade II Listed Buildings lie within the 250m area around the Satellite Application Site.

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**5.5.38** 41 non-designated assets are recorded in the 250m Study Area. One is located within the Principal Application Site, at the west end, and comprises Post-Medieval wells and an oven (NHER 4278). The Fullers Hill area is the location of the early medieval settlement and remains dating from the late Saxon have been recovered immediately to the south (NHER 1032, NHER 32585 and NHER 4369). The area is contained within the medieval Town Walls and evidence for medieval and Post-Medieval occupation is recorded throughout the Study Area (e.g. NHER 4277, NHER 4279, NHER 13371 and NHER 4315). The site of a Carmelite Friary lies approximately 250m to the south and the site of St. Mary's Hospital is 250m to the east. Other assets recorded include the route of the of the Great Yarmouth Urban railways (NHER 13576) and assets relating to World War II defences (e.g. NHER 27441, 27442 and 27443).

#### Acle New Road

**5.5.39** Two non-designated heritage assets are located within the Satellite Application Site on Acle New Road: World War II crater (NHER 27628) and a World War II road block (NHER 27630). A further 10 are recorded within the 250m Study Area and comprise the medieval route way known as Paddys Locke, approximately 200m to the north (NHER 4324), a find spot of medieval pottery approximately 200m to the west (HER 34044), the site of a post-medieval sheep fold approximately 250m to the north (HER 43692), Acle Straight Toll Road to the south (NHER 59972), the route of the Norfolk Railway approximately 75m south (NHER 13571) and five World War Two sites (NHER 27625, NHER 27626, NHER 27629, NHER 27627 and 27631).

**5.5.40** No designated heritage assets are located within the 250m study area.

#### Yarmouth Way

**5.5.41** The Satellite Application Site on Yarmouth Way lies between the King Street and the Hall Quay South Quay Conservation Areas. There are three Scheduled Monuments located in proximity: Medieval Town Walls (NHLE 1003782); Greyfriars Franciscan Friary (1017910); and Nos 6, 7 and 8 and Row 111, South Quay (NHLE 1003958)). Four Grade I, five Grade II\* and 68 Grade II Listed buildings lie within the 250m area around the Satellite Application Site.

**5.5.42** There are 35 non-designated assets within 250m of the Satellite Application Site on Yarmouth Way. The earliest in date is a find spot of Late Iron/Roman date approximately 200m to the north (HER 60006). The remains of a possible Viking Ship are recorded approximately 250m to the south-east (HER 4325). There are several records relating to the medieval occupation here, including the site of Greyfriars approximately 50m to the north-west (HER 4297) and the site of Great Yarmouth Castle approximately 65m north-east. There are numerous find spots of artefacts medieval date and post-

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medieval throughout the 250m Study Area (e.g. HER 4311, HER 30340, HER 4280 and HER 4320). Twelve of the non-designated assets are related to World War Two defences (NHER 27361, NHER 27367, NHER 27366, NHER 27368, NHER 27372, NHER 27531, NHER 27532, NHER 27432, NHER 27589, NHER 27530, NHER 54922 and NHER 54932).

## 5.6 Historic Landscape

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- 5.6.1 There are no designated landscapes within the Principal Application Site. The Satellite Application Sites on North Quay and Fuller Way are located in the St Nicholas and Northgate Conservation Area.
- 5.6.2 Detailed mapping of the Historic Landscape Characterisation (HLC) has been completed for the surrounding area, however does not extend into the Principal or Satellite Application Sites.
- 5.6.3 HLC has been completed for some areas as part of the NCC HER Character Area Report. The study area falls across two different character types, with a linear strip of Coastal - Managed Wetland to the east of the study area. This land was previously Unimproved Intertidal land. There are also small blocks of Coastal - Drained Enclosure to the west, which were previously Coastal - Managed Wetland, Unimproved Marine Marsh or Brackish Fen (Ref. 18).
- 5.6.4 The historic landscape of the study area is dominated by the late 19th and 20th century residential, industrial and commercial townscape, with the largely modern riverfront and harbour. The beach front is very strongly differentiated from the surrounding townscape with its 19th and 20th century leisure and tourist-focused landscape. These combined landscape types illustrate the evolution of Great Yarmouth in the recent past but are not readily indicative of the medieval or early post medieval history of the town. There are some indications of the earlier history of the settlement preserved in the street layout in the northern parts of town around Market Street.
- 5.6.5 The value of the historic landscape is judged to be low to negligible, the magnitude of the effect of the Scheme is considered to be minor and is therefore scoped out for further assessment.

## 5.7 Factors Affecting Survival

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### Introduction

- 5.7.1 Past ground disturbance in the Application Site may have compromised archaeological survival, e.g., building foundations or quarrying, identified primarily from historic maps, site walkover survey, and information on the likely depth of deposits.

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## Predicted Level of Archaeology

### Principal Application Site

- 5.7.2 Based on the information provided from a review of the NHER data and the available mapping, the level of significant archaeological remains at a shallow level (up to 2m deep) is predicted to be low.
- 5.7.3 There is the potential for deeply stratified deposits, which could contain archaeological remains, to be present. This could include waterlogged deposits which have the potential to preserve artefacts which usually degrade in the ground, such as wooden items and materials. This could include features associated with the former marine activity, such as the remains of quays, wharfs, or vessels.
- 5.7.4 A deposit model has been established based on an assessment of 14 boreholes (Ref. 14). The deposit model captures the stratigraphy within 50 m of the present ground level which includes the full depth potentially impacted by pile foundations associated with the bridge structure.
- 5.7.5 Bedrock is expected to be reached at depths greater than 40 m below OD but Crag Group is the dominant geology at depth across the site, with the top of Crag Group deposits present at elevations between -7 and -12 m OD.
- 5.7.6 Within the River Yare channel, Crag is present at, or within 1 m of the river bed. Elsewhere, along the margins of the River Yare, Crag is overlain by up to 15 m of Pleistocene and/or Holocene sediments.
- 5.7.7 Deposits interpreted to be Happisburgh Glacigenic Formation are present on the western side of the River Yare where they appear to thin towards the west from 3.75 m (BH9) to 2.00 m (BH6). They are no longer present west of BH5a. There is a low potential for archaeological deposits in these deposits.
- 5.7.8 Peat deposits of the Breydon Formation (BF-p) are present to the west of BH5a. They are located at elevations between -4 m OD (WS7) and -6.85 m OD (BH2) and reach a maximum depth of -10.35 m OD (BH2). In BH2, there are two discrete beds of peat separated by a thin (0.6 m) lens of alluvium. This is the only location where two discrete peats are identified. There is a potential for the archaeological remains to be sealed by these deposits and for the deposits to contain palaeoenvironmental material
- 5.7.9 Peat is not present in boreholes to the east of the River Yare. Overlying Breydon Formation peat and Happisburgh Glacigenic Formation, are Breydon Formation alluvial sediments (BF-a). These deposits only occur to the west of the River Yare and are not present to the east. The alluvium is extensive and is present between depths of -0.23 m OD (WS3) and -1.95 m OD (BH2), reaching a maximum depth of -10 m OD (BH2). There is a potential for archaeological remains associated with these deposits.

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- 5.7.10** To the east of the River Yare, Crag Group is overlain by deposits interpreted to be part of the North Denes Formation. These deposits are present at elevations between -0.10 m OD (BH18) and -12.60 m OD. North Denes Formation is not present to the west of the River Yare. It appears the river channel limits the extent of these coastal deposits. There is little potential for archaeological remains.
- 5.7.11** Modern Alluvium is present in boreholes located within the River Yare channel and directly adjacent to its margins. Modern Alluvium deposits appear to be thicker on the eastern side of the River Yare where they overlay North Denes Formation. The thickness of Made Ground deposits broadly varies from 0.40 m (WS3) to 3.50 m (BH2). There is a potential for archaeological remains in these deposits.

#### Satellite Application Sites

- 5.7.12** The Satellite Application Sites of Yarmouth Way, Fullers Way and North Quay are located within the historic core of Great Yarmouth, within the area defined by the medieval town walls. There is, therefore, a high potential for the presence of buried archaeological deposits dating from the medieval, post-medieval and modern periods. There is also a potential for early medieval remains around Fullers Way as this is believed to be the site of the pre-Conquest settlement.
- 5.7.13** There is limited potential for archaeological remains at A47 South, Gapton Hall Road and Acle New Road. All these sites lie in low lying areas (between -1m AOD and 1m AOD) which, prior to drainage in the 19<sup>th</sup> century, would have been unsuitable for occupation.

#### **Past Impacts and Archaeological Survival**

##### Principal Application Site

- 5.7.14** The Principal Application Site is located in an urbanised area and it is anticipated the disturbance associated with the development of these areas in the 19<sup>th</sup> and 20<sup>th</sup> centuries will have impacted on any shallow archaeological remains, particularly on the west side of the River Yare. The impacts on the east side of the River Yare, in contrast, could be less as potentially less ground disturbance was required to develop the Fish Wharf.
- 5.7.15** There is a high potential for deeply buried deposits of potential archaeological significance on the west side of the River Yare. There is potential for some of the deeper deposits to preserve waterlogged remains, including wooden remains associated with marine or fishing activities alongside the River Yare and the former medieval shoreline. There is limited potential for deposits within the River Yare itself due to dredging activity or on the eastern side of the River Yare due to the relatively modern date for this land mass.

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### Satellite Application Sites

- 5.7.16** The Satellite Application Sites are located alongside the existing road networks in areas which are likely to have been heavily disturbed throughout the modern era. The disturbance is predicted to be associated with the construction and maintenance of the highways, and the use of the land along the highways for the installation of below ground utilities.

## 6 Assessment of Buried Heritage Assets

### 6.1 Buried Heritage Assets within the Principal Application Site

6.1.1 There is a potential for below ground archaeological remains present within the Application Site to be adversely impacted by the construction of the Scheme through ground disturbance. This could result in the damage or complete, permanent loss of any archaeological assets. The scale of impact will depend on the proportion of the loss of the asset and would range from moderate to major adverse. The significance of effects would be determined by the value of the assets impacted. Assessment of the impact and the effects on buried heritage assets is presented in Section 8.

6.1.2 A total of 125 buried heritage assets are recorded within the 500m Study Area. These comprise one designated heritage asset (Scheduled Monument (Town Wall, NHLE 1003782)), 110 non-designated heritage assets which are recorded on the NHER as monuments or find-spots, and 15 non-designated heritage assets have been identified from historic mapping. A total of 18 assets lie within the Principal Application Site:

- Site of late 19th century icehouse and three salt stores (HER 55685);
- Site of late 19th century Fish Wharf (WSP10);
- Site of wharf side buildings (WSP09);
- The Site of three buildings on west side of Southtown Road (WSP11, WSP12 and WSP13);
- Site of 19th century house (WSP08);
- Site of Marsh House (WSP14);
- The Route of Norfolk and Suffolk Joint Railway (HER 13575);
- Routes of Great Yarmouth urban railways (HER 13576);
- Site of a 20th century timber yard and saw mill (WSP15);
- Site of World War II defences (HER 27697);
- Site of World War II craters (HER 27700, 43589, and 43741);
- Site of World War II anti invasion defences at Southtown (HER 42355 and 42353); and
- Site of World War II road blocks (HER 43304).

6.1.3 The Icehouse and Three Salt Stores (HER 56658), Site of Wharf Side Buildings (WSP09), and Site of Fish Wharf Buildings (WSP09) all relate to the fishing industry and the development of the South Denes area to support



this industry. The remains therefore have historical and archaeological value as evidence for growth, development and subsequent decline of a local economy. Any structural remains found will also have architectural value. Any remains found are likely to be of low value.

- 6.1.4** The historic mapping shows the site of three buildings on Southtown which appear to predate the later 19<sup>th</sup> century expansion into this area (WSP11 to WSP13). The site of a property on the west side of Southtown Road (WSP08) and Marsh House (WSP14) are shown on the 1883 OS map, located at the north-west end of the Principal Application Site, however both had gone by the 1940s. They therefore have the potential to provide archaeological and historical evidence for the nature of land-use and occupation in the area between the settlement cores of Southtown and Gorleston. Any structural remains could potentially have some architectural value too. Any remains identified will likely be of low value.
- 6.1.5** The site of a timber yard and saw mill (WSP15) is shown on the early 20<sup>th</sup> century OS mapping. The site had been removed by the later 20<sup>th</sup> century. There is potential for below ground remains associated with the sheds to be preserved as below ground remains, however due to the modern date they are judged to be of negligible value.
- 6.1.6** The routes of the two urban railways are judged to be of negligible value as they would provide very limited archaeological, historical or architectural information.
- 6.1.7** The World War II defence remains recorded in the site were temporary features and following the end of the war were removed, and no below remains are predicted to survive. Where present, they would be of negligible value. The World War II craters are similarly judged to be of negligible value.

## **6.2 Potential for Currently Unknown Heritage Assets within the Principal Application Site**

- 6.2.1** This section discusses the potential for each chronological period, based on the archaeological and historical background of the area, its geology, topography and hydrology, the likelihood for evidence of past activity, and considering past disturbance which may have affected survival. For example, the site may have high potential for the presence of activity of a particular period, but with low survival. This section also includes professional opinion on the likely heritage significance of such remains, where there is potential for such to be present.

### **Prehistoric and Roman**

- 6.2.2** The potential for below-ground archaeological remains from the Prehistoric and Roman periods is judged to be low due to the limited evidence from this



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period around the Scheme. There is, however, the potential for deeply stratified paleoenvironmental remains associated with these periods.

- 6.2.3 If present, such remains would be of medium or high value, depending on preservation and extent, based on their archaeological value.

### **Medieval and Post-Medieval**

- 6.2.4 The Scheme is located outside of the known medieval settlements of Great Yarmouth and Southtown. The west side of the river lay between the settlements of Southtown and Gorleston and likely formed part of the rural landscape supporting these settlements. There is a potential, therefore, for remains associated with agriculture or maritime activity (including remains of former quaysides, wharfs and potentially vessels) to be present, although the level of impact on any remains from this period from later development is currently unknown. The historic mapping from the early 1800s indicates the presence of up to three buildings alongside Southtown Road, which are replaced by terraced buildings by the late 19<sup>th</sup> century, and it is assumed that any remains have now been destroyed.
- 6.2.5 The east side of the river occupies the area known as South Denes, which formed gradually from a sandbank and remained free from development until the mid-19<sup>th</sup> century, being occupied prior to this by a Naval base.
- 6.2.6 If present, such remains would range from low to high value, depending on preservation and extent, from derived from archaeological and historical interest.

### **Modern**

- 6.2.7 The east side of the river saw rapid development in the later 19<sup>th</sup> century and 20<sup>th</sup> century and now forms a densely occupied residential area. The west side is still an operating wharf, although most of the late 18<sup>th</sup> and early 19<sup>th</sup> century buildings have been removed.
- 6.2.8 Industrial and modern remains would be of negligible to medium value, derived from archaeological and historical interest.

*Table 6.1: Summary of Importance/Sensitivity of Buried Heritage Assets in the Principal Application Site*

Importance/Sensitivity	Buried Assets
Very High/ International	None identified.
High/National	None identified.
Medium/Regional	None identified.
Low/Local	<ul style="list-style-type: none"> <li>● Site of late 19th century icehouse and three salt stores (HER 55685);</li> <li>● Remains of Wharf Side Buildings (WSP09);</li> <li>● Late 19th/early 20th century Fish Wharf (WSP10);</li> <li>● Early 19th century buildings on Southtown Road (WSP11, WSP12 and WSP13); and</li> <li>● Site of 19<sup>th</sup> century Marsh House (WSP14).</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>● The Route of the Norfolk and Suffolk Joint Railway (HER 13575);</li> <li>● Routes of Great Yarmouth urban railways (HER 13576);</li> <li>● Site of a 20<sup>th</sup> century timber yard and saw mill (WSP15);</li> <li>● Site of World War II defences (HER 27697);</li> <li>● Site of World War II craters (HER 27700, 43589 and 43741);</li> <li>● Site of World War II anti invasion defences at Southtown (HER 42355 and 42353); and</li> <li>● Site of World War II road blocks (HER 43304).</li> </ul>
Unknown	<ul style="list-style-type: none"> <li>● Currently unidentified below ground archaeological remains.</li> </ul>

### 6.3 Buried Heritage Assets in Satellite Application Sites

**6.3.1** The Satellite Application Sites on North Quay, Fullers Way and Yarmouth Way are located within the medieval town, as defined by the remain of the town walls. Below ground remains of medieval to post-medieval date relating to occupation are recorded within the Satellite Application Sites on North Quay (NHER 55641 and NHER 13371) and Fullers Way (NHER 4278), and there is a potential for additional remains to be present in both Satellite Application sites, along with the one on Yarmouth Way. There is also a potential for later Saxon remains at Fullers Ways due to its proximity with the site of a Later Saxon settlement. Any remains in these locations are predicted to have been heavily disturbed, however where present could range from low to high value.

- 6.3.2** The site of a World War Two crater (NHER 27628) and road block (NHER 27630) are located within the Satellite Application Site on Acle New Road, and the site of a Light Anti-Aircraft Battery (NHER 19084) are within the A47 South Satellite Application Site. Such remains are judged to be of negligible value and no significant below ground remains are predicted to survive.
- 6.3.3** There is a potential for below ground remains of later post-medieval to modern date within all the Satellite Application Sites. Where present, the remains would be of low to negligible value.

*Table 6.2: Summary of Importance/Sensitivity of Buried Heritage Assets in the Satellite Application Sites*

Importance/Sensitivity	Buried Assets
Very High/ International	None identified.
High/National	None identified.
Medium/Regional	None identified.
Low/Local	<ul style="list-style-type: none"> <li>● Post-medieval fish curing buildings (NHER 55641);</li> <li>● Post-Medieval wells and an oven (NHER 4278); and</li> <li>● Medieval to post-medieval houses (NHER 13371).</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>● World War II Light Anti-Aircraft Battery (HER 19084);</li> <li>● World War II crater (NHER 27628); and</li> <li>● World War II road block (NHER 27630).</li> </ul>
Unknown	<ul style="list-style-type: none"> <li>● Currently unidentified below ground archaeological remains.</li> </ul>

## 7 Assessment of Above-Ground Heritage Assets

### 7.1 Principal Application Site

#### Introduction

**7.1.1** The above ground heritage resource identified for assessment within 1km of the Principal Application Site consists of four Scheduled Monuments, 114 Listed Buildings (three Grade I, nine Grade II\* and 102 Grade II) and six Conservation Areas. Following consultation with the NCC, the following non-designated built heritage assets were included for assessment:

- Potential Fish Wharf 1877 Extension Building (WSP01);
- Late 19th century terraces off Southtown Road (WSP03 to WSP06); and
- Former 19th century maltings (WSP02).

**7.1.2** Table 7.1 below summarises the built heritage resource and its importance/sensitivity. A full list is provided in Annex A. An assessment of the impacts and effects on above ground heritage assets is presented in Section 8.

*Table 7.1: Summary of Above Ground Heritage Assets in 1km Study and Importance/Sensitivity*

Importance/Sensitivity	Above Ground Assets
Very High/ International	None identified
High/National	<ul style="list-style-type: none"> <li>● Scheduled Monuments:                             <ul style="list-style-type: none"> <li>- Town Walls (NHLE 1003782);</li> <li>- Nos 6,7 and 8, Row 111, South Quay (NHLE 1003958);</li> <li>- Merchant’s House, Row 117, South Quay (NHLE 1004020); and</li> <li>- Greyfriars Franciscan friary (NHLE 1017910).</li> </ul> </li> <li>● Grade I Listed Buildings:                             <ul style="list-style-type: none"> <li>- Nelsons Monument (NHLE 1246057);</li> <li>- St Georges Theatre (NHLE 1245919); and</li> <li>- Remains of the Church of the Greyfriars (NHLE 1245915).</li> </ul> </li> <li>● Grade II* Buildings:                             <ul style="list-style-type: none"> <li>- Great Yarmouth Potteries (NHLE 1245561);</li> <li>- Custom House (NHLE 1245800);</li> <li>- 25 South Quay (NHLE 1245803);</li> </ul> </li> </ul>

Importance/Sensitivity	Above Ground Assets
	<ul style="list-style-type: none"> <li>- Old Merchants House (NHLE 1245917);</li> <li>- The Hippodrome (NHLE 1245922);</li> <li>- St Nicholas Hospital Main Block (NHLE 1245983);</li> <li>- St Nicholas Hospital Main Entrance Range (NHLE 1245984);</li> <li>- Old White Lion Public House (NHLE 1271278); and</li> <li>- The Winter Gardens (NHLE 1271608).</li> </ul>
Medium/Regional	<ul style="list-style-type: none"> <li>• 102 Grade II Listed buildings; and</li> <li>• Six Conservation Areas.</li> </ul>
Low/Local	<ul style="list-style-type: none"> <li>• Potential Fish Wharf 1877 Extension Building (WSP01);</li> <li>• Late 19th century terraces (WSP03 to WSP06); and</li> <li>• Former 19<sup>th</sup> century maltings (WSP02).</li> </ul>
Negligible	N/A
Uncertain	N/A

### Above Ground Heritage Assets Within the Principal Application Site

**7.1.3** There are two built heritage assets within the Principal Application Site:

- Late 19th century terraced buildings on Queen Anne’s Road (WSP04); and
- Late 19th century terraced buildings on Southtown Road (WSP06).

**7.1.4** The Dolphin Public House (Grade II Listed Building, NHLE 1096829) and Late 19<sup>th</sup> century terracing off Southtown Road (WSP03) are situated outside of the Principal Application Site and as such there will be no direct physical impacts.

**7.1.5** The Scheme will require the demolition of one set of late 19<sup>th</sup> century terraced buildings on Southtown Road (WSP06) and one terrace along Queen Anne’s Road (WSP04). The following assessment is therefore focussed onto these two assets groups. The assessment has been limited to a visual inspection of the front elevation of the assets. As the properties are in occupation at the time of the assessment, no internal inspection was undertaken at this stage. As the main purpose of the assessment was to determine if the properties did represent those shown on the historic mapping, this level of assessment is deemed suitable.

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### Late 19th Century Terraced Housing on Southtown Road (WSP06)

- 7.1.6 A date stone on the buildings names the row of properties as “Brighton Terrace” and dates their construction as 1873. This date is supported by the historic mapping consulted. The terrace is made up of nine separate “two up to down”-style properties, set back slightly from Southtown Road. They appear to belong to two phases of construction, as the northern three vary in their design, being having slightly higher front elevations and ornate decoration along the roof line compared to the rest. All nine of the buildings share the same external design, with large bay windows extending from the ground up to the first floor. Two of the properties have had small extensions added to the front by the doorway.
- 7.1.7 The properties have architectural value as they are an example of late 19<sup>th</sup> century domestic buildings, likely built to support the rapidly growing population in Great Yarmouth. They also have some historic value as evidence for the expansion of the settlement of Southtown, and the potential multi-phasing of construction may have some historic significance. The value of the assets is judged be of low value as they are of local interest.



*Plate 7.1: WSP06: Late 19<sup>th</sup> Century Terraced Housing on Southtown Road*

### Late 19th Century Terraced Housing on Queen Anne’s Road (WSP04)

- 7.1.8 The terrace comprises of ten separate “two up two down” properties, which front onto Queen Anne’s Road. They appear to belong to a single phase of development. They are architecturally simpler compared to the ones on Southtown Road, and lack the large bay windows.



- 7.1.9 The properties have some architectural value as they are an example of late 19<sup>th</sup> century domestic buildings, likely built to support the rapidly growing population in Great Yarmouth. They also have some historic value as evidence for the expansion of the settlement of Southtown. The value of the assets is judged be of low value as they are of local interest.



*Plate 7.2: WSP04: Late 19<sup>th</sup> Century Terraced Housing on Queen Anne's Road*

### **Built Heritage Assets in the Wider Landscape: Setting Assessment**

#### Introduction

- 7.1.10 All of the designated assets within the 1km Study Area have been assessed to determine whether the Scheme would change their setting. The assessment was based on a desk-stop study and reviewed during the site walkover. As a result of this assessment, the following designated assets were identified as potentially seeing a change in setting and required additional assessment to establish the contribution of the setting to the value of the asset, applying the methodology section out in Section 4 and Annex B:

- 
- The Grade I listed Nelson’s Monument (NHLE 1246057);
  - Grade II listed Dolphin Public House (NHLE 1096829);
  - Grade II Listed Gas Holder (NHLE 1096789);
  - Grade II Scenic Railway Roller Coaster at Great Yarmouth (NHLE 1436976);
  - St Nicholas Hospital Block Asset group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986);
  - Camperdown Conservation Area;
  - Hall Quay South Quay Conservation Area;
  - Gorleston Conservation Area;
  - Potential Fish Wharf 1877 Extension Building (WSP01);
  - Late 19th century terraces off Southtown Road (WSP03); and
  - Late 19th century terraces off St Anne’s Road (WSP05).

7.1.11 The assessment of the impact and effects on the heritage asset as a result of change in the setting is presented in Section 8. An assessment of the level of harm is presented in Section 9.

Nelson’s Monument (NHLE 1246057)

7.1.12 Nelson’s Monument, also known as Nelson’s Pillar and the Britannia Monument, was built between 1817-19 and was the first monument built in England to commemorate the achievements of Admiral Lord Nelson. An information board at the monument states that the monument designed by William Wilkins, who was also responsible for the National Gallery building in London. It comprises of a tall, fluted Greek Doric column placed on a square pedestal, which is located on a raised square plinth. The figure of Britannia is located on the top of the column, facing inwards from the coast. Overall, it measures approximately 40m in height.





*Plate 7.3: NHLE 1246057: Nelson's Monument*

**7.1.13** The monument is designated as a Grade I Listed Building, and is therefore of high, national importance. The significance of Nelson's Monument is drawn its architectural, historical and artistic values. Architecturally, it is intentionally ornate, classically inspired and imposing structure. It has firm links to the historical maritime activity, and specifically to Admiral Lord Nelson himself. The purpose of the monument is to present a visual representation of the achievements of Nelson and to ensure they are remembered. The monument also has appeared in artistic representations (see Plate 7.4).



*Plate 7.4: View of Yarmouth Seen from Gorleston, with Nelson's Monument on the Right (Ref 16)*

**7.1.14** The setting of the monument has changed substantially since its construction. In the early 1800s, the South Denes area was part of the Naval base and was predominately open land. This is illustrated in Plate 7.4, and supported by the historic mapping. Following the closure of the Naval base, the South Denes area became available for development and the area around the monument is now densely occupied. Today, the monument is surrounded by industrial and commercial properties, although the monument itself is bordered on all four sides by a wall and fence, which in turn is boarded by roads and public footpaths. This allows the monument to stand out in its immediate environment.



*Plate 7.5: View South from Nelson's Monument (NHLE 1246057)*



*Plate 7.6: View of Nelson's Monument (NHLE 1246057), Facing North*

**7.1.15** The immediate setting of the monument at ground level contributes little to its overall significance due to the modern development undertaken around it. Its wider setting comprises the area of the former naval base, and also is in the same county that Nelson was born, and therefore in this context the setting provides a contribution due to the historic links. Due to the height of the monument, however, the setting of it extends beyond its immediate location. The monument is visible across a wide area, particularly from the

south towards Gorleston (Plate 7.7), although it does have to compete with other high features in its surroundings (e.g. cranes alongside the River Yare). It is also visible from the west side of the Scheme (Plate 7.8). This ability to see it from a long distance, albeit intermittently, is an important part of the significance of the monument and how the asset is experienced in its wider setting. Overall, the setting provides a moderate contribution to the significance of the asset.



*Plate 7.7: Long Distance View of Nelson's Monument (NHLE 1246057) from Corner of Icehouse Hill and Riverside Road, Gorleston (Monument Location Shown by Red Arrow)*





*Plate 7.8: Long Distance View of Nelson's Monument (NHLE 1246057)  
Southtown Road (Monument Location Shown by Red Arrow)*

Dolphin Public House (NHLE 1096829)

- 7.1.16 The Dolphin Public House was built between 1900 and 1904 and was originally known as the Fish Wharf Refreshment Rooms. It formed part of the plans for the development of the Fish Wharfs, which was built from the mid-19<sup>th</sup> century onwards. Most of the original wharf buildings have now been demolished and the public house is currently unoccupied.



*Plate 7.9: Dolphin Public House (NHLE 1096829)*

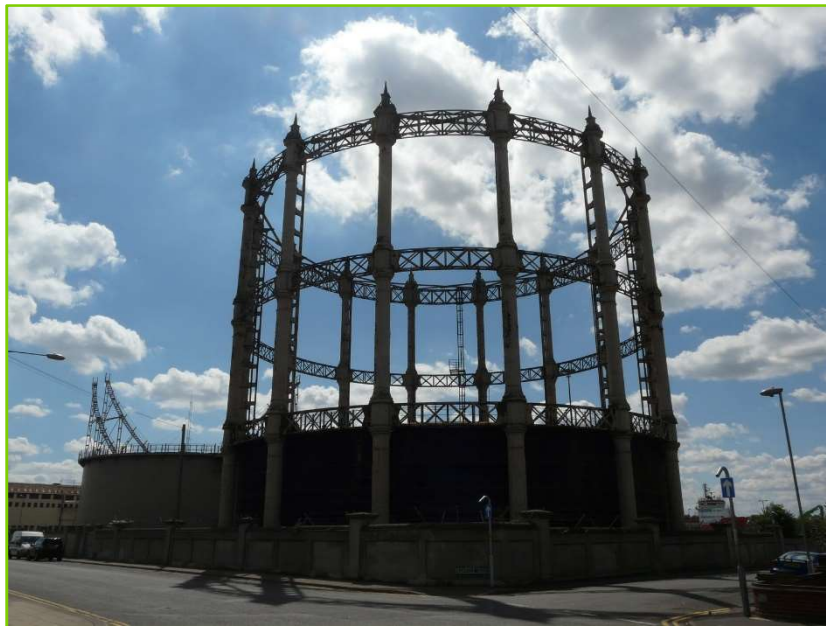
**7.1.17** The Public House is designated as a Grade II listed building and is therefore of medium value. The majority of the significance is drawn from its architectural value, which includes elements intended to make the external façade of the building aesthetically pleasing, along with such as the use of ceramic tiles and decorative panels depicting dolphins (Plate 7.9). The historic value contributes a little due to the direct relation with the public house with the historic Fish Wharfs area, although the loss of the market here and the modernisation of the wharfside have diminished this relationship.

**7.1.18** The Public House is located on the corner of the road called Fish Wharf, to the west of South Denes Road. The immediate setting is industrial in nature, and the Public House appears isolated. Historically, the Public House formed part of the Fish Wharf, a busy landing and market place for herring, used by lots of people. The wharfs were likely a noisy and active environment. The setting has therefore changed substantially since the Public House was first in use. The current setting of the asset provides a negligible contribution to the significance of the asset.

Gas Holder (NHLE 1096789)

**7.1.19** The Gas Holder consists of a steel drum set in a cast-iron and steel frame. The frame is composed of 14 cast columns, with needle finials and volutes providing an aesthetic value. It bears a maker's plate which reads "R.P. Spice/Engineer/London/1884" and "S. Cutler & Sons/Contractors/1884", and based on this the NHLE description states it dates to 1884, however it first appears in this location on the 1926 Ordnance Survey map. A Gas Works is

shown here from 1883, with two gas holders shown to the west. None are shown on the 1904 Ordnance Survey Map, and by 1926 there are three, including the Grade II listed one. Gas Holders were once a common feature in urban environments from the 19<sup>th</sup> century and were used up until the 1960s to store gas produced on land. Following the establishment of a gas supply from the North Sea, gas holders were made redundant and many demolished.



*Plate 7.10: Gas Holder (NHLE 1096789)*

- 7.1.20 The Gas Holder was designated as a Grade II Listed Building in 1998 and is of medium significance. The significance is drawn largely from its architectural value, which is increased by the use of ornate elements within an otherwise utilitarian structure. Historically, it is representative of 19<sup>th</sup> century efforts to provide a regular and constant gas supply to businesses and homes which also adds to its value.
- 7.1.21 The Gas Holder is located on the corner of Barrack Road and Admiralty Road. The areas to the north and west are predominately residential and to the south and west it is industrial. A second smaller gas holder lies immediately to the south. The Gas Holder was previously located within a gas works, which went out of use in the later 20<sup>th</sup> century and no above ground remains are visible. The gas works were likely located here as part of the development of the South Denes area following the closure of the Naval base and the availability of a large area of land for expansion.
- 7.1.22 Due to their function and purpose, gas holders are intentionally large and prominent structures and many have become landmarks. The Gas Holder has little to challenge its visibility in its immediate proximity and it can be



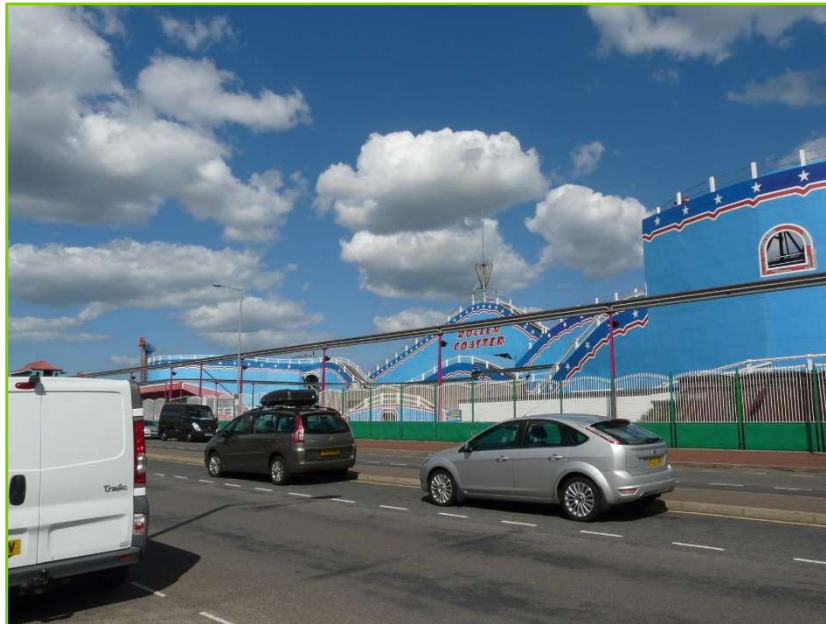
viewed from far away. It is very visible from the west side of the Scheme (Plate 7.11). The asset therefore has a visual prominence in the landscape and acts as a focal point, albeit unintentionally. It is this experience of the asset in its setting that provides a minor contribution to the significance of the asset.



*Plate 7.11: View East towards the Gas Holder (NHLE 1096789) from Southtown Road*

The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976)

**7.1.23** The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach is located on the beachfront, approximately 1km to the west of the Scheme. The Scenic Rollercoaster, opened in 1932, is a wooden construction and formed an important part of the Great Yarmouth Pleasure Beach complex, established in the early 1900s. It is the oldest surviving feature in the Pleasure Beach complex, as many of the early 20<sup>th</sup> century features were dismantled during World War II to enable metal to be reused. Being made from wood, the Rollercoaster was allowed to remain.

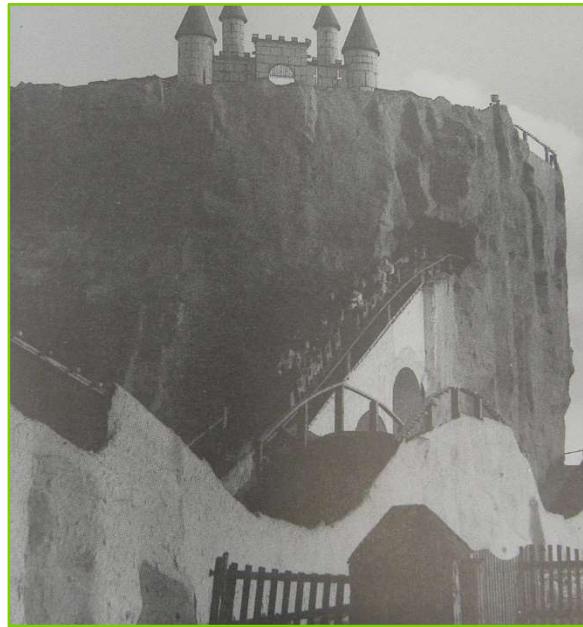


*Plate 7.12: The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976)*

**7.1.24** The asset has been recently listed as Grade II, and is therefore of medium significance. The NHLE listing description details where the significance of the monument is drawn from. The following is taken from the listing description:

- Date and rarity: it is the second oldest in date of only two surviving scenic railway type roller coasters in Britain, after the Scenic Railway at Margate, (Grade II\*, NHLE 1359602) the third-oldest roller coaster in Britain, and the third of only six surviving pre-Second World War roller coasters nationally;
- Architectural interest: although much of the timber has been renewed through maintenance (and will continue to be), and the alpine scenery has been lost, the roller coaster retains its original configuration, and the rider experience is almost identical to when the ride first opened. It is an important element of Great Yarmouth's C20 seaside history, and it contributes towards the outstanding collection of Victorian, Edwardian and later entertainment architecture in Great Yarmouth;

- Historic interest: as the major surviving ride from Great Yarmouth Pleasure Beach, one of the earliest seaside amusement parks in Britain and one of only two early seaside amusement parks to have remained open continuously (along with Blackpool Pleasure Beach).



*Plate 7.13: Scenic Rollercoaster, c. 1920 (Ref 16)*

**7.1.25** The physical appearance of the asset has been much changed since it was first constructed. And while much of the landscape around it has altered over the years, the fundamental elements of its setting have not. It was built within a seaside resort and alongside a beach. Its physical surroundings and the experience of asset are important elements and therefore the setting provides a moderate contribution to the significance.

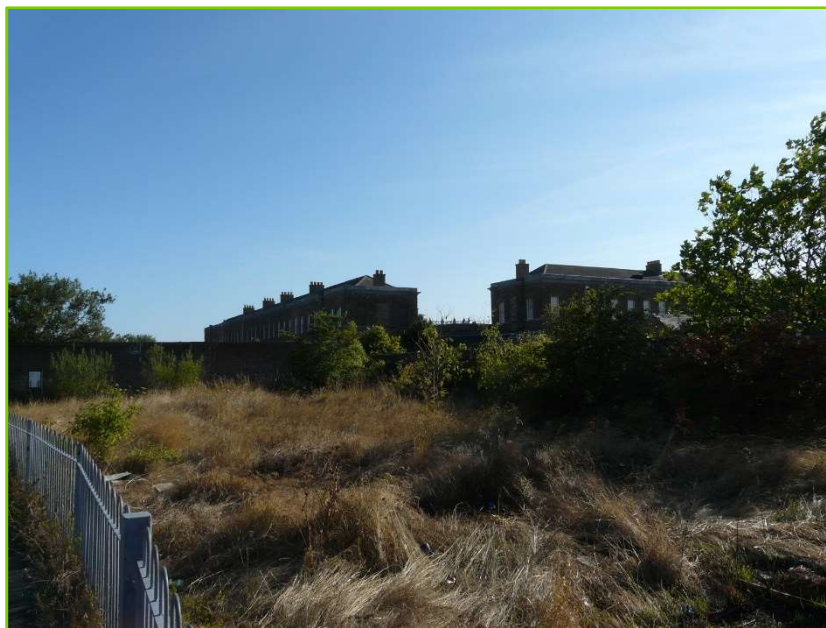
St Nicholas Hospital Assets Group

**7.1.26** St Nicholas Hospital comprises two Grade II\* and three Grade II Listed Buildings. The main hospital building comprises a four-wing hospital block, arranged around a central quadrangle (NHLE 1245983). To the north is the main entrance block (NHLE 1245984), and to the south is the South Block (NHLE 1245985) and CSSD Store, built as a mortuary and chapel (NHLE 1245982). The site is enclosed by walls and railings (NHLE 1245986). The hospital was built in 1809 to 1811 and then became a naval barracks in 1818. It was later used as a general hospital.

**7.1.27** The main block and entrance block are Grade II\* listed and are therefore of high significance, while the remainder are Grade II and have medium significance. The significance of all the assets is drawn from their architectural and historical values. They are an example of early 19<sup>th</sup>

century military and hospital planning architecture, and it was noted for its use of a well-lit and ventilated design. Its presence provides a clear link with the area's Great Yarmouth naval past.

**7.1.28** The asset group is bounded to the west by Admiralty Road, to the south by Dicken's Avenue, to the east by recreational area and north by residential properties. It lies within the Camperdown Conservation Area. The historic mapping shows the base in an open area in the early 1800s, however it is now surrounded by residential development. The assets are private property and therefore could only be assessed from the outside, and it is noticeable that the walls surrounding the hospital block enclose the assets away from their surroundings (Plate 7.14). The immediate setting of the asset groups, within the walls, is predicted to a feel separated from external elements and to be tranquil, green space. This was a deliberate aim of the layout of the hospital site to aid recovery of the patients. The immediate setting is therefore a major contribution to the value of the group. Outside of the walls, the wider setting of the assets therefore provides a negligible contribution to the significance of the asset group.



*Plate 7.14: St Nicholas Hospital Asset Group, from the South*





*Plate 7.15: St Nicholas Hospital Entrance*  
Camperdown Conservation Area

- 7.1.29** The Camperdown Conservation Area was first designated in 1969 and extended in 1979 and 2002. The original boundaries defined the series of street and square planned in the c. 1840s by the Victoria Building Co, which fronted onto Marine Parade. Only part of the planned scheme was completed, bounded by Camperdown to the north and Albert Square to the south. Kimberley and Brandon Terraces were constructed first and were based around terraces, crescents and squares, copying the style used in other seaside resorts, such as Brighton. The 2002 extension was to the south and brought in the St Nicholas Hospital asset group (described above) and Victorian and Edwardian terraces to the north and west.
- 7.1.30** The Conservation Area contains Grade II\* Listed Buildings and 17 Grade II Listed Buildings. Although the remaining properties are not designated, many nonetheless have some level of architectural interest and together have a distinctive group value. The value of the Conservation Area is based primarily on its architectural interest, and it contains buildings of different status throughout, from the grand four-storey high terraced buildings (now the Carlton Hotel (NHLE 1271269), along Kimberley Terrace, the uniform row of three storey high terraces along Nelson Road South, to the more mixed, lower status architectural styles along the roads in the west side. The gridded street patterns are also a significant feature, fossilising the mid-19<sup>th</sup> century planned development. The Conservation Area has a historic interest due to its relationship with the rise in popularity of seaside resorts during the 19<sup>th</sup> century.

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7.1.31 The value of the Conservation Area is judged to be medium due to the majority of the designated assets contained within it being of Grade II designation. The value also reflects the degree of change and the insertion of modern development within the Conservation Area.

7.1.32 The significant elements of the Conservation Area setting are the combination of urban and coastal location. It partly borders the Seaside Conservation Area, but is separated from it as this a principally residential area. The hierarchy of buildings is directly related to the distance between the assets and the sea front, with the larger domestic ones being located to the east and those of a lower status to the west. The location of the area of development outside of the medieval core is significant too, representing the ability to extend the town outside of its defences and begin expansion in to the former naval base area. The setting, therefore, provides a moderate contribution to overall value of the Conservation Area.

7.1.33 The draft Conservation Area appraisal document provided by Great Yarmouth Borough Council identifies the following principal views within the Conservation Area:

- South along Wellington Road to The Wellington Arch;
- From Queens Road into the Royal Naval Hospital;
- West along Queens Road to St. James' Church;
- At the eastern end of Camperdown; and
- Albert Terrace.

7.1.34 Key views into the Conservation Area are from the seafront westwards down Camperdown and from Albert Square.

#### Hall Quay South Quay Conservation Area

7.1.35 The Hall Quay South Quay Conservation Area lies approximately 1km north of the Principal Application Site. It is focussed along the main north-south route (South Quay to the south, and Hall Quay to the north), but extends to the east to Howard Street South, north to Stonecutters Way and south to Nottingham Way. It also extends across to the west bank of the River Yare and part Southtown on the west side of Haven Bridge.

7.1.36 The Conservation Area is located within the historic core of Great Yarmouth, defined by the Town Walls. It contains four Scheduled Monuments, and 44 listed buildings (three Grade I, four Grade II\* and 37 Grade II). It contains a number of buildings dating from the 16<sup>th</sup> to 18<sup>th</sup> century, along with the Tolhouse and Greyfriars Franciscan friary which are of 13<sup>th</sup> century date. Many of the earlier buildings were built for and occupied by wealthy merchants. The importance of the Conservation Area is drawn from its

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architectural and also strongly from its historic interest too. Based on the number of high value assets contained within the Conservation Area, the importance of it is judged to be also high.

**7.1.37** The setting of the Conservation Area has a substantial contribution to its value. The importance of the setting is drawn from its coastal location, and its position alongside the River Yare and River Bure. The development and use of the buildings contained within the Conservation Area is closely connected to the maritime industry which formed an important part of the economy of Great Yarmouth through the medieval and post-medieval period. The relationship between the Conservation Area and the medieval town walls and its location within the defended area is also an important contributing factor.

**7.1.38** The Draft Conservation Area Appraisal provided by Great Yarmouth Borough Council identifies 11 key views. The principal views out of the conservation area are listed as:

- Those across to Southtown and Breydon Water;
- Along South Quay from Hall Quay;
- South along the River Yare;
- North along the River Bure; and
- The view from Hall Quay east along Regent Street.

**7.1.39** Principal views into Hall Quay South Quay Conservation Area are defined as:

- From the Haven Bridge and Southtown to Hall Quay and South Quay;
- From South Quay;
- North Quay into Hall Quay;
- From Hall Plain into Hall Quay;
- From all the narrow rows/streets looking westwards onto South Quay and Hall Quay;
- The view into the conservation area from Vauxhall Bridge/Railway Station.

#### Gorleston Extension Conservation Area

**7.1.40** The Gorleston Extension Conservation Area was designated after 2009 and no appraisal document which includes the extension has been located. It is located approximately 500m to the south of the Principal Application Site. The designated area extends Ferryboat Lane in the north and runs parallel along the west side of the River Yare to South Icehouse Hill. It is made up of



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commercial and residential properties. It includes Riverside Road and High Street and contains seven Grade II Listed Buildings. It is separate from the main Gorleston Conservation Area, which is located approximately 1km south.

- 7.1.41 The lack of Conservation Area appraisal limits the opportunity to assess the value and importance of the Conservation Area as the character of it has not been defined. It is assumed that this based on mostly on the architectural interest. The Conservation Area is judged to be of medium value based on the value of the heritage assets contained within it. The contribution of the setting is also limited, however the relationship between the Conservation Area and the River Yare is likely to be a key element. The wider setting, which contains Southtown to the north and the Gorleston to the south is also a part of the setting. Views over to the South Denes area to the east and Great Yarmouth to the north are also important.

Non-Designated Potential Fish Wharf 1877 Extension Building (WSP01)

- 7.1.42 A building which corresponds to a building shown on historic mapping is located 30 m to the south of the Principal Application Site, on the east side of the River Yare (Plate 4) and it could be an extension to the Fish Wharfs, proposed in 1877. The asset could not be accessed and views to it from the west side were blocked by a shipping vessel. If it is confirmed, it will represent one of a few remaining elements of the 19<sup>th</sup> century Fish Wharf sites and would be of low significance. There is a potential for significance to be drawn from its architectural and historic values as an example of a late 19<sup>th</sup> century building associated with the Fish Wharf.
- 7.1.43 The building is located alongside the River Yare, in an industrial area. The area has undergone substantial alteration since the building was first constructed, including the loss of the most of the 19<sup>th</sup> century, however the setting does provide a moderate contribution to the significance due to its river side location.

Non-Designated Late 19th Century Terraces off Southtown Road (WSP03)

- 7.1.44 The terrace comprises of eight “two-up two down” domestic buildings of late 19<sup>th</sup> century date. They share the same design as terrace group WSP06, to the north. They are low significance, drawn from their architectural and historic value. They are located on the west side of Southtown Road, close to the junction with William Adams Way, and are separated from the next set of terraces by a garage repair centre. This physical separation has resulted in the assets appearing isolated from the other nearby areas of occupation. Despite this, the setting is judged to provide a minor contribution to the significance as they represent the expansion of settlement in Southtown in the later 19<sup>th</sup> century.



*Plate 7.16: Late 19<sup>th</sup> Century Terrace Housing of Southtown Road (WSP03)*  
Non-Designated Late 19th Century Terraces off St Anne’s Road (WSP05)

**7.1.45** The terrace comprises of three domestic buildings of late 19<sup>th</sup> century date and are similar in design to WSP04 to the north-west on St Anne’s Road. They have been substantially altered since originally constructed. The properties have some architectural value as they are an example of late 19<sup>th</sup> century domestic buildings, likely built to support the rapidly growing population in Great Yarmouth. They also have some historic value as evidence for the expansion of the settlement of Southtown. The value of the assets is judged be of low value as they are of local interest.

**7.1.46** The assets are located on the north side of St Anne’s Road, close to the junction of Southtown Road. St. Anne’s Road is a short section of road which contains residential properties along its northern side, and is one a series of roads running west off Southtown Road. The land to the south of St. Anne’s Road has remained undeveloped and consists of allotments. There are views from the properties towards the River Yare. The setting is judged to provide a minor contribution to the significance as they represent the expansion of settlement in Southtown in the later 19<sup>th</sup> century.



*Plate 7.17: Late 19<sup>th</sup> Century Terrace Housing off Southtown Road (WSP03)*

## 7.2 Satellite Application Sites

### Above Ground Assets in the Satellite Application Sites

- 7.2.1 There are no built heritage assets located within the Satellite Application Sites and none will be physically impacted by the installation of the VMS or any works associated with their installation.

### Built Heritage Assets in the Wider Landscape: Setting Assessment

- 7.2.2 All of the designated assets within a 250m area around the Satellite Application Sites were assessed to determine whether the Scheme would have an effect on the setting. As a result of this assessment, the following designated assets have been identified as requiring additional assessment to establish the contribution of the setting to the significance of the asset or asset group, and the potential impact of the proposed scheme on the setting:

- Scheduled Monument medieval Town Walls (NHLE 1003782); and
- Grade I Listed The Tolhouse (NHLE 1245560).

#### Medieval Town Walls (NHLE 1003782)

- 7.2.3 The Town Walls were built in the 13th century and extended for some 2km around the historic town of Great Yarmouth. The monument has a high significance due its archaeological, historical and architectural values.

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- 7.2.4 The settlement of Great Yarmouth remained contained within the Town Walls until the mid-19th century, when development began to the south of the town, in the South Denes area. Despite this, due the retention of the medieval street pattern around the walls, the setting does provide moderate contribution to its significance.

The Tolhouse (NHLE 1245560)

- 7.2.5 The Tolhouse structure was built in the mid-12th century as a merchant's house. It has had a variety of uses, including as a prison, town hall, police station, court house and toll office. From the 1880s, it was used a library and museum. It is a Grade I Listed Building and has a high significance. The significance is drawn from its architectural, historical and archaeological value as surviving remnant of the medieval settlement.
- 7.2.6 The Tolhouse is located on the west side of Tolhouse Street. It is surrounded by residential properties of 19th and 20th century date. The location has changed considerably since the Tolhouse was first built, however the urban setting is still evident. The setting provides a minor contribution to the significance of the asset.

## 8 Assessment of Impacts and Effects

### 8.1 Introduction

- 8.1.1 This section assesses the impacts and effects on historic environment, during the construction of the Scheme, and also during the operational (completed development) phase. It includes an assessment of the visual impacts when the bridge is in the closed position and when opened.
- 8.1.2 The assessment of the magnitude of impact (i.e. change) is the identification of the degree of the effect of the scheme on the heritage assets. There is no standard scale of comparison against which the severity of effects on heritage assets may be judged, because of the great variety of resources and assets. The assignment of a magnitude of impact is a matter of professional judgement (see Table 4.3).
- 8.1.3 The significance of effect on designated and non-designated heritage assets has been derived from a consideration of the sensitivity/value of the receptor and the magnitude of the impact upon it, as illustrated by the matrix presented in Table 4.4.
- 8.1.4 During construction, impacts would be from ground disturbance such as preliminary ground works, site strip/topsoil removal, demolition, remediation, landscaping, planting, excavation for basements, foundations, services, drainage and lighting, which could potentially disturb and destroy buried heritage assets. Above ground heritage assets may also be affected directly through demolition and alteration of historic fabric, where this is proposed, and indirectly temporarily from vibration (e.g. piling), dust, lighting and noise. There could also be an impact upon the above ground heritage assets setting.
- 8.1.5 During the operational phase, effects on buried heritage assets are typically scoped out on the basis that once the proposed development has been completed, no further ground disturbance would occur and consequently there would be no additional impact. The operational phase can have an impact on above ground heritage assets, due to changes to their setting due to a change in views, visibility, noise, lighting and air quality, which alters how the asset is understood and experienced.



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## 8.2 Impact and Effects on Buried Heritage Assets within the Principal Application Site

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### Construction Period

- 8.2.1 The majority of the impacts upon the buried heritage assets will occur during the construction phase. Development activities such as piling, stripping of overburden or hardstanding, landscaping, ground compaction access, service installation, stockpiling and storage may all have a negative effect on below ground heritage assets. The scale of impact on all buried heritage assets would be moderate to major adverse as the depth and scale of the ground disturbance will lead to the permanent and irreversible loss of the all or part of an asset.
- 8.2.2 A total of 18 non-designated heritage assets have been identified within the Principal Application Site. Five non-designated assets of low importance are located on the west side of the River Yare and will be directly impacted by the construction of the road and bridge (Site of buildings on west side of Southtown Road (WSP11, WSP12 and WSP13), Site of 19<sup>th</sup> century house (WSP08) and Site of Marsh House (WSP14)). The impacts on the assets would be major adverse and the effects Moderate Adverse.
- 8.2.3 Three non-designated assets of low importance are located on the east side of the River Yare (The Icehouse and Three Salt Stores (HER 55685), Wharf side Buildings (WSP09), and Fish Wharf (WSP10)). The construction of the bridge will have a major impact on any remains present associated with the Wharfside Buildings (WSP09) and Fish Wharf (WSP10) and the effects would be Moderate Adverse.
- 8.2.4 The Icehouse and Three Salt Stores (HER 55685) is located in the proposed compound area which is currently covered by hardstanding. If ground disturbance is required, then the impacts would be major and the effects Moderate Adverse. If no ground disturbance is required, the impacts would be no change and the effects Neutral.
- 8.2.5 Mitigation in the form of preservation by record would be appropriate for assets of this low importance where preservation in-situ cannot be achieved, and would reduce the effects to Slight Adverse.
- 8.2.6 The remaining non-designated heritage assets (The Route of Norfolk and Suffolk Joint Railway (HER 13575), Routes of Great Yarmouth urban railways (HER 13576), Site of World War II defences (HER 27697), Site of a 20th century timber yard and saw mill (WSP15), Site of World War II craters (HER 27700, 43589, and 43741), Site of World War II anti invasion defences at Southtown (HER 42355 and 42353), and Site of World War II road blocks (HER 43304)) are judged to be of negligible importance, and the effects will be slight adverse. Mitigation in the form of preservation by record would be

appropriate for assets of this importance where preservation in-situ cannot be achieved, and would reduce the effects to Neutral.

- 8.2.7** There is a potential for currently unknown below ground archaeological assets, including deeply stratified deposits not disturbed by modern development. Due to the proximity of the Principal Application Site to the River Yare and the medieval shoreline, there is potential for below ground remains associated with maritime activity, and for high level of preservation of remains, such as wooden artefacts, in waterlogged deposits. The presence of, extent, quality, date and sensitivity of such remains is unknown and cannot be quantified prior to excavation. As such, any remains present could range in sensitivity from negligible to high, with any remains of Palaeolithic date being classed as being of international significance and Very High sensitivity.
- 8.2.8** The assessment has established that there is a greater likelihood for buried assets on the west side of the River Yare of medieval, post-medieval and modern date. The sensitivity of these assets is predicted, based on the current evidence, to be negligible to medium. The magnitude of change prior to mitigation is considered to be moderate to major. Therefore, there is likely to be a slight to large effect on any below ground heritage assets prior to the implementation of mitigation measures. Mitigation through preservation by record would result in a Neutral effect. Mitigation through preservation by record would result in effects ranging from Slight Adverse to Moderate Adverse, depending on the sensitivity of the heritage asset.
- 8.2.9** The HEDBA has identified that the potential for unknown below ground archaeological remains on the east side of the River Yare varies from that predicted to the west. The land mass here is of a more recent date and historically has been part of the Naval base and then a port. Therefore, there is a higher likelihood for below ground remains of post-medieval and modern date of negligible to low sensitivity. The impacts are considered to be moderate to major and for this side of the Principal Application Site it is judged to be a Slight Adverse effect. Mitigation through preservation by record would result in a Neutral effect. Mitigation through preservation by record would reduce the impact, however the effects would remain Slight Adverse.
- 8.2.10** A Written Scheme of Investigation (WSI) has been produced to support the DCO application (as set out in Requirement 12 of the draft DCO (document reference 3.1)) and will set out the scale and scope of the post-consent investigations, as far as is practicable at this stage based on the construction methodology. The WSI has been produced in consultation with NCC.



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### Operational Period

- 8.2.11** There is potential that following the completion of construction, any buried archaeological remains present around the Scheme will adversely impacted through changes in the local hydrology, resulting in the compaction, desiccation or waterlogging of buried remains. The effects on the groundwater levels are assessed in ES Chapter 11: Road Drainage and the Water Environment. This has determined that there will be no change and neutral effects to the groundwater quality, recharge and flow, and a negligible change and negligible effects to the groundwater flow and quantity in superficial deposits and to the Crag Group aquifer, the main aquifer underlying the Principal Application Site (Section 11.8). The Preliminary Ground Water Control Strategy contains some uncertainties, however, which will be improved and defined through the project lifecycle (Section 11.10).
- 8.2.12** The assessment of change and effect on groundwater levels indicates no or negligible levels of change to the groundwater level, however it is not known currently what the impact of a negligible change would have on the archaeological value of the superficial geological deposits, in particular the Breydon Peats and Alluvium.
- 8.2.13** The potential for the occurrence of this, the assets impacted, the level of impact and resultant effects are currently unknown. A Written Scheme of Investigation (WSI) has been produced to support the DCO application (as set out in Requirement 14 of the draft DCO (document reference 3.1)) and will set out the scale and scope of the post-consent investigations to assess the potential impacts from changes in hydrology. The WSI has been produced in consultation with NCC.

### **8.3 Impact and Effects on Buried Heritage Assets within the Satellite Principal Application Site**

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#### Construction Period

- 8.3.1** The construction of the VMS would include the installation of new signs and associated infrastructure alongside major routes into Great Yarmouth. This will have minimal impact on buried archaeological remains due to the limited amount of previous ground disturbance anticipated in these locations. The Satellite Application Sites lie in areas which are likely to have been disturbed during the modern era associated with the construction and maintenance of the modern road network, and the through the installation of existing utilities alongside the roads. The ground disturbance is expected to be shallow and would only effect shallow deposits.
- 8.3.2** Where disturbance will occur, there is a low potential for below ground remains to be disturbed relating to medieval to post-medieval date within North Quay, Fullers Way and Yarmouth Way, which will have been

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subjected to previous disturbance. Below ground remains are likely to be disturbed are of low value. The impacts are likely to be no more than moderate, given the scale of disturbance anticipated, and therefore the effects Slight Adverse.

- 8.3.3 The remains of later post-medieval to modern date in the Satellite Application Sites are predicted to be of negligible value and the impacts moderate adverse. The effects, therefore, would be Neutral.

### **Operation Period**

- 8.3.4 There will be no impact on the buried heritage assets within the Satellite Application Sites and therefore no effects.

## **8.4 Impacts and Effect on Above Ground Heritage Assets within the Principal Application Site**

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### **Construction Period**

- 8.4.1 The Construction Phase will require the demolition of two sets of terraced housing located within the Principal Application Site: WSP04 and WSP06. Both terraces are of late 19<sup>th</sup> century date and are judged to be of low importance. As the assets will be removed entirely, the impacts before mitigation would be major adverse and the effects moderate adverse, without mitigation.
- 8.4.2 A level 1 historic building assessment would be undertaken, in accordance with Historic England's 2016 guide, titled 'Understanding Historic Buildings. A Guide to Good Recording Practice', ahead of demolition. The aim of the building assessment would be to determine the condition and value of any historic elements terraced housing, determine if additional, more detailed, building recording or monitoring is required prior to or during demolition; and to produce an archive for deposition with an appropriate museum, and to provide information for accession to the NHER, to ensure the long-term survival of the excavated data. The scope of the historic building assessment is set out in the WSI. This would reduce the effects to Slight Adverse.

### **Operational Period**

- 8.4.3 As the above ground heritage assets within the Principal Application Site will be demolished during the construction period, there will be no impacts or effects during the operational period.

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## 8.5 Impacts and Effect on Built Heritage Assets outside the Principal Application Site

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### Construction Period

8.5.1 All of the designated assets within the 1km Study Area have been assessed to determine whether the proposed scheme would have an effect on the setting. In Section 7, the following assets were judged to have a potential impact on their setting during construction:

- The Grade I listed Nelson's Monument (NHLE 1246057);
- Grade II Listed Dolphin Public House;
- Grade II Listed Gas Holder (NHLE 1096789);
- Grade II Listed The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976);
- St Nicholas Hospital Block Asset group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986);
- Camperdown Conservation Area;
- Hall Quay South Quay Conservation Area;
- Non-Designated Fish Wharf 1877 Extension Building (WSP01); Non-Designated Late 19th century terraces off Southtown Road (WSP03); and
- Non-Designated Late 19th century terraces off Southtown Road (WSP05).

8.5.2 There is a potential for temporary impacts and effects on built heritage assets in the wider landscape due to a change in the setting as a result of the construction phase. The impacts are predicted to derive from temporary visual intrusions and an increase in noise, dust, lighting, construction traffic and vibrations. The assets located in closer proximity to the Scheme are likely to see a higher level of impact as the intrusions will be more readily discerned.

#### Nelson's Monument (NHLE 1246057)

8.5.3 Nelson's Monument is a Grade I Listed Building and is therefore of high value, based on its architectural, historical and artistic values. The immediate setting contributes minimally towards the value of this asset, however its height, physical prominence and the broader historic links between the monument and the wider landscape, does contribute to its value. Overall, the setting is judged to have a moderate contribution to the value.

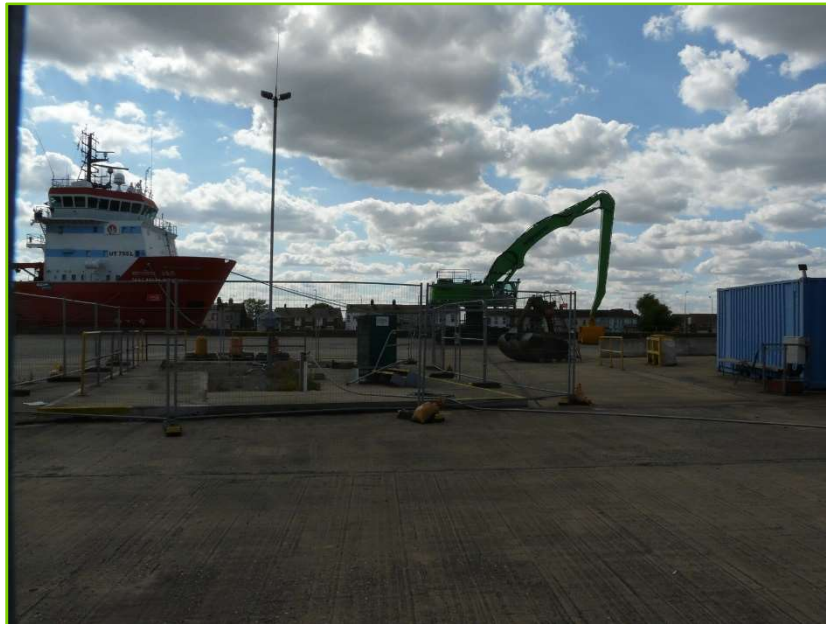
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**8.5.4** The visual intrusion of the resulting from the construction of the Scheme is predicted to present a challenge to the prominence of the asset. The infrastructure required to build the Scheme, particularly the bridge, control tower and plant room, will require the introduction of plant and equipment, such as cranes and piling rigs, which will compete visually with Nelson's Monument. The asset is already competing with other features and the Scheme will increase this impact. Views to the heritage asset from ground level on Southtown Road will also be impeded during the construction phase. The impacts on the setting of the high value asset during the construction phase are judged to be minor adverse. The effect on the high value heritage asset will be moderate adverse.

Dolphin Public House (NHLE 1096829)

**8.5.5** The construction of the Scheme will result in a major intrusion within the setting of the Grade II Dolphin Public House (NHLE 1096829), which is of medium value. The asset is located outside of the Principal Application Site. The construction of the road and new junction with South Denes Road would be undertaken approximately 50m to the south, and would result in significant changes in the immediate setting with an increase in construction related noise, dust, vibration, etc. The area north of the heritage asset would be used as a temporary compound.

**8.5.6** The current setting of the heritage assets is judged to provide a negligible contribution to the significance of the asset due to the high degree of change since the asset was constructed, in particular the modernisation of the Fish Wharfs and changes to the overall fishing industry in the UK which has resulted in vast reduction of human led industry here. As the contribution of the setting is negligible, the impact of construction period on the asset is also judged to be negligible, and the effects therefore Neutral.



*Plate 8.1: View from Dolphin Public House Facing West*  
Gas Holder (NHLE 1096789)

**8.5.7** The Grade II Listed Gas Holder is a medium value asset and is located approximately 150m from the east side of the new road and bridge. Due to the proximity of the asset to the Principal Application Site, there will be temporary adverse impacts on the setting during the construction period associated with an increase in noise, vibration, construction related traffic, and plant. There will be visual impacts too, with view from the asset outwards and views towards it being substantially altered.

**8.5.8** The setting of the Gas Holder contributes minimally to the value of the asset. The most significant element is its height and prominence in the wider landscape. The visual intrusion from the construction phase will have adverse impact on views towards Gas Holder, potentially either reducing its visibility or competing with it. Due to the combined factors and the close proximity of the asset to the Principal Application Site, the impacts during the construction will be moderate and the effects would be moderate adverse.

The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976)

**8.5.9** The Scheme Railway Roller Coaster at Great Yarmouth Pleasure Beach is a Grade II Listed Building is therefore of medium value. The setting of the Grade II Scenic Railway Roller Coaster provides a moderate contribution to the value of the asset due to the direct relationship between the asset and its seaside location. Due to the distance between the Principal Application Site and the Roller Coaster, and intervening buildings, the two are not intervisible at ground level, where the setting is judged to be the most significant. The

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Principal Application Site will be visible during the operation of the Roller Coaster due to the elevation and therefore the construction period will represent a change in the setting. Elements that would be visible would be the larger construction vehicles, such as cranes and piling rigs. The views would be fleeting and would be combined with many other visible elements across the town. The impacts are therefore judged to be negligible and the effects Neutral.

St Nicholas Hospital Block Asset Group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986)

- 8.5.10 The heritage assets are assessed as a group and are of high value. The construction phase of the Scheme will introduce some temporary localised impacts on setting of the St Nicholas Hospital Block Asset group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986) from an increase in noise, minor visual disruption and vibration which could impact on the sense of tranquillity and enclosure in the immediate setting of the Hospital. The asset groups are mainly screened from the Principal Application Site by buildings and there are no views in either direction at street level. There is a potential, however for some visibility from upper floor windows at the south-west corner, particularly of larger plant (e.g. cranes, piling rigs). These impacts are judged to be minor adverse, and would be temporary and reversible. The asset group as a whole is of high value, and therefore the effects slight adverse.

Camperdown Conservation Area

- 8.5.11 The Camperdown Conservation Area is of medium value and the setting of the Camperdown Conservation Area provides a moderate contribution to the overall value of the asset. The significance is drawn from the spatial hierarchy evident within the Conservation Area, and the relationship with the historic core of Great Yarmouth and the recreational Seafront area. Part of the setting is the residential character of the Conservation Area, and the noise associated with the construction phase would form an audible intrusion within the southern end of the Conservation Area (around Dickens Avenue). The noise associated with the construction is unlikely to be discerned beyond the southern boundary due to the distance. There is no intervisibility between the Conservation Area and the Scheme and there is no anticipated increase in traffic.
- 8.5.12 The Conservation Area of medium importance. The impacts on the setting would be negligible and the significance of effects neutral.

Hall Quay South Quay Conservation Area

- 8.5.13 The Hall Quay South Quay Conservation Area is a high value heritage asset, due to the number of heritage assets of national significance contained within it, and the setting is judged to provide a substantial contribution to its



value. The main elements of the setting which contribute to the value are the coastal location, the proximity of the Rivers Yare and Bure, and its position within medieval town. One of the key views identified is along South Quay from Hall Quay and South along the River Yare, although no details on why these have been defined as key views are provided.

- 8.5.14** The Principal Application Site is visible from South Quay and Hall Quay Road and therefore the construction phase will result in a change in one of the key views out from the Conservation Area. Due to the distance (c. 800m), the change in views will be limited. There is already competition in the view from existing infrastructure, and from vehicles using the road. The River Yare is also a busy shipping lane with large vessels frequently using it. There are no predicted changes in noise levels due to the distance and the impacts from any change in lighting during the construction phase. The impacts on the Conservation Area, which a high value asset, during construction are therefore judged to be negligible and the effects slight.



*Plate 8.2: View from South Quay within Hall Quay South Quay Conservation Area South Towards the Principal Application Site*

Gorleston Extension Conservation Area

- 8.5.15** The Gorleston Extension Conservation Area is located approximately 500m to the south of the Principal Application Site. The Conservation Area is judged to be of medium value and the setting providing a minor contribution. The Principal Application Site is visible from a limited number of areas within

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the Conservation Area when looking north along the River Yare. The construction phase will see an alteration to this one view, however there are unlikely to be impacts from noise, lighting, traffic, etc. The impacts would therefore be negligible and the effect neutral.

#### Non-Designated Fish Wharf 1877 Extension Building (WSP01)

- 8.5.16** The setting of the Fish Wharf 1877 Extension Building provides a moderate contribution to the significance due to its river side location and the historic relationship to the Fish Wharf. The proximity of the Scheme to the Extension Building would result in a substantial visual impact on the heritage asset during the construction period due to an increase in traffic, noise, lighting and pollution associated with the construction phase. The impacts associated with the construction phase would be moderate adverse. As the buildings is a low value heritage asset, the effects would be slight adverse.

#### Non-Designated Late 19th Century Terraces off Southtown Road (WSP03)

- 8.5.17** The late 19th century terraces off Southtown Road are also a low value asset, and the setting provides a minor contribution to its significance. The Scheme will result in a considerable change in the assets setting during the construction due to the proximity of the assets to the Principal Application Site. There will be an increase in construction related traffic, noise, lighting, dust and vibration. As the setting is only a minor contribution, however, the impacts on the asset would be minor adverse and the effects during construction slight adverse.

#### Non-Designated Late 19th Century Terraces off St Anne's Road (WSP05)

- 8.5.18** The terrace comprises of three domestic buildings of late 19th century date and are of low value. The setting is judged to provide a minor contribution to the significance as they represent the expansion of settlement in Southtown in the later 19<sup>th</sup> century. The Scheme will result in a considerable change in the assets setting during the construction due to the close proximity of the asset to the Principal Application Site. There will be an increase in construction related traffic, noise, lighting, dust and vibration. As the setting is only a minor contribution, however, the impacts on the asset would be minor adverse and the effects during construction slight adverse.

### **Operational Period**

- 8.5.19** There is a potential for permanent impacts and effects on built heritage assets in the wider landscape due to a change in the setting during operation. The impacts are predicted to derive from the visual intrusion resulting from the Scheme, along with an increase in noise, pollution, and vibration, associated with the direction of traffic through the Scheme. The impact of the Scheme would be increased by the movement of traffic and pedestrians across it, and the introduction of a vehicle lighting and a

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moderate increase in the level of noise (+5.0 to 9.9 dB, ES, Figure 7.2). from vehicles using the Scheme. There are anticipated to be limited impacts due to artificial lighting associated with the Scheme, however, as any additional lighting would be consistent with the baseline conditions (see Chapter 10: Townscape and Visual, Section 10.7).

**8.5.20** Following the setting assessment undertaken (see Section 7), the following built heritage assets in the have been identified as potentially sensitive receptors during construction:

- The Grade I listed Nelson’s Monument (NHLE 1246057);
- Grade II Listed Dolphin Public House (NHLE 1096829);
- Grade II Listed Gas Holder (NHLE 1096789);
- The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976);
- St Nicholas Hospital Block Asset group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986);
- Camperdown Conservation Area;
- Hall Quay South Quay Conservation Area;
- Gorleston Extension Conservation Area;
- Non-Designated Fish Wharf 1877 Extension Building (WSP01);
- Non-Designated Late 19th century terraces off Southtown Road (WSP03); and
- Non-Designated Late 19th century terraces off St Anne’s Road (WSP05).

Nelson’s Monument (NHLE 1246057)

**8.5.21** Nelson’s Monument is a high value heritage asset (Grade I Listed Building) and the immediate setting contributes minimally towards the value of this asset. The introduction of the road, bridge, control tower and plant room will introduce features within the wider setting of Nelson’s Monument which have the potential to challenge the visual prominence of the asset. The visual challenge will be higher during the time when the bridge is in the raised position (up to 5.5 minutes per vessel passage). The Scheme will also change the views towards the asset from the north and north-west, and will block some currently existing views at the current street level. The asset is already facing significant challenges to its visual prominence due to the variety of feature in the modern landscape, including cranes and large commercial structures, and therefore the Scheme will represent a cumulative change in the setting. It is important to note, however, that the introduction of the Scheme will provide a new opportunity to view the asset from an elevated position from the bridge.

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8.5.22 The visual prominence in the wider landscape represents an important aspect of the asset's setting and therefore any changes to this would impact on the asset. The impacts on the setting are judged to be minor, as the setting would be noticeably changed, but not significantly modified. The effects on the high value asset would be Moderate Adverse.

Dolphin Public House (NHLE 1096829)

8.5.23 The Construction of the Scheme will result in a major modification of the setting of the Grade II Dolphin Public House (NHLE 1096829), which is of medium value. The introduction of the bridge and highway immediately to the south would significantly alter the views to and from the asset. There would also be a substantial increase in traffic, noise, pollution in the immediate vicinity, which have an adverse impact on the asset. As the setting provides a negligible contribution to the significance of the asset, the impact is also negligible. The effects would be neutral.

8.5.24 The asset is outside of the Principal Application Site and Scheme does not include any elements which will directly provide any beneficial impacts, however there is a potential for future beneficial impacts once the Scheme is operational. The Scheme would result in an increase human activity in the area with road users and pedestrians using the bridge, and the improved transport route to the South Denes area should stimulate the redevelopment of the area. Future development proposals could include proposals which will bring the asset back into active use and could ensure the long-term stability of the structure.

Gas Holder (NHLE 1096789)

8.5.25 The Grade II Listed Gas Holder is a medium value asset and is located approximately 150m from the east side of the Principal Application Site. The introduction of the Scheme will represent a substantial change in the immediate setting of the Grade II Listed Building Gas Holder. The Scheme will challenge and compete with the visual prominence of the asset, due to the scale and proximity of the Scheme to the asset. The impact of the Scheme will be increased by the movement of traffic and pedestrians across it, and the introduction of a lighting and noise from vehicles using the Scheme. The Scheme will significantly change the views at current street level from the west and the road and bridge will block some existing views. New views will be introduced towards it from the bridge itself, however. The setting of the Gas Holder has a minor and largely unintentional contribution to the value of the asset. The Scheme will have a moderate impact on the setting as it will be significantly modified. The effects on the medium value asset would be moderate adverse.

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### The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976)

- 8.5.26 The Grade II Scenic Railway Roller Coaster a medium value asset and is located approximately 600m to the east of the Principal Application Site. There is no intervisibility between the asset and the Principal Application Site at street level and the presence of buildings between the two prevent the Scheme from being visible when the bridge leaf would be raised. The Scheme would be visible, however, when using the Roller Coaster due to the elevated height. The elements of the Scheme predicted to be visible would be upper level of the control tower, plant room and the bridge. There may also be an impact from an increase in lighting on the bridge and lights from larger vehicles using the bridge. The length of time where the Scheme would be visible are short due to the speed of the Roller Coaster, and would merge with other visible elements in the wider landscape. The presence of the Scheme would not change the experience of the using the Roller Coaster significantly. The impacts are therefore judged to be negligible and the effects Neutral.

### St Nicholas Hospital Block Asset Group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986)

- 8.5.27 The assets are of high importance, based on their group value. The site visit has confirmed that the asset group shares no intervisibility with the Principal Application Site at street level and may have some potential slight intervisibility at the upper floors in the south-east corner of the southern wing of Grade II\* main hospital building (NHLE 1245983). The elements which could be visible would be the upper part of the plant room on the east side of the River Yare, and the eastern bridge leaf when it is in the open position. Any visibility of the open bridge would be for short periods of time (approximately 5 minutes) and up to 15 times over a 24-hour period.
- 8.5.28 The impact of the scheme during the operation period is judged to be negligible due to very limited predicted visibility. The elements that are potentially visible would not change the setting in a way that would alter the contribution of the setting to the importance of the asset group. Due to the high value of the assets, the effects are slight adverse.

### Camperdown Conservation Area

- 8.5.29 There is currently no intervisibility between the Camperdown Conservation Area, a medium value asset, and the Principal Application Site and they share no key views. There will be no changes in sound, lighting, or traffic volumes as a result of the Scheme within the Conservation Area. There is a potential the raised bridge leaf would be visible from the area to the east of the St Nicholas's Hospital and from the east of Queen's Road above the roof



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lines of the buildings, however the Scheme would not be visible the majority of the time when the bridge is in the closed position.

- 8.5.30 The occasional visibility of the bridge when it is raised would not impact on the elements of the setting which contribute to the importance of the Camperdown Conservation Area. The Scheme is therefore judged to have no change and the significance of effect neutral.

#### Hall Quay South Quay Conservation Area

- 8.5.31 Hall Quay South Quay Conservation Area is a high value asset and the boundary is located approximately 900m from the Principal Application Site. The operation of the Scheme will result in a change in a key view from the Conservation Area, south from Hall Quay South Quay Road along the River Yare. The Scheme would not visible from anywhere else within the Conservation Area.
- 8.5.32 The introduction of the Scheme would slightly reduce the existing long distance along the River Yare. At street level, it is possible to see south along the River Yare up to where the water course curves slightly to the east, around the Fish Wharfs area. The position of the bridge here will shorten the view and impose upon it. There will be impacts on the view too due to the introduction of lighting and from the visibility of traffic using the bridge.
- 8.5.33 The introduction of the Scheme will provide some beneficial impacts on the Conservation Area, however. The purpose of the Scheme is to reduce the impact of traffic in Great Yarmouth and the Conservation Area will directly benefit from this.
- 8.5.34 During the operation phase, the impacts of the Scheme on the Hall Quay South Quay Conservation Area are judged to be negligible. There will be a slight change in one key view, south along the River Yare which will see the distance shortened very slightly, and while the bridge, control tower and plant room will provide a new visual intrusion, there exist a number of other intrusions within the view currently. The nature of the Scheme is entirely in keeping with the maritime character of the area. The Scheme will not impact on the elements of the setting of the Conservation Area which contribute to its value, and some beneficial impacts will be delivered due to the reduction in traffic volumes using Hall Quay and South Quay. As the value of the Conservation Area is judged to be high and the contribution of the setting substantial, the effects are slight adverse.

#### Gorleston Extension Conservation Area

- 8.5.35 The Gorleston Extension Conservation Area is a medium value asset. The Principal Application Site would be visible from a small number of locations in the Gorleston Extension Conservation Area, including Riverside Road,



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Ferry Hill and High Street. The introduction of the Scheme would alter the views up river from the Conservation Area, with the bridge, the control tower and the plant room being visible. Both sides of the bridge would likely be visible when raised in these locations. The majority of the Conservation Area is screened from the Principal Application Site.

- 8.5.36 The impacts of the Scheme on the Conservation Area would be negligible as the setting of the Conservation Area would not be altered in a way that would reduce the contribution of the setting to the asset. The effects of the Scheme would therefore be neutral.

Non-Designated Fish Wharf 1877 Extension Building (WSP01)

- 8.5.37 The Non- Designated Fish 1877 Wharf Extension Building is a low value asset. The setting of the asset provides a moderate contribution to the significance due to its river side location and the historic relationship to the Fish Wharf. The proximity of the Scheme to the Extension Building would have a visual impact on the heritage asset and would see an increase in movement from traffic, an increase in traffic noise, vehicle lighting and pollution from the vehicles using the road and the bridge. The Scheme will also see the partial loss of the former Fish Wharf area, however the historic relationship between the asset and the 19<sup>th</sup> century Fish Wharf site has already been irreversibly lost. The Scheme will not, however, disrupt the relationship between the building and the river, which does provide an important part of the setting. The impacts are therefore judged to be minor adverse and the effects slight adverse.

Non-Designated Late 19th Century Terraces off Southtown Road (WSP03)

- 8.5.38 The late 19th century terraces off Southtown Road are of low value and are located outside of the Principal Application Site. The buildings will be retained, however much of the immediate surroundings would be altered with the introduction of the Scheme. The new road and bridge would be built over Southtown Road, with an underpass maintaining access north and south along Southtown Road, north of the assets. The positioning of the road and bridge would also form a barrier between them and the other buildings located north along Southtown Road, which may result in increased sense of isolation.
- 8.5.39 Although there would be a great deal of change in the setting, the contribution of the setting to the value of the late 19<sup>th</sup> century terraces is medium, and therefore the impacts only minor. The significance of effects would be slight adverse.

Non-Designated Late 19th Century Terraces off St Anne's Road (WSP05)

- 8.5.40 The terrace buildings on St Anne's Road which would be retained are low value heritage assets and the setting has a minor contribution. The Scheme

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would result in a substantial change in the immediate setting of the heritage asset, with the views to the north blocked by the road and bridge. The Scheme will also see an increase in traffic using the road and bridge, and a change in noise, vibration and pollution. The impacts on the asset would be minor and the significance of effects would be slight adverse.

## **8.6 Impacts and Effect on Built Heritage Assets outside the Satellite Application Site**

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### **Construction Period**

- 8.6.1** All of the designated assets within the 250m Study Area of the Satellite Application Sites have been assessed to determine whether the proposed scheme would have an effect on the setting during the construction period. The disruption and impacts to the setting of the heritage assets in the Satellite Application Sites during the construction period is judged to be neutral as it comprises the installation of VMS in an urban environment. The effects are therefore neutral.

### **Operation Period**

- 8.6.2** All of the designated assets within the 250m Study Area of the Satellite Application Sites have been assessed to determine whether the proposed scheme would have an effect on the setting during the operation period. In Section 6, the following assets were judged to have a potential impact on their setting during operation:

- Scheduled Monument medieval Town Walls (NHLE 1003782); and
- Grade I Listed The Tolhouse (NHLE 1245560).

#### Medieval Town Walls (NHLE 1003782)

- 8.6.3** The Satellite Application Site on North Quay is located 30m from an extant section of the Scheduled Monument Town Walls (NHLE 1003782), which is of high value. The positioning of the VMS close to an upstanding part of the monument may result in it causing a slight visual distraction when approaching the monument from the north along North Quay, although due to the size of the VMS compared to the monument and the presence of other many other visual distractions, the impacts are judged to be neutral, and the effects neutral.

#### The Tolhouse (NHLE 1245560)

- 8.6.4** The Tolhouse structure was built in the mid-12th century as a merchant's house and is Grade I Listed. It is of high value. It is located approximately 50m from the Satellite Application Site on Yarmouth Way. The position of the VMS will mean limited intervisibility between the asset and the VMS and



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there will be negligible impact on the Grade I Listed Building. The effects on the high value heritage asset would be slight adverse.

## 9 Assessment of Harm to Designated Heritage Assets

### 9.1 Introduction

9.1.1 The NPS NN and NPPF states that substantial harm to or loss of a Grade II Listed Building or a Grade II Registered Park or Garden should be exceptional, and wholly exceptional for Scheduled Monuments, Grade I and II\* Listed Buildings, Registered Battlefields, and Grade I and II\* Registered Parks and Gardens. The assessment of magnitude of harm is determined by the impact of the development on the value and interest of the heritage asset (architectural, historic, archaeological, and/or artistic). The assessment of harm is expressed on a three-point scale: Minor Harm and Harm (both constitute “Less than Substantial Harm”) and Substantial Harm.

### 9.2 Assessment of Harm to Heritage Assets Within the Principal Application Site

9.2.1 There are no designated heritage assets within the Principal Application Site.

### 9.3 Assessment of Harm to Heritage Assets Outside of the Principal Application Site

9.3.1 The assessment has identified 12 designated heritage assets in a 1km Study Area which have the potential to be harmed by the introduction and operation of the Scheme due a change in their setting (see Section 7.1.10). They comprise of the following assets:

- The Grade I listed Nelson’s Monument (NHLE 1246057);
- Grade II Listed Dolphin Public House (NHLE 1096829);
- Grade II Listed Gas Holder (NHLE 1096789);
- Grade II The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976);
- St Nicholas Hospital Block Asset group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986);
- Camperdown Conservation Area;
- Hall Quay South Quay Conservation Area; and
- Gorleston Extension Conservation Area.

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### **Nelson's Monument (NHLE 1246057)**

- 9.3.2** Nelson's Monument is a Grade I Listed Building and is therefore of high value, based on its architectural, historical and artistic values. The assessment has established that its immediate setting contributes minimally towards the value of this asset, however the wider setting does contribute to its value. The impacts on the setting are judged to be slight, as the setting would be noticeably changed, but not significantly modified, and the effects Moderate Adverse.
- 9.3.3** The Scheme would not result in a significant change to the architectural, historical and artistic interest of the Nelson's Monument. The Scheme will slightly reduce the contribution the setting makes in a few locations in the wider setting by diminishing its visual prominence, however the introduction of the Scheme will provide new opportunities to view the asset from the bridge itself. The Scheme would therefore have Less than Substantial Harm on Nelson's Monument.

### **Dolphin Public House (NHLE 1096829)**

- 9.3.4** The Dolphin Public House is designated as Grade II Listed Building and is located adjacent to the Principal Application Scheme. It will not be directly physically impacted by the Scheme. The Dolphin is not currently in use, however externally it appears to be in good condition. The Dolphin is of medium value, with its interest drawn from both its architectural and historic interest. Its direct relationship with the 19<sup>th</sup> century Fish Wharf is a key part of its historic interest.
- 9.3.5** The Scheme would result in a major modification of the setting of the Grade II Dolphin Public House (NHLE 1096829). The introduction of the bridge and highway immediately to the south would significantly alter the views to and from the asset. There would also be a substantial increase in traffic, noise, pollution and lighting in the immediate environment, which have an adverse impact on the asset. The setting, however, is judged to have a negligible contribution to the value of the asset due to the high degree of change that has occurred with the modernisation of the port, resulting in the loss of historic elements (mainly the Fish Wharf).
- 9.3.6** The Scheme would not reduce the architectural interest of the asset as the building would be retained and would not be materially altered in anyway. The historic interest is no longer manifest substantially in the setting due to the level of modernisation required for the Fish Wharf, and so this would also remain unchanged. The asset appears to be in good condition, however the continued lack of use of the building would in the long term leave it at risk from degradation. While there are no opportunities included within the Scheme which include the asset, there is a potential for opportunities for the asset to be brought back into use following its completion and these are

should be encouraged. The impact of the Scheme would, therefore, be No Harm.

### **Gas Holder (NHLE 1096789)**

- 9.3.7 The Gas Holder was built in the 1880s and was designated as a Grade II Listed Building in 1998. As it is a Grade II listed building, it is of medium value, based largely on its architectural value, which is increased by the use of ornate elements within an otherwise utilitarian structure. Historically, it is representative of 19<sup>th</sup> century efforts to provide a regular and constant gas supply to businesses and homes which also adds to its value. The setting provides a minor contribution due to the size and prominence of the structure.
- 9.3.8 The introduction of the Scheme will not impact significantly on the architectural interest of the Gas Holder, as there will be no direct physical impacts, and will not change the historic value in anyway. The asset has unintentionally become a prominent feature in the wider landscape and the Scheme will impact on the asset by reducing and removing some views towards it. The impacts are judged to be minor and would be Less than Substantial Harm.

### **The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach (NHLE 1436976)**

- 9.3.9 The Scenic Railway Roller Coaster at Great Yarmouth Pleasure Beach is located on the beachfront, approximately 1km to the west of the Scheme. The value of the asset is drawn from its age/rarity, architectural and historic interest. The Scheme would not be visible at street level, however it would be visible when riding the Roller Coaster; albeit fleetingly. The assessment has determined that there will be negligible impacts and no Harm on the setting of the Roller Coaster and the value of the asset will not be altered due to the Scheme.

### **St Nicholas Hospital Assets Group (NHLE 1245982, 1245983, 1245984, 1245985 and 1245986);**

- 9.3.10 St Nicholas Hospital comprises two Grade II\* and three Grade II Listed Buildings. The main hospital building comprises a four-wing hospital block, arranged around a central quadrangle (NHLE 1245983). To the north is the main entrance block (NHLE 1245984), and to the south is the South Block (NHLE 1245985) and CSSD Store, built as a mortuary and chapel (NHLE 1245982). The site is enclosed by walls and railings (NHLE 1245986). The hospital was built in 1809 to 1811 and then became a naval barracks in 1818. It was later used as a general hospital.
- 9.3.11 The main block and entrance block are Grade II\* listed and are therefore of high value, while the remainder are Grade II and have medium value. The



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group as a whole is judged to be a high value. The value of all the assets is drawn from their architectural and historical values. They are an example of early 19<sup>th</sup> century military and hospital planning architecture, and it was noted for its use of a well-lit and ventilated design. Its presence provides a clear link with the area's Great Yarmouth naval past.

- 9.3.12** The impact of the Scheme during the operation period is judged to be negligible due to very limited predicted visibility of the Scheme at the asset. The elements that are potentially visible would not change the setting in a way that would alter the contribution of the setting to the importance of the asset group, and would not change the architectural and historical value of the asset group. The Scheme would cause No Harm to the asset group.

### **Camperdown Conservation Area**

- 9.3.13** The value of the Conservation Area is judged to be medium due to the majority of the designated assets contained within it being of Grade II designation. The value also reflects the degree of change and the insertion of modern development within the Conservation Area. The significant elements of the Conservation Area setting are the combination of urban and coastal location.
- 9.3.14** There is currently no intervisibility between the Camperdown Conservation Area and the Principal Application Site and they share no key views. There is a potential the raised bridge leaf would be visible from the area to the east of the St Nicholas's Hospital and from the east of Queen's Road above the roof lines of the buildings, however the Scheme would not be visible the majority of the time when the bridge is in the closed position. The occasional visibility of the bridge when it is raised would not impact on the elements of the setting which contribute to the importance of the Camperdown Conservation Area. The Scheme is therefore judged to have no change and there will be No Harm.

### **Hall Quay South Quay Conservation Area**

- 9.3.15** The Hall Quay South Quay Conservation Area lies approximately 1km north of the Principal Application Site. The Conservation Area is located within the historic core of Great Yarmouth, defined by the Town Walls. It contains four Scheduled Monuments, and 44 listed buildings (three Grade I, four Grade II\* and 37 Grade II). The importance of the Conservation Area is drawn from its architectural and also strongly from its historic interest too. Based on the number of high value assets contained within the Conservation Area, the importance of it is judged to be also high. The setting of the Conservation Area has a substantial contribution to its value.
- 9.3.16** During the operation phase, the impacts of the Scheme on the Hall Quay South Quay Conservation Area are judged to be negligible. There will be a slight change in one key view, south along the River Yare which will see the

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distance shortened very slightly, and while the bridge, control tower and plant room will provide a new visual intrusion, there exist a number of other intrusions within the view currently. There is also a potential for the Scheme to provide beneficial impacts with a reduction in traffic volume along Hall Quay and South Quay.

- 9.3.17** The change in Scheme will not impact on the architectural and historic interest of the Conservation Area and there will be a very limited change in the contribution of the setting. The impacts will therefore be Less than Substantial Harm.

### **Gorleston Extension Conservation Area**

- 9.3.18** The Gorleston Extension Conservation Area boundary lies approximately 500m to the south of the Principal Application Site. The lack of Conservation Area appraisal limits the opportunity to assess the value and importance of the Conservation Area as the character of it has not been defined. It is assumed that this is based mostly on the architectural interest. The impacts of the Scheme on the Conservation Area would be negligible as the setting of the Conservation Area would not be altered in a way that would reduce the contribution of the setting to the asset. The Scheme would therefore have No Harm on the asset.

## **9.4 Assessment of Harm to Heritage Assets within the Satellite Application Sites**

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- 9.4.1** There are no designated heritage assets within the Satellite Application Site.

## **9.5 Assessment of Harm to Heritage Assets Outside of the Principal Application Site**

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- 9.5.1** The assessment has identified two designated heritage assets in a 250m Study Area which have the potential to be harmed by the introduction and operation of the Scheme due to a change in their setting:

- The Scheduled Monument Medieval Town Walls (NHLE 1003782); and
- The Grade I Listed Tolhouse (NHLE 1245560)

Medieval Town Walls (NHLE 1003782); and

- 9.5.2** The Satellite Application Site on North Quay is located 30m from an extant section of the Scheduled Monument Town Walls (NHLE 1003782), which is of high value. The impacts of the Scheme on the setting of the Scheduled Monument would be neutral, and therefore there would be No Harm on the asset.

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### The Tolhouse (NHLE 1245560)

- 9.5.3** The Tolhouse is of a high value asset and is located approximately 50m from the Satellite Application Site on Yarmouth Way. The position of the VMS will mean limited intervisibility between the asset and the VMS and there will be negligible impact on the Grade I Listed Building from a change of setting. The Scheme will not impact on the architectural and historic interest of the Tolhouse and there will a very limited change in the contribution of the setting. The impacts will therefore be Less than Substantial Harm.

## 10 Conclusion

- 10.1.1** A total of 18 buried heritage assets have been identified within the Principal Application Site, of which eight are identified as being of low importance and the remainder negligible. The impacts will be moderate to major adverse and the effects moderate adverse on the low value assets before mitigation, reducing to minor adverse with mitigation through preservation by record.
- 10.1.2** There is a potential for currently unknown buried archaeological assets to be present within the Scheme, including deeply stratified deposits which may not have been disturbed by modern development. Due to the proximity of the Principal Application Site to the River Yare and the medieval shoreline, there is potential for buried remains associated with maritime activity, and for high level of preservation of remains, such as wood, in waterlogged deposits.
- 10.1.3** An archaeological evaluation will be required prior to construction in order to establish the presence, extent and value of the buried archaeological resource. The importance of such remains is unknown and may range from Negligible to High value. Any early prehistoric artefacts of Palaeolithic date would be classed as being of international significance and Very High value. The impacts on buried assets within the Principal Application Site would be major adverse and the effects would therefore vary from slight to very large adverse.
- 10.1.4** The construction phase will require the demolition of two sets of terraced housing located within the Principal Application Site on the western side of the River Yare (WSP04 and WSP06). Both terraces are of late 19th century date and are judged to be of low importance. As the assets will be removed entirely, the impacts before mitigation would be major adverse and the effects moderate adverse, without mitigation. There is a potential for the effects to be reduced through a programme of historic building recording which will allow for preservation by record and would reduce the effects to slight adverse.
- 10.1.5** The construction and operation phase will result in significant effects on Grade I Listed Nelson's Monument (NHLE 1246057) and the Grade II Listed Gas Holder (NHLE 1096789) due to changes in the setting. The Scheme will have moderate adverse impacts on their settings due to the visual intrusion, particularly from the bridge, the control tower and the plant room, which will present a major change in the skyline. Both are visually dominant features in the local area and this contributes to the importance of each asset. The effects on Nelson's Monument, a Grade I Listed Building of high value, will be moderate adverse, due to the distance and varying level of impact on the views towards the monument. The effect on the Grade II listed Gas Holder, a medium value asset, is also predicted to be moderate adverse due to the close proximity of the Gas Holder to the bridge. The impacts identified would

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have a Less than Substantial Harm on these assets, however, as the value of the assets would remain largely unchanged.

- 10.1.6** There will be adverse impacts on the settings of three non-designated built heritage assets during construction and operation period (Fish Wharf 1877 Extension Building (WSP01), Late 19<sup>th</sup> century terraces off Southtown Road (WSP03) and Late 19<sup>th</sup> century terraces off St Anne's Road (WSP05). All are low value assets and the setting represents a minor contribution to the value: the effects are therefore slight adverse effect.
- 10.1.7** The Scheme includes six Satellite Application Sites for the installation of VMS. The Satellite Application Sites on North Quay, Fullers Way and Yarmouth Way are located within the medieval town, as defined by the remain of the town walls, and there is a potential for buried remains in these locations, although they are predicted to have been heavily disturbed. The amount of ground disturbance associated with the installation of VMS is predicted to be minimal.
- 10.1.8** The Satellite Application Site on North Quay is located 30m from an extant section of the Scheduled Monument Town Walls (NHLE 1003782). The positioning of the VMS close to an upstanding part of the monument may result in it causing a slight visual distraction when approaching the monument from the north along North Quay, although due to the size of the VMS compared to the monument and the presence of other many other visual distractions, the impacts are judged to be neutral, and the effects neutral.
- 10.1.9** The Tolhouse structure was built in the mid-12th century as a merchant's house and is Grade I Listed. It is located approximately 50m from the Satellite Application Site on Yarmouth Way. The position of the VMS will mean limited intervisibility between the asset and the VMS and there will be negligible impact on the Grade I Listed Building. The effects on the high value heritage asset would be slight adverse.

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## Annex A: Historic Environment Gazetteer

### A1.1 Introduction

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**A1.1.1** The Historic Environment Gazetteer is based on the data held in the National Heritage List for England (NHLE), the Norfolk Historic Environment Record (NHER) and a result of the walkover survey undertaken as part of the DBA. The Gazetteer includes a summary of the potential and residual effect for all sites identified within the desk-based study area, showing the extent and contribution of the various mitigation measures proposed.

### A1.2 Study Areas

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**A1.2.1** The study area which has been adopted for the assessment of cultural heritage features extends to 500m around the Proposed Scheme for non-designated cultural heritage assets, and 1km around the scheme options for designated assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Park and Garden, Registered Battlefield and Conservation Area). The Study Area for the road traffic signs extends 250m around the proposed locations for designated cultural heritage assets.

**A1.2.2** The location of the cultural heritage assets is shown in Figure 9.1 and 9.2 in the ES (document reference 6.1).

### A1.3 Assessment of Value

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**A1.3.1** An indication of the value of the cultural heritage assets is provided in the Tables below based on the assessment undertaken. The assessment of the value of cultural heritage assets involves consideration of how far the asset(s) contribute to an understanding of the past, through their individual or group qualities, either directly or potentially. These are professional judgements, but they are also guided by legislation, national policies, acknowledged standards, designations, criteria and priorities. The assessment of value (also referred to as significance) is undertaken in line with DMRB guidance (Annexes 5, 6 and 7), and in compliance with the NPPF.

### A1.4 Assessment of Impact

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**A1.4.1** The assessment of the magnitude of impact (i.e. change) is the identification of the degree of the effect of the scheme on the heritage assets. There is no standard scale of comparison against which the severity of effects on heritage assets may be judged, because of the great variety of resources



and assets. The assignment of a magnitude of impact is a matter of professional judgement.

*Table A.1: Summary of Criteria to Assess Magnitude of Impact Criteria*

Impact	Description
Major	<ul style="list-style-type: none"> <li>Change to most or all key archaeological materials or key historic building elements, such that the resource is totally altered.</li> <li>Comprehensive changes to setting</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>Changes to many key archaeological materials or key historic building elements, such that the resource is clearly modified.</li> <li>Considerable changes to setting that affect the character of the asset.</li> </ul>
Minor	<ul style="list-style-type: none"> <li>Changes to key archaeological materials or key historic building elements, such that the asset is slightly altered.</li> <li>Slight changes to setting.</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>Very minor changes to archaeological materials or historic building elements, or setting.</li> </ul>
No Change	<ul style="list-style-type: none"> <li>No change</li> </ul>

## A1.5 Assessment of Significance of Effects

**A1.5.1** The significance of effect on designated and non-designated heritage assets has been derived from a consideration of the sensitivity/value of the receptor and the magnitude of the impact upon it, as illustrated by the matrix presented below.

*Table A.2: Impact Significance*

		Magnitude of Impact				
		Major	Moderate	Minor	Negligible	No Change
Value	Very High	Very Large	Large/ Very Large	Moderate/ Large	Slight	Neutral
	High	Large/ Very Large	Moderate/ Large	Moderate/ Slight	Slight	Neutral
	Medium	Moderate/ Large	Moderate	Slight	Neutral/ Slight	Neutral

Magnitude of Impact						
	<b>Low</b>	Slight/ Moderate	Slight	Neutral/ Slight	Neutral/ Slight	Neutral
	<b>Negligible</b>	Slight	Neutral/ Slight	Neutral/ Slight	Neutral	Neutral
	<b>Unknown</b>	Unknown	Unknown	Unknown	Unknown	Unknown

### Copyright

**A1.5.2** The HER data contained within this gazetteer is the copyright of the NHER. The NHLE Data is the copyright of Historic England statutory designations data © Historic England 2018. Contains Ordnance Survey data © Crown copyright and database right 2018.

### Abbreviations:

HER – Historic Environment Record

NHLE – National Heritage List Entry

WSP – Sites identified by WSP during walkover

*Table A.3: Summary of British Archaeological and Historical Periods and Date Ranges*

Date Range	
Prehistoric Period:	
• Palaeolithic	500,000 – 10,000 BC
• Mesolithic	10,000 – 3,500 BC
• Neolithic	3,500 – 2,200 BC
• Bronze Age	2,200 – 700 BC
• Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval (Anglo-Saxon and Viking periods)	AD 410 – AD 1066
Late Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1901

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Date Range	
Modern	Post-1901

## A1.6 Principal Application Area

*Table A.4: Scheduled Monuments: Principal Application Area*

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1003782	TOWN WALLS	652572	307583	High	No Change	Neutral	N/A	Neutral
NHLE 1003958	NOS 6, 7 AND 8, ROW 111, SOUTH QUAY	652459	307195	High	No Change	Neutral	N/A	Neutral
NHLE 1004020	MERCHANT'S HOUSE, ROW 117, SOUTH QUAY	652462	307141	High	No Change	Neutral	N/A	Neutral
NHLE 1017910	GREYFRIARS FRANCISCAN FRIARY	652398	307343	High	No Change	Neutral	N/A	Neutral

**Table A.5: Grade I Listed Buildings: Principal Application Area**

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245560	THE TOLHOUSE	652496	307253	High	No Change	Neutral	N/A	Neutral
NHLE 1245915	REMAINS OF THE CHURCH OF THE GREYFRIARS	652403	307330	High	No Change	Neutral	N/A	Neutral
NHLE 1245919	ST GEORGES THEATRE	652612	307348	High	No Change	Neutral	N/A	Neutral
NHLE 1246057	NELSONS MONUMENT	652999	305508	High	Moderate adverse setting	Moderate – Setting	N/A	Moderate – Setting

**Table A.6: Grade II\* Listed Buildings: Principal Application Area**

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245561	GREAT YARMOUTH POTTERIES	652727	306909	High	No Change	Neutral	N/A	Neutral
NHLE 1245800	CUSTOM HOUSE	652406	307237	High	No Change	Neutral	N/A	Neutral
NHLE 1245803	25, SOUTH QUAY	652438	307190	High	No Change	Neutral	N/A	Neutral
NHLE	OLD MERCHANTS	652462	307142	High	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1245917	HOUSE							
NHLE 1245922	THE HIPPODROME	653048	307119	High	No Change	Neutral	N/A	Neutral
NHLE 1245983	ST NICHOLAS HOSPITAL MAIN BLOCK	652890	306400	High	Minor Adverse Setting –	Slight– setting	N/A	Slight– setting
NHLE 1245984	ST NICHOLAS HOSPITAL MAIN ENTRANCE RANGE	652840	306464	High	Minor Adverse Setting –	Slight– setting	N/A	Slight– setting
NHLE 1271278	OLD WHITE LION PUBLIC HOUSE	652635	307081	High	No Change	Neutral	N/A	Neutral
NHLE 1271608	THE WINTER GARDENS	653148	306762	High	No Change	Neutral	N/A	Neutral

*Table A.7: Grade II Listed Buildings: Principal Application Area*

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096787	MAYFLOWER HOTEL (NUMBER 5) ST GEORGES HOTEL (NUMBERS 7-8)	652980	306784	Medium	No Change	Neutral	N/A	Neutral
NHLE	GAS HOLDER	652739	306149	Medium	No Change	Moderate –	N/A	Moderate –



Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1096789						setting		setting
NHLE 1096790	SOUTHTOWN AND GORLESTON METHODIST CHURCH	652411	305346	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096791	TOWER FISH CURING WORKS	652766	306976	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096804	REMAINS OF AUSTIN FRIARS PRIORY	652417	305260	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096805	DONNA DOONE HOTEL (NUMBERS 1, 1A AND 2) NEPTUNE HOTEL (NUMBERS 9-11) AND SIENNA LODGE HOTEL (NUMBERS 17-18)	653004	306878	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096806	THE EMBASSY HOTEL (NUMBERS 38-41)	652991	306832	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096826	WOOD HALL HOTEL	652714	307151	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096827	CHURCH OF ST SPYRIDON	652726	307101	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096829	DOLPHIN PUBLIC HOUSE	652587	306039	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245556	9 AND 11, TOLHOUSE STREET	652505	307238	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245557	13, TOLHOUSE STREET	652509	307233	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245558	15, TOLHOUSE STREET	652511	307229	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245559	17 AND 19, TOLHOUSE STREET	652514	307221	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245563	3, 4 AND 5, WATERLOO ROAD	653041	306894	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245564	11-16, WELLINGTON ROAD	653002	306910	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245565	20, WELLINGTON ROAD	653002	306978	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245566	WELLINGTON ARCH	653020	306885	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245798	16, SOUTH QUAY	652396	307273	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245799	17, SOUTH QUAY	652394	307261	Medium	No Change	Neutral	N/A	Neutral
NHLE	PORT AND HAVEN COMMISSIONERS	652411	307225	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1245801	OFFICES							
NHLE 1245802	23 AND 24, SOUTH QUAY	652434	307215	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245804	26 AND 27, SOUTH QUAY	652434	307180	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245805	31, SOUTHTOWN ROAD	652106	307083	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245806	32, SOUTHTOWN ROAD	652109	307076	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245807	BOUNDARY WALL TO SOUTH OF NUMBER 66 (NUMBER 66 NOT INCLUDED)	652201	306797	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245808	BOUNDARY WALL TO NORTH OF NUMBER 67 (NUMBER 67 NOT INCLUDED)	652201	306794	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245809	83 AND 84, SOUTHTOWN ROAD	652328	306490	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245810	244, SOUTHTOWN ROAD	652281	306806	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245811	WORKSHOP RANGE N OF NO. 244A	652303	306872	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245812	UTILITY BLOCK IMMEDIATELY EAST OF NUMBER 244A	652313	306850	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245813	WORKSHOP RANGE NORTH OF NUMBER 244A	652303	306872	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245814	244B, SOUTHTOWN ROAD	652314	306828	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245815	245, SOUTHTOWN ROAD	652280	306827	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245816	271-277, SOUTHTOWN ROAD	652155	307134	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245817	CHURCH OF ST MARY	652146	307165	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245916	6, 7 AND 8, ROW 111	652458	307193	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245918	1, 2 AND 3, ST GEORGES PLAIN	652638	307289	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245920	PARK HOUSE (NUMBER 82)	652730	307331	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245921	RED FLEET HOUSE	652705	307342	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245980	9, QUEEN STREET	652370	307340	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245981	CHURCH OF ST JAMES	652716	306548	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245982	ST NICHOLAS HOSPITAL CSSD STORE	652778	306286	Medium	Minor Adverse setting –	Slight– setting	N/A	Slight– setting
NHLE 1245985	ST NICHOLAS HOSPITAL SOUTH BLOCK	652845	306289	Medium	Minor Adverse setting -	Slight– setting	N/A	Slight– setting
NHLE 1245986	ST NICHOLAS HOSPITAL WALLS AND RAILINGS	652926	306371	Medium	Minor Adverse setting -	Slight– setting	N/A	Slight– setting
NHLE 1246059	41-46, NELSON ROAD SOUTH	652885	306854	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246580	CANNON BOLLARD, CANNON BOLLARD AT JUNCTION WITH ROW 116	652633	307212	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246583	CAVENDISH HOTEL	653051	306878	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246584	ROYAL HOTEL	653034	306937	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246585	MARITIME MUSEUM	653052	307202	Medium	No Change	Neutral	N/A	Neutral
NHLE	123 AND 123A, KING	652635	307157	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1246587	STREET							
NHLE 1246588	126 AND 127, KING STREET	652626	307184	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246589	131, KING STREET	652619	307205	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246590	132, KING STREET	652615	307214	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246591	133, KING STREET	652614	307223	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246592	134 AND 134A, KING STREET	652613	307235	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246593	135, KING STREET	652613	307242	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246594	136, KING STREET	652603	307253	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246595	137 AND 138, KING STREET	652596	307259	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246596	139, KING STREET	652596	307265	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246597	LIBERTIES PUBLIC HOUSE	652593	307277	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246598	NUMBER 141 INCLUDING AREA RAILINGS	652598	307292	Medium	No Change	Neutral	N/A	Neutral



Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1246599	142, KING STREET	652591	307297	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246600	143, KING STREET	652593	307305	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246601	144, KING STREET	652582	307305	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246602	NUMBER 145 INCLUDING BASEMENT AREA RAILINGS IN FRONT	652579	307317	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246603	NUMBER 148 INCLUDING RAILINGS TO DOORWAY	652570	307348	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246970	AHOY, MANBY HOUSE	652610	305354	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246971	95, HIGH ROAD	652579	305414	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246972	96, HIGH ROAD	652575	305424	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246973	PROVIDENCE VILLA	652570	305433	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246974	KOOLUNGA HOUSE	652608	305230	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1246975	THE SHORT BLUE PUBLIC HOUSE	652721	304845	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246977	235, HIGH STREET	652665	305022	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246978	MILEPOST IN FRONT OF NUMBER 245 (NUMBER 245 NOT INCLUDED)	652657	305084	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271269	CARLTON HOTEL (NUMBERS 1-5)	653022	306805	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271271	33, KING STREET (See details for further address information)	652626	307285	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271272	34, KING STREET	652629	307281	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271273	CREDENCE HOUSE INCLUDING AREA RAILINGS	652645	307242	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271274	KINGS WINE BAR INCLUDING STEP RAILINGS	652646	307232	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271275	NUMBER 43 INCLUDING 2 STABLE RANGES TO REAR	652649	307222	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1271276	NUMBER 44 INCLUDING RAILINGS TO STEPS	652648	307213	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271277	WORKING MENS CLUB	652679	307171	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271549	BARKING SMACK PUBLIC HOUSE	653053	307058	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271551	WINDMILL CINEMA	653054	306988	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271606	MASONIC ROYAL ASSEMBLY ROOMS	653006	306732	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271607	SHADINGFIELD LODGE	653034	306684	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271612	5, SOUTH QUAY	652352	307348	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271613	6, SOUTH QUAY	652353	307337	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271614	7 AND 8, SOUTH QUAY	652358	307333	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271615	10, SOUTH QUAY	652372	307307	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271616	11, SOUTH QUAY	652374	307304	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1271617	12, SOUTH QUAY	652383	307310	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271618	13 AND 14, SOUTH QUAY	652385	307292	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271805	WELLINGTON MEWS ARCH	653016	306832	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271806	CHURCH OF ST JOHN	652985	307172	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393268	UTILITY BLOCK IMMEDIATELY EAST OF NO.244A	652313	306850	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393653	YORK ROAD CENTRE (FORMER DRILL HALL)	652707	307236	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393704	FORMER GAS SHOWROOM	652646	307253	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393958	FAR EAST PRISONER OF WAR, WAR MEMORIAL	653115	307053	Medium	No Change	Neutral	N/A	Neutral
NHLE 1436976	THE SCENIC RAILWAY ROLLER COASTER AT GREAT YARMOUTH PLEASURE BEACH	653137	306001	Medium	No Change	Neutral	N/A	Neutral

**Table A.8: Conservation Areas: Principal Application Area**

Site Reference	Conservation Area Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
N/A	CAMPERDOWN	652929	306555	Medium	Negligible	Neutral	N/A	Neutral
N/A	GORLESTON EXTENSION	652653	305186	Medium	Negligible	Neutral	N/A	Neutral
N/A	KING STREET	652617	307207	High/ Medium	No Change	Neutral	N/A	Neutral
N/A	SEAFRONT	653186	307860	Medium	No Change	Neutral	N/A	Neutral
N/A	HALL QUAY AND SOUTH QUAY	652310	307371	High	Minor Adverse	Slight Adverse	N/A	Slight Adverse
N/A	ST GEORGE'S	652795	307519	Medium	No Change	Neutral	N/A	Neutral

**Table A.9: Non-Designated Heritage Assets: Principal Application Area**

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 12936	Find Spot	Neolithic	NEOLITHIC SCRAPER	652222	306174	Medium	No Change	Neutral	N/A	Neutral
NHER 60518	Monument	Medieval	LATE MEDIEVAL TIMBER-FRAMED BUILDING,	652449	305276	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			BURNT LANE							
NHER 60531	Monument	Medieval	SITE OF AUGUSTINIAN FRIARY, GORLESTON ON SEA	652505	305300	Medium	No Change	Neutral	N/A	Neutral
NHER 21361	Find Spot	Medieval to Post Medieval	MEDIEVAL AND POST MEDIEVAL POTTERY	652564	306641	Low	No Change	Neutral	N/A	Neutral
NHER 4266	Monument	Medieval to Post Medieval	THE SITE OF THE MEDIEVAL DOMINICAN OR BLACKFRIARS FRIARY	652600	306775	Medium	No Change	Neutral	N/A	Neutral
NHER 56257	Monument	Medieval to Post Medieval	SITE OF SOUTH GATE	652523	306700	Medium	No Change	Neutral	N/A	Neutral
NHER 30081	Monument	Medieval to Post Medieval	MULTI-PERIOD FINDS	652657	307094	Low	No Change	Neutral	N/A	Neutral
NHER 55098	Monument	Medieval to Post Medieval	LATE MEDIEVAL POTTERY SHERD AND ALLUVIAL	652641	305294	Low	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northings	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			DEPOSITS							
NHER 15149	Monument	Post Medieval	POST MEDIEVAL MALTINGS, GORLESTON ON SEA	652523	305570	Low	No Change	Neutral	N/A	Neutral
NHER 21345	Monument	Post Medieval	SITE OF POST MEDIEVAL SIGNAL STATION AND COASTGUARD STATION	652987	306581	Low	No Change	Neutral	N/A	Neutral
NHER 28940	Monument	Post Medieval	POST MEDIEVAL ICEHOUSE	652383	306655	Low	No Change	Neutral	N/A	Neutral
NHER 4328	Monument	Post Medieval	SOUTH STAR BATTERY	653035	305944	Low	No Change	Neutral	N/A	Neutral
NHER 40075	Building	Post Medieval	FELLOWS DRY DOCKS	652352	306732	Low	No Change	Neutral	N/A	Neutral
NHER 43472	Monument	Post Medieval	SITE OF DRAIN, PROBABLY POST MEDIEVAL, AT HARFREYS INDUSTRIAL ESTATE,	651643	306061	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SOUTHTOWN							
NHER 43637	Monument	Post Medieval	SITE OF A POST MEDIEVAL ROPEWALK AT GREAT YARMOUTH COLLEGE, SOUTHTOWN	652168	306440	Low	No Change	Neutral	N/A	Neutral
NHER 12030	Monument	Post Medieval	BELOW GROUND REMAINS ASSOCIATED WITH THE SOUTHTOWN ARSENAL	652320	306820	Medium/Low	No Change	Neutral	N/A	Neutral
NHER 35783	Monument	Post Medieval	EARLY 19TH CENTURY BOUNDARY POST AT GORLESTON ON SEA	652360	305270	Low	No Change	Neutral	N/A	Neutral
NHER 55685	Monument	Post Medieval to Cold War	FISHWHARF SALT STORES	652531	306093	Low	Moderate to Major Adverse	Moderate Adverse	Preservation by record through archaeological	Slight Adverse

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
									investigation.	
NHER 55412	Building	Post Medieval to Cold War	GREAT YARMOUTH ELECTRICITY WORKS	652758	305845	Low	No Change	Neutral	N/A	Neutral
NHER 27643	Monument	Post Medieval to Modern	POSSIBLE WORLD WAR ONE HARDSTANDING	652948	305440	Negligible	No Change	Neutral	N/A	Neutral
NHER 50508	Building	Post Medieval to Modern	SOUTH QUAY SERVICE STATION	652550	306356	Low	No Change	Neutral	N/A	Neutral
NHER 13576	Monument	Post Medieval to Modern	ROUTES OF GREAT YARMOUTH URBAN RAILWAYS	652364	307247	Low	No Change	Neutral	N/A	Neutral
NHER 13581	Monument	Post Medieval to Modern	ROUTE OF MIDLAND AND GREAT NORTHERN JOINT RAILWAY (GREAT YARMOUTH TO	601604	319784	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SUTTON BRIDGE)							
WSP01	Building	Post Medieval to Modern	BUILDING ALONGSIDE FISH WHARF SHOWN ON 19TH CENTURY MAPPING. STILL EXTANT	652597	305801	Low	Minor Adverse-setting	Slight Adverse-setting –	N/A	Slight Adverse – setting
WSP02	Building	Post Medieval to Modern	19TH CENTURY BUILDING, FORMER MALTINGS. PARTIALLY EXTANT	652436	652436	Low	No Change	Neutral	N/A	Neutral
WSP03	Building	Post Medieval to Modern	19TH CENTURY DOMESTIC TERRACE BUILDING	652383	305832	Low	Minor Adverse – setting	Slight Adverse – setting	N/A	Slight Adverse – setting
WSP04	Building	Post Medieval to Modern	19TH CENTURY DOMESTIC TERRACE BUILDING	652299	305921	Low	Major Adverse	Moderate Adverse	Preservation by record through historic building recording.	Slight Adverse

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
WSP05	Building	Post Medieval to Modern	19TH CENTURY BUILDING	652373	305883	Low	Minor Adverse – setting	Slight Adverse – setting	N/A	Slight Adverse – setting
WSP06	Building	Post Medieval to Modern	19TH CENTURY BUILDING	652369	305974	Low	Major Adverse	Moderate Adverse	Preservation by record through historic building recording.	Slight Adverse
WSP07	Monument	Post Medieval to Modern	SITE OF 19TH CENTURY BUILDING	652373	305929	Low	No Change	Neutral	N/A	Neutral
WSP08	Monument	Post Medieval to Modern	SITE OF 19TH CENTURY BUILDING	652396	305749	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse
WSP09	Monument	Post Medieval to Modern	WHARF SIDE BUILDINGS	652538	305940	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse
WSP10	Monument	Post	FISH WHARF	652603	305915	Low	Major	Moderate	Preservation	Slight

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		Medieval to Modern					Adverse	Adverse	by record through archaeological investigation.	Adverse
WSP11	Monument	Post Medieval to Modern	SITE OF 19TH CENTURY BUILDING	652383	305950	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse
WSP12	Monument	Post Medieval to Modern	SITE OF 19TH CENTURY BUILDING	652398	305989	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse
WSP13	Monument	Post Medieval to Modern	SITE OF 19TH CENTURY BUILDING	652428	305749	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse
WSP14	Monument	Post Medieval to Modern	SITE OF MARSH HOUSE	652055	3066065	Low	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 48943	Building	Post Medieval to Modern	YARMOUTH COLLEGE, FORMER EDWARD WORLLEDGE CENTRAL SCHOOL, CONSTRUCTED AT SOME DATE AFTER 1883 AND BEFORE 1914.L	652136	306627	Low	No Change	Neutral	N/A	Neutral
WSP15	Monument	Modern	SITE OF A 20 <sup>TH</sup> CENTURY TIMBER YARD AND SAW MILL	6252126	306015	Negligible	Major Adverse	Moderate Adverse	Preservation by record through archaeological investigation	Neutral
NHER 43305	Monument	Modern	SITE OF POSSIBLE WORLD WAR TWO PILLBOX SOUTH OF BOUNDARY ROAD, SOUTHTOWN	652007	306009	Low	No Change	Neutral	N/A	Neutral
NHER	Monument	Modern	ROUTE OF	652385	302847	Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
13575			NORFOLK AND SUFFOLK JOINT RAILWAY (GREAT YARMOUTH TO LOWESTOFT)				Change			
NHER 33943	Monument	Modern	MODERN SEA WALL AND TRAMWAY INSTALLATIONS	653106	307705	Low	No Change	Neutral	N/A	Neutral
NHER 43304	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCKS ON BOUNDARY ROAD AND SUFFOLK ROAD, SOUTHTOWN	652194	306151	Low	No Change	Neutral	N/A	Neutral
NHER 19084	Monument	World War Two	WORLD WAR TWO LIGHT ANTI AIRCRAFT BATTERY AT GORLESTON ON SEA	652071	305377	Negligible	No Change	Neutral	N/A	Neutral
NHER 27701	Monument	World War Two	SITE OF WORLD WAR TWO AIR	652635	306171	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northings	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			RAID SHELTER AND GASOMETER							
NHER 32655	Monument	World War Two	SITE OF WORLD WAR TWO LIGHT ANTI AIRCRAFT TOWER AND OTHER DEFENCES ON FISHERMANS WHARF, GORLESTON ON SEA	652649	305356	Negligible	No Change	Neutral	N/A	Neutral
NHER 27364	Monument	World War Two	WORLD WAR TWO PILLBOX	652475	306767	Negligible	No Change	Neutral	N/A	Neutral
NHER 27373	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652668	306658	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27602	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTERS	652671	306805	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27375	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652677	306461	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27387	Monument	World War Two	SITE OF WORLD WAR TWO SURFACE AIR RAID SHELTERS AT ST JAMES' CHURCH, QUEEN'S ROAD	652700	306574	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27374	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652788	306515	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27319	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTERS	653023	305846	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27541	Monument	World War Two	WORLD WAR TWO SITE	653058	305556	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27639	Monument	World War Two	PROBABLE WORLD WAR TWO FUEL STORE	652848	305469	Negligible	No Change	Neutral	N/A	Neutral
NHER 27363	Monument	World War Two	SITE OF WORLD WAR TWO BARRAGE BALLOON	652882	305333	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27363	Monument	World War Two	SITE OF WORLD WAR TWO BARRAGE BALLOON	652882	305333	Negligible	No Change	Neutral	N/A	Neutral
NHER 27638	Monument	World War Two	SITE OF WORLD WAR TWO DEFENCES AND MILITARY INSTALLATIONS	652918	305509	Negligible	No Change	Neutral	N/A	Neutral
NHER 27645	Monument	World War Two	SITE OF WORLD WAR TWO SEAFRONT DEFENCES	653162	305648	Negligible	No Change	Neutral	N/A	Neutral
NHER 27658	Monument	World War Two	SITE OF WORLD WAR TWO SEAFRONT DEFENCES	653160	306362	Negligible	No Change	Neutral	N/A	Neutral
NHER 27678	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCK	653065	306276	Negligible	No Change	Neutral	N/A	Neutral
NHER 27677	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCK	653062	306224	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27675	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCK	653063	306116	Negligible	No Change	Neutral	N/A	Neutral
NHER 27672	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCK	653064	306000	Negligible	No Change	Neutral	N/A	Neutral
NHER 27670	Monument	World War Two	SITE OF WORLD WAR TWO ROAD BLOCK	653054	305894	Negligible	No Change	Neutral	N/A	Neutral
NHER 27679	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652957	306232	Negligible	No Change	Neutral	N/A	Neutral
NHER 27676	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	653049	306160	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27674	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	653068	306060	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27673	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	653017	306021	Low/Negligible	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27671	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	653055	305944	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27669	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	653038	305868	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27695	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	652955	306095	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27694	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	652878	306090	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27693	Monument	World War Two	SITES OF WORLD WAR TWO AIR RAID SHELTERS	652812	306115	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27697	Monument	World War Two	SITE OF WORLD WAR TWO DEFENCES	652572	305820	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER	Monument	World	SITE OF WORLD WAR TWO	652809	305856	Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
27698		War Two	BUILDING				Change			
NHER 27649	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652972	305956	Negligible	No Change	Neutral	N/A	Neutral
NHER 27699	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652872	305948	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27692	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652786	306207	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27690	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652855	306254	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27691	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652791	306251	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27700	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS	652590	306180	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27712	Monument	World War Two	SITE OF WORLD WAR TWO BUILDINGS	652545	306195	Negligible	No Change	Neutral	N/A	Neutral
NHER	Monument	World	SITE OF WORLD	652394	305888	Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
42355		War Two	WAR TWO ANTI INVASION DEFENCES AT JUNCTION OF QUEEN ANNE'S ROAD AND SOUTHTOWN ROAD, SOUTHTOWN				Change			
NHER 43303	Monument	World War Two	SITE OF WORLD WAR TWO SPIGOT MORTAR EMPLACEMENT NORTH OF WAVENEY ROAD, SOUTHTOWN	652310	306104	Negligible	No Change	Neutral	N/A	Neutral
NHER 43306	Monument	World War Two	WORLD WAR TWO MILITARY SITE SOUTH OF GREAT YARMOUTH COLLEGE, SOUTHTOWN	652231	306334	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 43307	Monument	World War Two	POSSIBLE SITE OF WORLD WAR TWO MILITARY ACTIVITY AT 127 TO 131 GORDON ROAD, SOUTHTOWN	652154	306672	Negligible	No Change	Neutral	N/A	Neutral
NHER 43310	Monument	World War Two	SITE OF WORLD WAR TWO HUT AT GAINSBOROUGH COURT	652941	306689	Negligible	No Change	Neutral	N/A	Neutral
NHER 43311	Monument	World War Two	SITE OF WORLD WAR TWO STRUCTURE AT SEAFIELD CLOSE	652963	306564	Negligible	No Change	Neutral	N/A	Neutral
NHER 43375	Monument	World War Two	SITE OF WORLD WAR TWO MILITARY ACTIVITY ON ST NICHOLAS RECREATION GROUND, FRANK STONE	652995	306411	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			COURT AND SOUTH BEACH PARADE CAR PARK							
NHER 43309	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO CIVIL DEFENCE BUILDING OR SHELTER AT SELBY PLACE	652592	306550	Negligible	No Change	Neutral	N/A	Neutral
NHER 43379	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS BETWEEN PIER PLACE AND QUEEN'S ROAD	652804	306629	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43378	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS OFF CAMDEN ROAD	652744	306675	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27570	Monument	World War Two	WORLD WAR TWO ROAD	651940	305217	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			BLOCK ACROSS BURGH ROAD, GORLESTON-ON-SEA							
NHER 43301	Monument	World War Two	WORLD WAR TWO STRUCTURES AT FIRE STATION AND FERRYSIDE COUNTY COUNCIL OFFICES, SOUTHTOWN	652520	305505	Negligible	No Change	Neutral	N/A	Neutral
NHER 43312	Monument	World War Two	SITE OF A WORLD WAR TWO EMERGENCY WATER SUPPLY TANK AT 42-44 SUFFOLK ROAD, GORLESTON-ON-SEA	652234	305440	Negligible	No Change	Neutral	N/A	Neutral
NHER 42353	Monument	World War Two	SITE OF WORLD WAR TWO ANTI INVASION	652290	305977	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northings	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			DEFENCES AT SOUTHTOWN							
NHER 43581	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 14, 16, 21, 27 AND WHAT WAS FORMERLY 30 BURNT LANE, GORLESTON-ON-SEA	652478	305252	Negligible	No Change	Neutral	N/A	Neutral
NHER 43584	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 56, 60 AND 63 BURNT LANE, AND LAND BEHIND NUMBER 54, GORLESTON-ON-SEA	652440	305288	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43583	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 10 AND 11 MANBY ROAD,	652453	305333	Low/Negligible	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			GORLESTON-ON-SEA							
NHER 43585	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 79 AND 80 BURNT LANE, GORLESTON-ON-SEA	652494	305376	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43582	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT CLEM-ELLEN COTTAGES, GORLESTON-ON-SEA	652503	305313	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43599	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT 135 SUFFOLK ROAD, GORLESTON-ON-SEA	652333	305262	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43595	Monument	World War Two	SITE OF WORLD WAR TWO AIR	652284	305453	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			RAID SHELTER AT 24 MANOR ROAD, GORLESTON-ON-SEA							
NHER 43594	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 46 COMMON ROAD; 3, 15, 23 AND 25 HARFREY'S ROAD; AND 20, 24, 34, 48, 50, 64 AND 66 SUFFOLK ROAD, GORLESTO	652197	305435	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43596	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 3 AND 5 MANOR ROAD, GORLESTON-ON-SEA	652331	305508	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER	Monument	World	SITE OF WORLD WAR TWO AIR	652272	305580	Low/Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
43597		War Two	RAID SHELTERS AT 21 COMMON ROAD AND 11 SUFFOLK ROAD, GORLESTON-ON-SEA				Change			
NHER 27663	Monument	World War Two	WORLD WAR TWO BOMB CRATER NORTHEAST OF TOWN LANDS, SOUTHTOWN	651960	305618	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27571	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO BOMB CRATER AT 34 BURGH ROAD, GORLESTON-ON-SEA	652188	305229	Negligible	No Change	Neutral	N/A	Neutral
NHER 43589	Monument	World War Two	PROBABLE WORLD WAR TWO BOMB CRATER AT GAS DISTRIBUTION STATION,	652340	305765	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SOUTHTOWN							
NHER 43471	Monument	World War Two	WORLD WAR TWO BOMB CRATER AT HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN	651991	305879	Negligible	No Change	Neutral	N/A	Neutral
NHER 27580	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS AT HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN	651907	305938	Negligible	No Change	Neutral	N/A	Neutral
NHER 27579	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS AT HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN	651747	305898	Negligible	No Change	Neutral	N/A	Neutral
NHER 42532	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATER AT	651759	306077	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northings	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN							
NHER 27578	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS AT HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN	651706	306218	Negligible	No Change	Neutral	N/A	Neutral
NHER 43477	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS AT YARMOUTH BUSINESS PARK, SOUTHTOWN	652143	306172	Negligible	No Change	Neutral	N/A	Neutral
NHER 43615	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATER OFF BOUNDARY ROAD, SOUTHTOWN	652311	306164	Negligible	No Change	Neutral	N/A	Neutral
NHER	Monument	World	SITE OF WORLD	652125	306458	Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
43616		War Two	WAR TWO BOMB CRATER OR SPIGOT MORTAR EMPLACEMENT AT GREAT YARMOUTH COLLEGE, SOUTHTOWN				Change			
NHER 43587	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT GAS DISTRIBUTION STATION, SOUTHTOWN	652377	305731	Negligible	No Change	Neutral	N/A	Neutral
NHER 43598	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT 6 COMMON ROAD, SOUTHTOWN	652348	305647	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43586	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID	652419	305610	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SHELTER AT JUNCTION OF COMMON ROAD AND BECCLES ROAD, SOUTHTOWN							
NHER 43629	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO AIR RAID SHELTER AT 1 COMMON ROAD, SOUTHTOWN	652397	305641	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43300	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT SUFFOLK CLOSE, GORLESTON-ON-SEA	652184	305480	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43590	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT 16 TO 18 ALPHA ROAD,	652328	305709	Low/Negligible	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SOUTHTOWN							
NHER 43588	Monument	World War Two	SITE OF WORLD WAR TWO INDUSTRIAL AIR RAID SHELTERS OFF QUEEN ANNE'S ROAD, SOUTHTOWN	652093	306015	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43478	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS ON ORDNANCE ROAD	652697	306366	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43479	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS ON EXMOUTH ROAD	652623	306427	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43377	Monument	World War Two	SITE OF WORLD WAR TWO SURFACE-LEVEL AIR RAID SHELTERS BEHIND HOUSES ON MARINERS'	652579	306710	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			ROAD							
NHER 43480	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT GREAT YARMOUTH COLLEGE AND EDWARD WORLLEDGE MIDDLE SCHOOL, SOUTHTOWN	652084	306598	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43621	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO AIR RAID SHELTER AT 132A GORDON ROAD, SOUTHTOWN	652190	306686	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 19949	Monument	World War Two	WORLD WAR TWO PILLBOX AT GORLESTON ON SEA	652010	305420	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER	Monument	World	WORLD WAR	652068	306324	Low/Negligible	No	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
32661		War Two	TWO PILLBOX AT YARMOUTH BUSINESS PARK, SOUTHTOWN				Change			
NHER 43622	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO AIR RAID SHELTER AT 4 TOLLGATE ROAD, SOUTHTOWN	652284	306363	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27644	Monument	World War Two to Modern	POSSIBLE WORLD WAR TWO AMBULANCE STATION	653027	305761	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43617	Monument	World War Two to Modern	SITE OF AN AIR RAID SHELTER	652026	306621	Low/Negligible	No Change	Neutral	N/A	Neutral

## A1.7 Satellite Application Sites

*Table A.10: Non-Designated Heritage Assets: Proposed VMS A47 South*

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 19084	Monument	World War Two	WORLD WAR TWO LIGHT ANTI AIRCRAFT BATTERY AT GORLESTON ON SEA	652071	305377	Negligible	No Change	Neutral	N/A	Neutral
NHER 27570	Monument	World War Two	WORLD WAR TWO ROAD BLOCK ACROSS BURGH ROAD, GORLESTON-ON-SEA	651940	305217	Negligible	No Change	Neutral	N/A	Neutral
NHER 43312	Monument	World War Two	SITE OF A WORLD WAR TWO EMERGENCY WATER SUPPLY TANK AT 42-44 SUFFOLK	652234	305440	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			ROAD, GORLESTON-ON-SEA							
NHER 62792	Monument	Undated and World War Two	UNDATED DITCHES AND PITS, POST-MEDIEVAL QUARRIES AND WORLD WAR II CRATERS	651622	304785	Low	No Change	Neutral	N/A	Neutral
NHER 43594	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 46 COMMON ROAD; 3, 15, 23 AND 25 HARFREY'S ROAD; AND 20, 24, 34, 48, 50, 64 AND 66 SUFFOLK ROAD, GORLESTON	652197	305435	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 43597	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS AT 21 COMMON ROAD AND 11 SUFFOLK ROAD, GORLESTON-ON-SEA	652272	305580	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27663	Monument	World War Two	WORLD WAR TWO BOMB CRATER NORTHEAST OF TOWN LANDS, SOUTHTOWN	651960	305618	Negligible	No Change	Neutral	N/A	Neutral
NHER 27571	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO BOMB CRATER AT 34 BURGH ROAD, GORLESTON-	652188	305229	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Eastings	Northing	Historic Value	Magnitude of impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			ON-SEA							
NHER 43618	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT 91 BURGH ROAD, GORLESTON ON SEA	651897	305175	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43300	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER AT SUFFOLK CLOSE, GORLESTON-ON-SEA	652184	305480	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 13575	Monument	Modern	ROUTE OF NORFOLK AND SUFFOLK JOINT RAILWAY (GREAT YARMOUTH	652385	302847	Low	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			TO LOWESTOFT)							
NHER 19949	Monument	World War Two	WORLD WAR TWO PILLBOX AT GORLESTON ON SEA	652010	305420	Low/Negligible	No Change	Neutral	N/A	Neutral

*Table A.11: Non-Designated Heritage Assets: VMS Gapton Hall*

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 32662	Monument	World War Two	WORLD WAR TWO TYPE 24 PILLBOX AT NEW CUTT FARM, GREAT YARMOUTH	651343	306647	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 34996	Monument	Post Medieval to	SITE OF 19TH CENTURY DRAINAGE	651400	306200	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		Modern	MILL							
NHER 13574	Monument	Post Medieval to Modern	ROUTE OF EAST SUFFOLK RAILWAY (YARMOUTH TO BECCLES)	647969	300071	Low	No Change	Neutral	N/A	Neutral
NHER 13575	Monument	Modern	ROUTE OF NORFOLK AND SUFFOLK JOINT RAILWAY (GREAT YARMOUTH TO LOWESTOFT)	652385	302847	Low	No Change	Neutral	N/A	Neutral
NHER 13581	Monument	Post Medieval to Modern	ROUTE OF MIDLAND AND GREAT NORTHERN JOINT RAILWAY (GREAT YARMOUTH TO SUTTON BRIDGE)	601604	319784	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 42519	Monument	World War Two	SITE OF WORLD WAR TWO RAILWAY BLOCK AT SOUTHTOWN	651657	306692	Negligible	No Change	Neutral	N/A	Neutral
NHER 42521	Monument	World War Two	WORLD WAR TWO LIGHT ANTI AIRCRAFT BATTERY SOUTH OF NEW CUTT FARM, GREAT YARMOUTH	651306	306521	Negligible	No Change	Neutral	N/A	Neutral
NHER 42531	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO STRUCTURE WEST OF THE A47, GREAT YARMOUTH	651504	306503	Negligible	No Change	Neutral	N/A	Neutral
NHER 43474	Monument	Medieval to Post Medieval	PROBABLY POST MEDIEVAL	650992	306114	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			DRAINS ON GAPTON MARSHES							
NHER 43475	Monument	Post Medieval	DRAINS, PROBABLY POST MEDIEVAL, ON GAPTON MARSHES	651047	306486	Low	No Change	Neutral	N/A	Neutral
NHER 43472	Monument	Post Medieval	SITE OF DRAIN, PROBABLY POST MEDIEVAL, AT HARFREYS INDUSTRIAL ESTATE, SOUTHTOWN	651643	306061	Low	No Change	Neutral	N/A	Neutral
NHER 27578	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATERS AT HARFREYS INDUSTRIAL ESTATE,	651706	306218	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
<b>SOUTHTOWN</b>										
NHER 43470	Monument	World War Two	SITE OF WORLD WAR TWO BOMB CRATER OR SPIGOT MORTAR EMPLACEMENT AT GREAT YARMOUTH COLLEGE, SOUTHTOWN	651469	306677	Negligible	No Change	Neutral	N/A	Neutral

*Table A.12: Scheduled Monuments: VMS North Quay*

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1003782	TOWN WALLS	652572	307583	High	No Change	Neutral	N/A	Neutral

*Table A.13: Grade I Listed Buildings: VMS North Quay*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245978	ST NICHOLAS (PRIORY) MIDDLE SCHOOL	652460	307985	High	No Change	Neutral	N/A	Neutral

*Table A.14: Grade II\* Listed Buildings: VMS North Quay*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096809	VICARAGE	652439	307977	High	No Change	Neutral	N/A	Neutral
NHLE 1096813	CHURCH OF ST NICHOLAS	652435	308036	High	No Change	Neutral	N/A	Neutral

*Table A.15: Grade II Listed Buildings: VMS North Quay*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096808	HARDYS	652332	307881.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096810	25, CHURCH PLAIN	652435	307959.4	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096811	SEWELL HOUSE	652437	307954.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096812	27, CHURCH PLAIN	652427	307953.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096814	CHURCHYARD GATES PIERS AND RAILINGS TO CHURCH OF ST NICHOLAS, CHURCHYARD RAILINGS TO CHURCH OF ST NICHOLAS	652354	308066.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096817	MEMORIAL TO DAVID BARTLEMAN WEST OF CHURCH OF ST NICHOLAS	652377	308026.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096818	MEMORIAL TO GEORGE BELOE SOUTH OF CHURCH OF ST NICHOLAS	652441	308002.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096819	PALMER TOMB 18 METRES WEST OF CHURCH OF ST NICHOLAS	652385	308047.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245562	VAUXHALL BRIDGE	652068	308021.4	Medium	No Change	Neutral	N/A	Neutral



Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245975	225, 226 AND 226A, NORTHGATE STREET	652386	308142.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246006	3, 4 AND 5, NORTHGATE STREET	652323	308026.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246007	6, NORTHGATE STREET	652322	308037.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246008	7, NORTHGATE STREET	652312	308036.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246009	WHITE HORSE INN	652304	308072.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246010	14 AND 15, NORTHGATE STREET	652312	308084.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246011	POST OFFICE (NUMBER 17)	652323	308094.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246012	18 AND 19, NORTHGATE STREET	652332	308105.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246013	20 AND 20A, NORTHGATE STREET	652338	308112.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246014	220, 221 AND 222, NORTHGATE STREET	652403	308181.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246015	224, NORTHGATE STREET	652387	308154.4	Medium	No Change	Neutral	N/A	Neutral
NHLE	2, HOWARD STREET	652392	308175.4	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1271265	SOUTH							

*Table A.16: Conservation Areas: VMS North Quay*

Site Reference	Conservation Area Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
N/A	ST NICHOLAS NORTHGATE STREET	652534	308150	High/ Medium	No Change	Neutral	N/A	Neutral

*Table A.17: Non-Designated Heritage Assets: VMS North Quay*

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 1032	Monument	Late Saxon	LATE SAXON AND MEDIEVAL OCCUPATION AT FULLER'S HILL	652285	307929	Medium / High	No Change	Neutral	N/A	Neutral
NHER 4369	Find Spot	Late Saxon to	MULTI-PERIOD	652261	307990	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		Post Medieval	POTTERY							
NHER 32585	Monument	Medieval	LATE SAXON, MEDIEVAL AND POST MEDIEVAL FINDS AND FEATURES ON SITE OF LACON BREWERY	652191	307960	Medium / High	No Change	Neutral	N/A	Neutral
NHER 28934	Monument	Medieval	POSSIBLE SITE OF MEDIEVAL LEPER HOSPITAL	652389	308312	Medium	No Change	Neutral	N/A	Neutral
NHER 4277	Find Spot	Medieval	MEDIEVAL MORTAR VESSEL AND POTTERY	652295	307872	Low / Medium	No Change	Neutral	N/A	Neutral
NHER 13371	Monument	Medieval to Post Medieval	SITE OF MEDIEVAL OR POST MEDIEVAL HOUSE,	652217	308178	Low	Moderate	Moderate Adverse	Preservation by record through archaeological investigation.	Slight Adverse

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			LAUGHING IMAGE CORNER							
NHER 52923	Monument	Medieval to Modern	POST-MEDIEVAL LINEAR FEATURE, 218-219 NORTHGATE STREET	652427	308198	Low	No Change	Neutral	N/A	Neutral
NHER 13571	Monument	Post medieval to modern	NORFOLK RAILWAY (YARMOUTH, NORWICH AND BRANDON)	613797	296264	Low	No Change	Neutral	N/A	Neutral
NHER 45485	Monument	Post Medieval	17TH CENTURY MOATED SITE, ALDERSON ROAD	652252	308307	Low / Medium	No Change	Neutral	N/A	Neutral
NHER 50515	Building	Post Medieval to Cold	NEW ROAD BRIDGE	652154	308145	Negligible /Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		War								
NHER 55589	Building	Post Medieval to Modern	NORTH QUAY PUMPING STATION	652238	308315	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 55641	Building	Post Medieval to World War Two	NORTH QUAY FISH CURING HOUSES	652222	308152	Low	Moderate	Slight Adverse	Preservation by record through archaeological investigation.	Slight Adverse
NHER 49065	Monument	Post Medieval to Cold War	SITE OF VAUXHALL GARDENS	652068	308112	Low	No Change	Neutral	N/A	Neutral
NHER 15667	Monument	Post Medieval	POST MEDIEVAL LIME KILN	652201	308255	Low	No Change	Neutral	N/A	Neutral
NHER 28472	Find Spot	Post Medieval	POST MEDIEVAL GRAVEST ONE	652347	308126	Low	No Change	Neutral	N/A	Neutral
NHER 30020	Monument	Post Medieval	SITE OF POST MEDIEVAL LIME KILN	652041	307985	Low	No Change	Neutral	N/A	Neutral
NHER	Building	Post	SITE OF	652240	308250	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
50514		Medieval	MAGISTRATES COURT, NORTH QUAY							
NHER 4278	Monument	Post Medieval	POST MEDIEVAL WELLS AND OVEN	652261	308008	Low	No Change	Neutral	N/A	Neutral
NHER 27446	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652292	308131	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27447	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652317	308169	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27450	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652236	308332	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27494	Monument	World War Two	SITE OF WORLD WAR TWO	652115	308363	Negligible /Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			AIR RAID SHELTER							
NHER 27496	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652066	308299	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27497	Monument	World War Two	SITE OF WORLD WAR TWO SPIGOT MORTAR EMPLACEMENT	652055	308221	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27444	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS NORTH OF VAUXHALL BRIDGE	652086	308094	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 43564	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID SHELTER	652367	308403	Negligible /Low	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			AT 184 PALGRAVE ROAD							
NHER 43566	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID SHELTERS AT 30, 31 AND 42 TOWN WALL ROAD	652506	308162	Negligible /Low	No Change	Neutral	N/A	Neutral
43651	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID SHELTER AT 12 BRIDGE ROAD	652058	308196	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 43673	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID	652123	308281	Negligible /Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SHELTERS OFF ARCHER'S ROAD AND NORTH RIVER ROAD							
NHER 37380	Monument	Cold War to Modern	COLD WAR NUCLEAR BUNKER	652248	308197	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 27509	Monument	Modern	POSSIBLE WORLD WAR TWO DEFENCES	652129	308133	Negligible /Low	No Change	Neutral	N/A	Neutral
NHER 30014	Monument	Unknown	UNDATED BOAT	652308	308153	Unknown	No Change	Neutral	N/A	Neutral
NHER 4275	Monument	Unknown	UNDATED BUILDING AND MEDIEVAL POTTERY	652318	308126	Low	No Change	Neutral	N/A	Neutral

*Table A.18: Scheduled Monuments: VMS Fullers Way*

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1003782	TOWN WALLS	652572	307583	High	No Change	Neutral	N/A	Neutral

*Table A.19: Grade I Listed Buildings: VMS Fullers Way*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096820	FISHERMENS HOSPITAL INCLUDING GATE PIERS AND RAILINGS	652449	307890.4	High	No Change	Neutral	N/A	Neutral
NHLE 1245978	ST NICHOLAS (PRIORY) MIDDLE SCHOOL	652460	307985	High	No Change	Neutral	N/A	Neutral

*Table A.20: Grade II\* Listed Buildings: VMS Fullers Way*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096809	VICARAGE	652439	307977	High	No Change	Neutral	N/A	Neutral
NHLE 1096813	CHURCH OF ST NICHOLAS	652435	308036	High	No Change	Neutral	N/A	Neutral

*Table A.21: Grade II Listed Buildings: VMS Fullers Way*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096808	HARDYS	652332	307881.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096810	25, CHURCH PLAIN	652435	307959.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096811	SEWELL HOUSE	652437	307954.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096812	27, CHURCH PLAIN	652427	307953.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096814	CHURCHYARD GATES PIERS AND RAILINGS TO CHURCH OF ST NICHOLAS, CHURCHYARD RAILINGS TO CHURCH	652354	308066.4	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name			Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
	OF ST NICHOLAS							
NHLE 1096816	HEADSTONE 15 METRES NORTH-EAST OF CHURCH OF ST NICHOLAS	652496	308035.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096817	MEMORIAL TO DAVID BARTLEMAN WEST OF CHURCH OF ST NICHOLAS	652377	308026.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096818	MEMORIAL TO GEORGE BELOE SOUTH OF CHURCH OF ST NICHOLAS	652441	308002.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096819	PALMER TOMB 18 METRES WEST OF CHURCH OF ST NICHOLAS	652385	308047.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096821	STATUE OF CHARITY IN COURTYARD OF FISHERMANS HOSPITAL	652440	307887.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245562	VAUXHALL BRIDGE	652068	308021.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245975	225, 226 AND 226A, NORTHGATE STREET	652386	308142.4	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name			Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1246006	3, 4 AND 5, NORTHGATE STREET	652323	308026.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246007	6, NORTHGATE STREET	652322	308037.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246008	7, NORTHGATE STREET	652312	308036.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246009	WHITE HORSE INN	652304	308072.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246010	14 AND 15, NORTHGATE STREET	652312	308084.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246011	POST OFFICE (NUMBER 17)	652323	308094.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246012	18 AND 19, NORTHGATE STREET	652332	308105.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246013	20 AND 20A, NORTHGATE STREET	652338	308112.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246014	220, 221 AND 222, NORTHGATE STREET	652403	308181.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246015	224, NORTHGATE STREET	652387	308154.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246047	68, MARKET PLACE	652456	307844.4	Medium	No Change	Neutral	N/A	Neutral
NHLE	69, MARKET PLACE	652447	307848.4	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name			Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1246048								
NHLE 1271265	2, HOWARD STREET SOUTH	652392	308175.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271552	TWO NECKED SWAN PUBLIC HOUSE	652370	307847.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271553	7 AND 8, MARKET PLACE	652375	307837.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271554	13 AND 14, MARKET PLACE	652361	307805.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271555	MARKET TAVERN PUBLIC HOUSE	652372.6	307778.1	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271556	20, MARKET PLACE	652385	307757.4	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271557	21, MARKET PLACE	652385.8	307750.9	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271558	22 and 22A, MARKET PLACE	652381.7	307741.2	Medium	No Change	Neutral	N/A	Neutral



*Table A.22: Conservation Areas: VMS Fullers Way*

Site Reference	Conservation Area Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
N/A	ST NICHOLAS NORTHGATE STREET	652534	308150	High/ Medium	No Change	Neutral	N/A	Neutral

*Table A.23: Non-Designated Heritage Assets: VMS Fullers Way*

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 4369	Find Spot	Late Saxon to Post Medieval	MULTI-PERIOD POTTERY	652261	307990	Medium	No Change	Neutral	N/A	Neutral
NHER 1032	Monument	Late Saxon to Cold War	LATE SAXON AND MEDIEVAL OCCUPATION AT FULLER'S HILL	652285	307929	High/ Medium	No Change	Neutral	N/A	Neutral
NHER 32585	Monument	Medieval to Cold War	LATE SAXON, MEDIEVAL AND POST MEDIEVAL FINDS AND FEATURES	652191	307960	High/ Medium	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			ON SITE OF LACON BREWERY							
NHER 21251	Monument	Medieval	POSSIBLE MEDIEVAL INHUMATION AND MEDIEVAL KNIFE HANDLE	652433	307931	Medium	No Change	Neutral	N/A	Neutral
NHER 4261	Monument	Medieval	MEDIEVAL STREET OR YARD SURFACE AND FINDS	652254	307810	Medium	No Change	Neutral	N/A	Neutral
NHER 4277	Find Spot	Medieval	MEDIEVAL MORTAR VESSEL AND POTTERY	652295	307872	Medium/Low	No Change	Neutral	N/A	Neutral
NHER 4279	Monument	Medieval to Post Medieval	MEDIEVAL WALL AND POST MEDIEVAL KILN	652381	307728	Medium/Low	No Change	Neutral	N/A	Neutral
NHER 13371	Monument	Medieval to Post	SITE OF MEDIEVAL OR	652217	308178	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		Medieval	POST MEDIEVAL HOUSE, LAUGHING IMAGE CORNER							
NHER 33473	Monument	Medieval to Post Medieval	DISSENTERS BURIAL GROUND	652487	307759	Medium	No Change	Neutral	N/A	Neutral
NHER 4306	Monument	Medieval to Post Medieval	SITE OF CARMELITE FRIARY	652174	307735	High/Medium	No Change	Neutral	N/A	Neutral
NHER 4333	Monument	Medieval to Post Medieval	SITE OF ST MARY'S HOSPITAL	652470	307819	High/Medium	No Change	Neutral	N/A	Neutral
NHER 4315	Monument	Medieval	MEDIEVAL WELL	652373	307882	Low/Medium	No Change	Neutral	N/A	Neutral
NHER 52923	Monument	Medieval to Modern	POST-MEDIEVAL LINEAR FEATURE, 218-219 NORTHGATE STREET	652427	308198	Low	No Change	Neutral	N/A	Neutral
NHER	Monument	Post	POST MEDIEVAL	652411	307806	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
16573		Medieval	PILLORY							
NHER 28472	Find Spot	Post Medieval	POST MEDIEVAL GRAVESTONE	652347	308126	Low	No Change	Neutral	N/A	Neutral
NHER 30020	Monument	Post Medieval	SITE OF POST MEDIEVAL LIME KILN	652041	307985	Low	No Change	Neutral	N/A	Neutral
NHER 4278	Monument	Post Medieval	POST MEDIEVAL WELLS AND OVEN	652261	308008	Low	No Change	Neutral	N/A	Neutral
NHER 50514	Building	Post Medieval	SITE OF MAGISTRATE S COURT, NORTH QUAY	652240	308250	Low	No Change	Neutral	N/A	Neutral
NHER 50515	Building	Post Medieval to Cold War	NEW ROAD BRIDGE	652154	308145	Low	No Change	Neutral	N/A	Neutral
NHER 55641	Building	Post Medieval to World War Two	NORTH QUAY FISH CURING HOUSES	652222	308152	Low	No Change	Neutral	N/A	Neutral
NHER 48928	Monument	Post Medieval	SITE OF PRIMITIVE	652497	307894	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		to Cold War	METHODIST TEMPLE							
NHER 49065	Monument	Post Medieval to Cold War	SITE OF VAUXHALL GARDENS	652068	308112	Medium/Low	No Change	Neutral	N/A	Neutral
NHER 27358	Monument	World War Two	WORLD WAR TWO BARRAGE BALLOON SITE	652150	307856	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27359	Monument	World War Two to Cold War	WORLD WAR TWO AIR RAID SHELTER	652314	307819	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27439	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS	652556	307925	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27441	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652279	307964	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27442	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID	652225	307978	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SHELTER			e				
NHER 27443	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO AIR RAID SHELTER	652233	308009	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27445	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652238	308135	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27446	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652292	308131	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27447	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652317	308169	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27444	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTERS NORTH OF VAUXHALL BRIDGE	652086	308094	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27454	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652166	307810	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27434	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652472	307791	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43569	Monument	World War Two	SITE OF POSSIBLE WORLD WAR TWO AIR RAID SHELTERS ON LAND ADJACENT TO 101-105 ST NICHOLAS ROAD	652477	307843	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43567	Monument	World War Two	SITE OF WORLD WAR TWO STRUCTURE ON PRIORY PLAIN	652443	307907	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 43566	Monument	World War Two	SITE OF PROBABLE WORLD WAR TWO AIR RAID	652506	308162	Low/Negligible	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			SHELTERS AT 30, 31 AND 42 TOWN WALL ROAD							
NHER 27509	Monument	Modern	POSSIBLE WORLD WAR TWO DEFENCES	652129	308133	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 37380	Monument	Cold War to Modern	COLD WAR NUCLEAR BUNKER	652248	308197	Low	No Change	Neutral	N/A	Neutral
NHER 4275	Monument	Unknown	UNDATED BUILDING AND MEDIEVAL POTTERY	652318	308126	Unknown	No Change	Neutral	N/A	Neutral
NHER 30014	Monument	Undated	UNDATED BOAT	652308	308153	Unknown	No Change	Neutral	N/A	Neutral

*Table A.24: Scheduled Monuments: VMS Yarmouth Way*

Site Reference	Site Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1003782	TOWN WALLS	652572	307583	High	No Change	Neutral	N/A	Neutral
NHLE 1003935	MEDIEVAL VAULTS UNDER 50-56 HOWARD STREET	652405	307435	High	No Change	Neutral	N/A	Neutral
NHLE 1003958	NOS 6, 7 AND 8, ROW 111, SOUTH QUAY	652459	307195	High	No Change	Neutral	N/A	Neutral
NHLE 1004020	MERCHANT'S HOUSE, ROW 117, SOUTH QUAY	652462	307141	High	No Change	Neutral	N/A	Neutral
NHLE 1017910	GREYFRIARS FRANCISCAN FRIARY	652398	307343	High	No Change	Neutral	N/A	Neutral

**Table A.25: Grade I Listed Buildings: VMS Yarmouth Way**

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245560	THE TOLHOUSE	652496	307253	High	No Change	Neutral	N/A	Neutral
NHLE 1245915	REMAINS OF THE CHURCH OF THE GREYFRIARS	652403	307330	High	No Change	Neutral	N/A	Neutral
NHLE 1245919	ST GEORGES THEATRE	652612	307348	High	No Change	Neutral	N/A	Neutral
NHLE 1271611	4, SOUTH QUAY	652352	307360	High	No Change	Neutral	N/A	Neutral

**Table A.26: Grade II\* Listed Buildings: VMS Yarmouth Way**

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245800	CUSTOM HOUSE	652406	307237	High	No Change	Neutral	N/A	Neutral
NHLE 1245917	OLD MERCHANTS HOUSE	652462	307142	High	No Change	Neutral	N/A	Neutral
NHLE 1245803	25, SOUTH QUAY	652438	307190	High	No Change	Neutral	N/A	Neutral
NHLE 1246969	TOWN HALL	652313	307426	High	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1271278	OLD WHITE LION PUBLIC HOUSE	652635	307081	High	No Change	Neutral	N/A	Neutral

*Table A.27: Grade II Listed Buildings: VMS Yarmouth Way*

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1096826	WOOD HALL HOTEL	652714	307151	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096833	3, GREYFRIARS WAY	652383	307427	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096834	SHIP INN	652410	307389	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096835	GREYFRIARS HOUSE	652394	307414	Medium	No Change	Neutral	N/A	Neutral
NHLE 1096836	29, HALL PLAIN	652351	307453	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245556	9 AND 11, TOLHOUSE STREET	652505	307238	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245557	13, TOLHOUSE STREET	652509	307233	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245558	15, TOLHOUSE STREET	652511	307229	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245559	17 AND 19, TOLHOUSE STREET	652514	307221	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245798	16, SOUTH QUAY	652396	307273	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245799	17, SOUTH QUAY	652394	307261	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245801	PORT AND HAVEN COMMISSIONERS OFFICES	652411	307225	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245802	23 AND 24, SOUTH QUAY	652434	307215	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245804	26 AND 27, SOUTH QUAY	652434	307180	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245913	FASTOLFF HOUSE	652391	307502	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245914	NUMBER 2 AND ATTACHED WAREHOUSE	652361	307463	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245916	6, 7 AND 8, ROW 111	652458	307193	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245918	1, 2 AND 3, ST GEORGES PLAIN	652638	307289	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245920	PARK HOUSE (NUMBER 82)	652730	307331	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1245921	RED FLEET HOUSE	652705	307342	Medium	No Change	Neutral	N/A	Neutral
NHLE 1245980	9, QUEEN STREET	652370	307340	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246572	154, KING STREET	652540	307393	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246573	155, KING STREET	652530	307395	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246575	157 AND 157A, KING STREET	652528	307408	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246576	158, KING STREET	652529	307419	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246577	160, KING STREET	652517	307424	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246578	161, KING STREET	652516	307431	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246579	PEGGOTTYS PUBLIC HOUSE	652502	307432	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246580	CANNON BOLLARD, CANNON BOLLARD AT JUNCTION WITH ROW 116	652633	307212	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246587	123 AND 123A, KING STREET	652635	307157	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1246588	126 AND 127, KING STREET	652626	307184	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246589	131, KING STREET	652619	307205	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246590	132, KING STREET	652615	307214	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246591	133, KING STREET	652614	307223	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246592	134 AND 134A, KING STREET	652613	307235	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246593	135, KING STREET	652613	307242	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246594	136, KING STREET	652603	307253	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246595	137 AND 138, KING STREET	652596	307259	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246596	139, KING STREET	652596	307265	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246597	LIBERTIES PUBLIC HOUSE	652593	307277	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246598	NUMBER 141 INCLUDING AREA RAILINGS	652598	307292	Medium	No Change	Neutral	N/A	Neutral



Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHLE 1246599	142, KING STREET	652591	307297	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246600	143, KING STREET	652593	307305	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246601	144, KING STREET	652582	307305	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246602	NUMBER 145 INCLUDING BASEMENT AREA RAILINGS IN FRONT	652579	307317	Medium	No Change	Neutral	N/A	Neutral
NHLE 1246603	NUMBER 148 INCLUDING RAILINGS TO DOORWAY	652570	307348	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271266	3, HOWARD STREET SOUTH	652376	307451	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271270	24 AND 24A, KING STREET	652534	307469	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271271	33, KING STREET (See details for further address information)	652626	307285	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271272	34, KING STREET	652629	307281	Medium	No Change	Neutral	N/A	Neutral
NHLE	CREDENCE HOUSE INCLUDING AREA	652645	307242	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1271273	RAILINGS							
NHLE 1271274	KINGS WINE BAR INCLUDING STEP RAILINGS	652646	307232	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271275	NUMBER 43 INCLUDING 2 STABLE RANGES TO REAR	652649	307222	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271276	NUMBER 44 INCLUDING RAILINGS TO STEPS	652648	307213	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271277	WORKING MENS CLUB	652679	307171	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271609	1, 2 AND 2BQ, SOUTH QUAY	652331	307379	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271610	3, SOUTH QUAY	652336	307364	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271612	5, SOUTH QUAY	652352	307348	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271613	6, SOUTH QUAY	652353	307337	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271614	7 AND 8, SOUTH QUAY	652358	307333	Medium	No Change	Neutral	N/A	Neutral
NHLE	10, SOUTH QUAY	652372	307307	Medium	No Change	Neutral	N/A	Neutral

Site Reference	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
1271615								
NHLE 1271616	11, SOUTH QUAY	652374	307304	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271617	12, SOUTH QUAY	652383	307310	Medium	No Change	Neutral	N/A	Neutral
NHLE 1271618	13 AND 14, SOUTH QUAY	652385	307292	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393653	YORK ROAD CENTRE (FORMER DRILL HALL)	652707	307236	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393704	FORMER GAS SHOWROOM	652646	307253	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393956	WORLD WAR II MEMORIAL	652656	307436	Medium	No Change	Neutral	N/A	Neutral
NHLE 1393957	WORLD WAR I MEMORIAL INCLUDING GATE AND GATE PIERS	652679	307440	Medium	No Change	Neutral	N/A	Neutral

**Table A.28: Conservation Areas: Yarmouth Way**

Site Reference	Conservation Area Name	Easting	Northing	Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
N/A	KING STREET	652617	307207	High/ Medium	No Change	Neutral	N/A	Neutral
N/A	HALL QUAY AND SOUTH QUAY	652310	307371	High	No Change	Neutral	N/A	Neutral
N/A	ST GEORGE'S	652795	307519	Medium	No Change	Neutral	N/A	Neutral

**Table A.29: Non-Designated Heritage Assets: VMS Yarmouth Way**

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 60006	Find Spot	Late Iron Age to Roman	LATE IRON AGE/ROMAN POTTERY SHERD	652500	307499	Medium	No Change	Neutral	N/A	Neutral
NHER 4325	Monument	Middle Saxon to Late Saxon	POSSIBLE VIKING SHIP	652664	307087	High/ Medium	No Change	Neutral	N/A	Neutral
NHER 4311	Find Spot	Medieval	MEDIEVAL MORTAR FIND	652450	307150	Medium/ Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	North- ing	Historic Value	Magnitu- de of Impact	Significan- ce of Potential Impact Before Mitigation	Mitigating Archaeologic- al Work Proposed	Significance of Residual Effects
NHER 30340	Find Spot	Medieval	MEDIEVAL POTTERY FIND	652553	307088	Medium/ Low	No Change	Neutral	N/A	Neutral
NHER 4280	Find Spot	Medieval	MEDIEVAL POTTERY	652476	307137	Medium/ Low	No Change	Neutral	N/A	Neutral
NHER 13372	Monument	Medieval	POSSIBLE MEDIEVAL ARCH	652526	307393	Medium	No Change	Neutral	N/A	Neutral
NHER 4320	Find Spot	Medieval	MEDIEVAL MORTAR AND MEDIEVAL WALL	652542	307249	Low	No Change	Neutral	N/A	Neutral
NHER 4297	Monument	Medieval to Post Medieval	GREYFRIARS , MIDDLEGATE STREET	652403	307336	High/ Medium	No Change	Neutral	N/A	Neutral
NHER 4316	Monument	Medieval to Post Medieval	MEDIEVAL TOWN DITCH AND MULTI-PERIOD FINDS	652565	307491	Medium/ Low	No Change	Neutral	N/A	Neutral
NHER 4273	Find Spot	Medieval to Post	MEDIEVAL AND POST	652557	307464	Medium/ Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
		Medieval	MEDIEVAL POTTERY							
NHER 13375	Monument	Medieval to Post Medieval	SITE OF GREAT YARMOUTH CASTLE	652555	307366	High	No Change	Neutral	N/A	Neutral
NHER 33475	Monument	Post Medieval to Modern	GRAMMAR SCHOOL GROUNDS	652849	307369	Low	No Change	Neutral	N/A	Neutral
NHER 36212	Monument	Medieval to Post Medieval	'ROW 117', REAR OF OLD GALLON CAN PUBLIC HOUSE, SOUTH QUAY	652465	307158	Low/ Medium	No Change	Neutral	N/A	Neutral
NHER 17802	Find Spot	Medieval to Post Medieval	MEDIEVAL TO POST MEDIEVAL RUBBISH DUMPING	652260	307435	Low/ Medium	No Change	Neutral	N/A	Neutral
NHER 4299	Monument	Medieval to Post Medieval	SITE OF TOWN HOUSE AND OLD STAPLE WOOL	652414	307216	Low/ Medium	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			HOUSE, SOUTH QUAY							
21167	Find Spot	Post Medieval	POST MEDIEVAL POTTERY BOTTLE	652479	307509	Low	No Change	Neutral	N/A	Neutral
22624	Find Spot	Post Medieval	POST MEDIEVAL POTTERY	652386	307468	Low	No Change	Neutral	N/A	Neutral
4274	Find Spot	Post Medieval	POST MEDIEVAL POTTERY	652453	307260	Low	No Change	Neutral	N/A	Neutral
4308	Find Spot	Post Medieval	POST MEDIEVAL POTTERY FINDS	652338	307486	Low	No Change	Neutral	N/A	Neutral
NHER 50289	Monument	Post Medieval	SITE OF 48A AND 48B DENESIDE, GREAT YARMOUTH	652658	307238	Low	No Change	Neutral	N/A	Neutral
NHER 55101	Monument	Post Medieval	IMPORTED 16TH AND 17TH CENTURY	652683	307110	Low	No Change	Neutral	N/A	Neutral



Site Reference	Heritage Asset Type	Period	Site Name	Easting	North-ing	Historic Value	Magnitu- de of Impact	Significan- ce of Potential Impact Before Mitigation	Mitigating Archaeologic- al Work Proposed	Significance of Residual Effects
			MATERIAL AND RESIDUAL MEDIEVAL ARTEFACTS							
NHER 13576	Monument	Post Medieval to Modern	ROUTES OF GREAT YARMOUTH URBAN RAILWAYS	652364	307247	Low	No Change	Neutral	N/A	Neutral
NHER 63141	Monument	Post Medieval to Cold War	SITE OF YARMOUTH HOSPITAL, DENESIDE	652653	307336	Low	No Change	Neutral	N/A	Neutral
NHER 27361	Monument	World War Two	WORLD WAR TWO PILLBOX	652370	307233	Low/Negligi- ble	No Change	Neutral	N/A	Neutral
NHER 27367	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTERS	652481	307334	Low/Negligi- ble	No Change	Neutral	N/A	Neutral
NHER 27366	Monument	World War Two	WORLD WAR TWO STRUCTURE	652427	307319	Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	North- ing	Historic Value	Magnitu- de of Impact	Significan- ce of Potential Impact Before Mitigation	Mitigating Archaeologic- al Work Proposed	Significance of Residual Effects
NHER 27368	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652615	307054	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27372	Monument	World War Two	PROBABLE WORLD WAR TWO AIR RAID SHELTER	652542	307089	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27531	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTER	652439	307258	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27532	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTERS	652549	307214	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27432	Monument	World War Two	WORLD WAR TWO STRUCTURE	652770	307312	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27589	Monument	World War Two	SITE OF WORLD WAR TWO AIR RAID SHELTER	652742	307253	Low/Negligible	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 27530	Monument	World War Two	WORLD WAR TWO AIR RAID SHELTERS	652440	307389	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 54922	Monument	Modern	WORLD WAR I MEMORIAL, GATE AND GATE PIERS	652679	307440	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 54932	Monument	Cold War	GREAT YARMOUTH WORLD WAR II MEMORIAL	652658	307436	Low/Negligible	No Change	Neutral	N/A	Neutral

*Table A.30: Non-Designated Heritage Assets: VMS Acle Road*

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
NHER 4324	Monument	Medieval to Post Medieval	PADDYS LOKE	650769	309123	Medium	No Change	Neutral	N/A	Neutral
NHER	Find Spot	Medieval	MEDIEVAL	651319	309046	Low	No Change	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
34044		to Post Medieval	TO POST MEDIEVAL POTTERY AND TILE							
NHER 43692	Monument	Post Medieval	SITE OF POSSIBLE POST MEDIEVAL SHEEP FOLD NORTH OF PADDYS LOKE	651631	309085	Low	No Change	Neutral	N/A	Neutral
NHER 13571	Monument	Post Medieval to Modern	NORFOLK RAILWAY (YARMOUTH, NORWICH AND BRANDON)	613797	296264	Low	No Change	Neutral	N/A	Neutral
NHER 59972	Monument	Post Medieval to Modern	THE ACLE STRAIGHT OR ACLE NEW ROAD	644000	308929	Low	No Change	Neutral	N/A	Neutral
NHER 27630	Monument	World War Two	WORLD WAR TWO ROAD BLOCK ACROSS NEW ROAD	651588	308823	Low/ Negligible	Moderate Adverse	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			AT RUNHAM, GREAT YARMOUTH							
NHER 27627	Monument	World War Two	WORLD WAR TWO BOMB CRATERS	651733	308786	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27631	Monument	World War One to World War Two	WORLD WAR TWO MILITARY SITE AT RUNHAM, GREAT YARMOUTH	651750	308865	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27625	Monument	World War Two	WORLD WAR TWO BOMB CRATER	651411	308892	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27629	Monument	World War Two	PROBABLE WORLD WAR TWO BOMB CRATER	651446	308799	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27626	Monument	World War Two	WORLD WAR TWO BOMB CRATERS	651495	308668	Low/Negligible	No Change	Neutral	N/A	Neutral
NHER 27628	Monument	World War Two	PROBABLE WORLD WAR	651546	308858	Low/Negligible	Moderate Adverse	Neutral	N/A	Neutral

Site Reference	Heritage Asset Type	Period	Site Name	Easting	Northing	Historic Value	Magnitude of Impact	Significance of Potential Impact Before Mitigation	Mitigating Archaeological Work Proposed	Significance of Residual Effects
			TWO BOMB CRATER							

## Annex B: Settings Assessment Methodology

**B1.1.1** The following is the methodology used in the settings assessment. It focuses on steps 2 and 3 with step 1 being the identification of the heritage assets and step 4 being mitigation in order to reduce the potential for harm to the setting of the heritage asset.

**B1.1.2** Step 2: In assessing whether, how and to what degree the settings make a contribution to the significance of the heritage assets, a number of potential attributes of a setting were considered. These are presented in the table below.

*Table B.1: Step 2 – Determining the Contribution of setting to the Significance of the Heritage Asset(s)*

Contribution of Setting: Potential Attributes / Factors to Consider
<p>The asset's physical surroundings:</p> <ul style="list-style-type: none"> <li>• Topography;</li> <li>• Other heritage assets (archaeological remains, buildings, structures, landscapes, areas or archaeological remains);</li> <li>• Definition, scale and 'grain' of surrounding streetscape, landscape and spaces;</li> <li>• Historic materials and surfaces;</li> <li>• Land use;</li> <li>• Openness, enclosure and boundaries; functional relationships and communications;</li> <li>• Green spaces, trees and vegetation;</li> <li>• History and degree of change over time;</li> <li>• Integrity;</li> <li>• Issues, such as soil chemistry and hydrology.</li> </ul>
<p>Experience of the asset:</p> <ul style="list-style-type: none"> <li>• Surrounding landscape and town character;</li> <li>• Views from, towards, through and across, including the asset;</li> <li>• Visual dominance, prominence or role as focal point;</li> <li>• Intentional intervisibility with other historic and natural features;</li> <li>• Noise, vibration and other pollutants and nuisances;</li> </ul>



### Contribution of Setting: Potential Attributes / Factors to Consider

- Tranquillity, remoteness, ‘wildness’;
- Sense of enclosure, seclusion, intimacy or privacy;
- Dynamism and activity;
- Accessibility, permeability and patterns of movement;
- Degree of interpretation or promotion to the public;
- The rarity of comparable survivals of setting.

The asset’s associative attributes:

- Associative relationships between heritage assets;
- Cultural associations;
- Celebrated artistic representations;
- Traditions.

**B1.1.3** The attributes of the setting contribute to the sensitivity of the setting and its contribution to the significance of the asset. The table below presents examples of definitions for the sensitivity of a setting but these have not been considered as an exhaustive list.

*Table B.2: Step 2 – Definitions of Sensitivity for the Settings of Heritage Assets*

Examples of Settings	Contribution to Significance of the Asset
A defined setting that is contemporary with and historically and functionally linked with the heritage asset, may contain other heritage assets of international or national importance, has a very high degree of intervisibility with the asset and makes a very substantial contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.	Very substantial
Contemporary with and historically and functionally linked with the heritage asset, with minor alterations (in extent and/or character), has a high degree of intervisibility with the asset and which makes a substantial contribution to both the significance of the	Substantial

Examples of Settings	Contribution to Significance of the Asset
heritage asset and to the understanding and appreciation of the significance of the asset.	
Contemporary with and/or historically and/or functionally linked with the heritage asset but with alterations which may detract from the understanding of the heritage asset, and/or with a moderate degree of intervisibility with the asset and/or which makes a moderate contribution to the significance of the heritage asset and/or a moderate contribution to the understanding and appreciation of the significance of the asset.	Moderate
Largely altered so that there is very little evidence of contemporaneous and/or historic and/or functional links with the heritage asset, and/or with a low degree of intervisibility with the asset and/or which makes a minor contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.	Minor

**B1.1.4** Step 3: Having assessed the contribution of the setting to the significance of the asset, the effect of the proposed development on the setting was determined by consideration of the potential attributes of the proposed development affecting setting. These are outlined in the table below.

*Table B.3: Step 3 – Potential Attributes of the Proposed Scheme*

Attribute	Factors to consider
Location and siting of the scheme	<ul style="list-style-type: none"> <li>● Proximity to asset;</li> <li>● Extent;</li> <li>● Position in relation to landform;</li> <li>● Degree to which location will physically or visually isolate asset;</li> <li>● Position in relation to key views.</li> </ul>
The form and appearance of the scheme	<ul style="list-style-type: none"> <li>● Prominence, dominance, or conspicuousness;</li> <li>● Competition with or distraction from the asset;</li> <li>● Dimensions, scale and massing;</li> </ul>

Attribute	Factors to consider
	<ul style="list-style-type: none"> <li>● Proportions;</li> <li>● Visual permeability;</li> <li>● Materials (texture, colour, reflectiveness, etc.);</li> <li>● Architectural style or design;</li> <li>● Introduction of movement or activity;</li> <li>● Diurnal or seasonal change.</li> </ul>
Other effects of the scheme	<ul style="list-style-type: none"> <li>● Change to built surroundings and spaces;</li> <li>● Change to skyline;</li> <li>● Noise, odour, vibration, dust, etc.;</li> <li>● Lighting effects and 'light spill';</li> <li>● Change to general character (e.g. suburbanising or industrialising);</li> <li>● Change to public access, use or amenity;</li> <li>● Change to land use, land cover, tree cover;</li> <li>● Changes to archaeological context, soil chemistry or hydrology;</li> <li>● Changes to communications/accessibility/permeability.</li> </ul>
Permanence of the scheme	<ul style="list-style-type: none"> <li>● Anticipated lifetime/temporariness;</li> <li>● Recurrence;</li> <li>● Reversibility.</li> </ul>
Longer term or consequential effects of the scheme	<ul style="list-style-type: none"> <li>● Changes to ownership arrangements;</li> <li>● Economic and social viability;</li> <li>● Communal and social viability.</li> </ul>

**B1.1.5** Once the sensitivity and contribution of the setting has been determined and the potential attributes of the proposed scheme upon it have been identified, the level of harm or beneficial impact of the potential scheme has been evaluated.

**B1.1.6** The criteria for assessing the level of harm of impacts on setting are presented below. This presents definitions of varying scales of harm or benefit to the contribution of the setting.

**Table B.4: Step 3 – Criteria for Assessment of Magnitude of an Impact on the Setting of a Cultural Heritage Asset**

Level of Harm or Benefit	Guideline Criteria
Major beneficial	The contribution of setting to the cultural heritage asset's significance is considerably enhanced as a result of the development; a lost relationship between the asset and its setting is restored, or the legibility of the relationship is greatly enhanced. Elements of the surroundings that detract from the asset's cultural heritage significance or the appreciation of that significance are removed.
Moderate beneficial	The contribution of setting to the cultural heritage asset's significance is enhanced to a clearly appreciable extent as a result of the development; as a result, the relationship between the asset and its setting is rendered more readily apparent. The negative effect of elements of the surroundings that detract from the asset's cultural heritage significance or the appreciation of that significance is appreciably reduced.
Minor beneficial	The setting of the cultural heritage asset is slightly improved as a result of the development, slightly improving the degree to which the setting's relationship with the asset can be appreciated.
Negligible	The setting of the cultural heritage asset is changed by the development in ways that do not alter the contribution of setting to the asset's significance.
Less than substantial harm:	
Minor harm	The contribution of the setting of the cultural heritage asset to its significance is slightly degraded as a result of the development, but without adversely affecting the interpretability of the asset and its setting; characteristics of historic value can still be appreciated, the changes do not strongly conflict with the character of the site, and could be easily reversed to approximate the pre-development conditions.
Harm	The contribution of the setting of the cultural heritage asset to its significance is reduced appreciably as a result of the development. Relevant setting characteristics can still be appreciated but less readily.
Substantial harm	The contribution of the setting of the cultural heritage asset to its significance is effectively lost or substantially reduced as a result of the development, the relationship between the asset and its setting is no longer readily

Level of Harm or Benefit	Guideline Criteria
	appreciable.

**B1.1.7** Changes may occur in the surroundings of an asset that neither affects their contribution to the significance of the asset, nor the extent to which its significance can be experienced. In such instances it is considered that there is no impact upon setting.

**B1.1.8** Step 4: Approaches to maximising enhancement and minimising harm to the setting and significance of the assets as appropriate are presented within the main body of the report.

## Annex C: References

### C1.1 Published and Documentary Sources

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# Great Yarmouth Third River Crossing

## Application for Development Consent Order

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### **Document 6.2: Environmental Statement Volume II: Technical Appendix 9C: Borehole Log Review and Deposit Modelling Report**

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**Planning Act 2008**

**The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (“APFP”)**

APFP regulation Number: 5(2)(a)

Planning Inspectorate Reference Number: TR010043

Author: Norfolk County Council

Document Reference: 6.2 – Technical Appendix 9C

Version Number: 0 – Revision for Submission

Date: 30 April 2019

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# Great Yarmouth Third River Crossing

Borehole log review  
and deposit modelling report

Ref: 204901.01  
September 2018





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## Document Information

Document title Third River Crossing, Great Yarmouth  
Document subtitle Geoarchaeological borehole review and deposit modelling  
Document reference 204901.01

Client name WSP UK Ltd  
Address 3 White Rose Office Park  
Millshaw Park Lane  
Leeds LS11 0DL

Site location Great Yarmouth  
County Norfolk  
National grid reference 652500 305920 (TG 52500 05920)  
Statutory designations  
Planning authority Norfolk County Council

WA project name Great Yarmoth Third River Crossing  
WA project code 204901 (204900)  
Project management by Dave Norcott  
Document compiled by Claire Mellett  
Contributions from Holly Rodgers, Andrew Shaw  
Graphics by Nancy Dixon

**Quality Assurance**

Version & issue date	Status	Author	Approved by
V1 07/09/2018	External draft	CLM	DRN



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**Table 2** Stratigraphy of deposits with the proposed scheme



## Summary

Wessex Archaeology was commissioned by WSP Ltd. to undertake a geoarchaeological assessment of geotechnical borehole data collected as part of ground investigation works in support of the proposed Third River Crossing, Great Yarmouth.

The proposed scheme will provide a new bridge and associated transport links across the River Yare, which bisects the town. Construction activities include the installation of pile foundations to support the bridge structure, and ground works and landscaping associated with the new strategic road network.

Previous archaeological investigations identified deposits of potential geoarchaeological significance within the proposed scheme boundary (WSP 2018; Wessex Archaeology 2018). These comprise peat and alluvium of the Breydon Formation, deposited in semi-terrestrial wetland environmental under the influence of post-glacial rising sea levels.

To assess the distribution, depth and significance of the geoarchaeological resource, and therefore the possible impact of construction activities, a geoarchaeological review of 48 geotechnical borehole logs has been undertaken and the results used to construct a deposit model for the scheme area.

Based on the borehole review, the stratigraphy of the site is characterised by London Clay overlain by Crag Group deposits, both of which pre-date human occupation and thus have no geoarchaeological potential. Sands and gravels of the Happisburgh Glacigenic Formation overlie Crag Group deposits, but as these were deposited during the Anglian glacial period, they have low geoarchaeological potential.

The most geoarchaeologically significant deposits within the proposed scheme belong to the Breydon Formation. These deposits comprise peat and alluvium and were mapped on the western side of the River Yare. Peat deposits have high geoarchaeological potential as they may preserve palaeoenvironmental as well as archaeological material. These deposits are located at depths between -4 m OD and -10.35 m OD. Alluvial deposits overlie the peat and can be found at depths between -0.23 m OD and -10 m OD. These deposits have a lower organic content but the potential to preserve inorganic microfossils and are judged to be of medium geoarchaeological potential.

On the eastern side of the River Yare, North Denes Formation is present where Breydon Formation is absent. North Denes Formation comprises sand and gravel that was deposited as part of a coastal spit/ barrier that developed from AD 500 onwards. The geoarchaeological potential of these deposits is low, although it is possible that they may contain evidence of occasional archaeological activity.

Modern Alluvium is present in boreholes located within the River Yare channel and directly adjacent to its margins; elsewhere across the proposed scheme Made Ground comprises the uppermost deposits. Collectively, these deposits have low geoarchaeological potential, although the Made Ground could include any near-surface archaeological features or layers.

Taking into account construction activities and the location of the buried resource – in particular the Breydon Formation – it is likely the only impacts of significance would be associated with the construction of the road network to the west of the River Yare. Even here, unless construction impact penetrates more than 5 metres below current ground level, the deposits should be unaffected.

If construction works are to impact the area of proposed road construction to the west of the River Yare, then it is recommended a purposive geoarchaeological borehole survey be undertaken, with palaeoenvironmental and dating works to follow on core samples if appropriate.



## **Acknowledgements**

This work was commissioned by WSP UK Ltd. Alex Grassam of WSP is thanked for their assistance in the production of this report. The report was compiled by Claire Mellett with contributions from Andy Shaw. The deposit modelling was undertaken by Holly Rogers. Illustrations were prepared by Nancy Dixon. Quality control and project management was provided by Dave Norcott.



# Third River Crossing, Great Yarmouth

## Geoarchaeological borehole review and deposit modelling

### 1 INTRODUCTION

#### 1.1 Project background

- 1.1.1 Wessex Archaeology have been commissioned by WSP Ltd. to undertake a geoarchaeological assessment of geotechnical borehole data collected as part of ground investigation works in support of the proposed Third River Crossing, Great Yarmouth (herein referred to as the proposed scheme).
- 1.1.2 The proposed scheme will provide a new bridge and associated transport links across the River Yare which bisects the town of Great Yarmouth in Norfolk. The Third River Crossing will provide new linkages between South Denes Road to the east of the River Yare, and key transport networks to the west via the A47 Harfreys roundabout (**Figure 1**).
- 1.1.3 Any impacts on the geoarchaeological or archaeological resource are expected to occur during the construction phase through the installation of pile foundations to support the bridge structure, and ground works and landscaping associated with the new strategic road network.

#### 1.2 Site location and geology

##### *Site Location*

- 1.2.1 The proposed scheme is located ~800 m south of the town centre in Great Yarmouth, Norfolk. Great Yarmouth lies at the mouth of the River Yare which is one of the principle navigable waterways, connecting the Norfolk Broads to the North Sea at Gorleston-on-Sea (**Figure 1**).
- 1.2.2 The proposed scheme will provide a new crossing over the River Yare connecting the isolated South Denes peninsular on the eastern side of the river, with the rest of the town and major transport links on the western side of the river.
- 1.2.3 The proposed scheme site boundary is presented on **Figure 1** centred at approximately National Grid Reference TG 52500 05920.

##### *Geology*

- 1.2.4 The solid and superficial geology of Great Yarmouth has been mapped by the British Geological Survey (BGS) (Arthurton et al. 1994) and is summarised below. Where age estimates are available these are either in millions of years ago (MA), thousands of years ago (ka), or years before present (BP). These dates are supplemented, where known, with the relevant Marine Isotope Stage (MIS).
- 1.2.5 The solid geology comprises blue-grey calcareous silty clays, London Clay Formation (Eocene), overlain by dark green to weathered brown marine sands and gravels of the Crag Group, laid down between approximately 0.5 to 5 MA during the late Pliocene and Early Pleistocene epochs.



- 1.2.6 The superficial geology of Great Yarmouth mostly covers the last 480,000 years of geological time, extending across the Middle Pleistocene (781-126 ka), Late Pleistocene (126-11.7 ka) and Holocene (11.7 ka–present) epochs. Together these epochs form part of the Quaternary, a period covering the last 2.588 MA characterised by repeated fluctuations between cold (glacial) and warm (interglacial) climate stages.
- 1.2.7 Extensive deposits of sand, and sand and gravel have been mapped to the north and south of Great Yarmouth. These deposits are members of the Happisburgh Glacigenic Formation thought to be glacial outwash deposits associated with the Anglian glaciation (MIS 12, 423–480 ka)
- 1.2.8 Less extensive deposits of glacial till occur to the north and south of Great Yarmouth, predominately comprising sandy till deposits of the Happisburgh Glacigenic Formation with localised patches of chalky sandy till of the Lowestoft Formations, both deposited during the Anglian Glaciation (MIS 12, 423–480 ka).
- 1.2.9 Yare Valley Formation, comprising alluvium and river terrace deposits, overlies glacial deposits and Crag Group, extending as far as the River Ant to the North and the Waveney Valley to the south. These deposits also extend offshore within River Yare palaeochannels that formed during periods of lower sea level (Tizzard et al. 2015). The precise age of these deposits is unknown but thought to date from the late Anglian (MIS 12) to Devensian (MIS 5-2) (Tizzard et al., 2015).
- 1.2.10 BGS boreholes located in the vicinity of the proposed scheme boundary have recorded sand and gravel underlying Breydon Formation. Given their lithology, these deposits may correlate to sand and gravel members of the Happisburgh Glacigenic Formation, or to Yare Valley Formation.
- 1.2.11 The Yare Valley Formation is overlain by Holocene (MIS 1, 11.7 ka to present day) sediments of the Breydon Formation and North Denes Formation (Arthurton et al. 1994).
- 1.2.12 The Breydon Formation comprises a variable lateral and vertical sequence of estuarine clays and silts with subordinate sands (alluvium), interbedded with peat. The Breydon Formation are deposits that formed under the influence of mid-Holocene rising sea-levels. Alluvium represents mudflat and saltmarsh environments deposited during periods of sea-level rise with peat forming during periods of stable and/or falling sea level when semi-terrestrial plant communities (e.g. tall herb swamp, fen woodland) encroached into the wetland. Breydon Formation alluvium is extensive to the west of the River Yare with pockets of peat fringing the alluvium.
- 1.2.13 The North Denes Formation overlies Breydon Formation and is mapped by the BGS to the east of the River Yare, comprising beach sands and gravels, flanked to the east towards the present coastline by blown sand and marine beach deposits. These deposits relate to a coastal barrier and spit that is reported to have developed ~2000 yrs BP (Arthurton et al., 1994).
- 1.2.14 The early Holocene geomorphology of the Great Yarmouth area has recently been modelled by Jordan et al. (2016) using 467 borehole records held by the BGS. The base of the early Holocene deposits in Great Yarmouth ranged between -30.46 m OD to +7.61 m OD, but within the proposed scheme boundary, this varies between topographic lows of -12 m OD (northern limits of the site on the line of the A1243) and -6 m OD to -8 m OD (western limits of the site at the A12 and William Adams Way), to highs of -2 m OD to 0 m OD within the centre of the proposed scheme. This suggests that any Holocene deposits of





Breydon Formation and/or North Denes Formation within the proposed scheme boundary should not exceed thickness of 12 m.

### 1.3 Summary of previous geoarchaeological work

- 1.3.1 Cultural heritage was assessed in the Environmental Impact Assessment Scoping Report for the proposed scheme (WSP 2018). The majority of heritage assets within 500 m of the proposed scheme are post-Medieval to Modern in age, with the exception of buried urban and riverfront remains dating to the Medieval and a single Neolithic find (WSP 2018).
- 1.3.2 However, previous archaeological investigations found evidence of buried medieval shorelines on which fragments of boats were preserved (WSP 2018), thus highlighting the geoarchaeological potential of deposits within and along the margins of the River Yare. The scoping report outlined a mitigation strategy that included a comprehensive review of available geological data to understand the potential and significance of the geoarchaeological resource.
- 1.3.3 Subsequently, a geoarchaeological feasibility study was undertaken by Wessex Archaeology to assess the geoarchaeological resource and recommend a strategy for further works to mitigate the impact of the proposed scheme on deposits with geoarchaeological potential (Wessex Archaeology 2018).
- 1.3.4 Of the geological units present beneath the proposed scheme, peat and organic rich alluvium of the Breydon Formation are of geoarchaeological interest due to their potential to preserve palaeoenvironmental material. Sands and gravels of the Yare Valley Formation were also highlighted as being of interest due to their potential to contain thin organic layers and/or Palaeolithic artefacts.
- 1.3.5 The mitigation strategy recommended a geoarchaeological review, and if appropriate, sub-sampling and palaeoenvironmental assessment of ground investigation boreholes acquired in support of the proposed scheme.

### 1.4 Scope of document

- 1.4.1 To help frame geoarchaeological investigations of this nature, WA has developed a five-stage approach, encompassing different levels of investigation appropriate to the results obtained, accompanied by formal reporting of the results. The stages are summarised below (**Table 1**).
- 1.4.2 This report outlines the results of a Stage 1 geoarchaeological review of ground investigation logs collected in support of the proposed scheme, accompanied by deposit modelling, as detailed in **Table 1**, with recommendations made for further geoarchaeological work if deemed necessary.

**Table 1** Stages of geoarchaeological assessment and recording

Stage	Method	Description
1	Geoarchaeological Review	A desk-based archaeological review of the borehole, vibrocore and CPT logs generated by geotechnical contractors. Aims to establish the likely presence of horizons of archaeological interest and broadly characterise them, as a basis for deciding whether and what Stage 2 archaeological recording is required. The Stage 1 report will state the scale of Stage 2 work proposed.



Stage	Method	Description
2	Geoarchaeological Recording	Archaeological recording of selected retained or new core samples will be undertaken. This will entail the splitting of the cores, with each core being cleaned and recorded. The Stage 2 report will state the results of the archaeological recording and will indicate whether any Stage 3 work is warranted.
3	Sampling and Assessment	Dependent upon the results of Stage 2, sub-sampling and palaeoenvironmental assessment (pollen, diatoms and foraminifera) may be required. Subsamples will be taken if required. Assessment will comprise laboratory analysis of the samples to a level sufficient to enable the value of the palaeoenvironmental material surviving within the cores to be identified. Subsamples will also be taken and/or retained at this stage in case scientific dating is required during Stage 4. Some scientific dating (e.g. radiocarbon or Optically Stimulated Luminescence (OSL)) may be undertaken at this stage to provide chronological context. The Stage 3 report will set out the results of each laboratory assessment together with an outline of the archaeological implications of the combined results, and will indicate whether any Stage 4 work is warranted.
4	Analysis and Dating	Full analysis of pollen, diatoms and/or foraminifera assessed during Stage 3 will be undertaken. Typically, Stage 4 will be supported by scientific dating (e.g. radiocarbon or OSL) of suitable subsamples. Stage 4 will result in an account of the successive environments within the coring area, a model of environmental change over time, and an outline of the archaeological implications of the analysis.
5	Final Report	If required Stage 5 will comprise the production of a final report of the results of the previous phases of work for publication in an appropriate journal. This report will be compiled after the final phase of archaeological work, whichever phase that is.

## 2 GEOARCHAEOLOGICAL BACKGROUND

### 2.1 Lower Palaeolithic (800 – 243 ka)

2.1.1 Great Yarmouth is located within the Crag Basin, a structural depression resulting from downwarping of the crust due to the weight of Neogene sediment in the North Sea Basin (Gibbard et al. 1991; 1998). Within this basin marine, intertidal and fluvial sediments are preserved that reflect changing sea levels and climatic oscillations through the Pliocene to early Middle Pleistocene. These deposits are overlain by a series of glaciogenic deposits.

2.1.2 The pre-glacial sediments reflect a broad transition from shallow marine, to estuarine and fluvial deposits (West 1980, Gibbard et al. 1991; 1998). The marine sediments are assigned to the 'Crag Group' and reflect climatic and paleoenvironmental change, ranging from relatively stable shallow marine deposition during the Pliocene (Coralline Crag Formation) to the more pronounced climatic oscillations during the Early and early Middle Pleistocene (Red Crag, Norwich Crag and Wroxham Crag formations), which included periods of arctic conditions. These predominately marine sediments are post-dated by units reflecting fluvial deposition (Hill House Formation (HHF) and Cromer Forest-bed Formation (CF-bF), with deposition in a complex of floodplains, tidal channels and rivers draining land to the west (West 1980). The units have long been famous for their rich palaeoenvironmental records (Newton 1882, Reid 1882, Stuart 1996), but over recent decades have also produced a steadily growing number of Lower Palaeolithic archaeological sites relating to the earliest occupation of Britain and northern Europe (Parfitt et al. 2005; 2010; Ashton et al. 2008, 2014).

- 2.1.3 The two key Lower and early Middle Pleistocene localities in the region are Happisburgh 3 (Parfitt et al. 2010; Ashton et al. 2008, 2014). and Pakefield (Parfitt et al. 2005).
- 2.1.4 At Happisburgh 3 archaeological and palaeoenvironmental evidence has been recovered from gravels, sands and interbedded sands and silts of the Hill House Formation (HHF), which are within channels cut within marine deposits belonging to the Norwich Crag Formation. The HHF accumulated in the lower reaches of a large river system, attributed to the River Thames, most probably in the central or upper part of its estuary (Parfitt et al. 2010). The HHF deposits at Happisburgh 3 have produced a small number of lithics artefacts and extensive associated paleoenvironmental indicators; the latter are indicative of hominin activity during boreal conditions (Parfitt et al. 2010). Bio-stratigraphic indicators and palaeomagnetic data indicate that this hominin presence dates to >0.78 Myr ago (Parfitt et al. 2010); it is therefore the earliest known hominin presence in northern Europe. Additionally, hominin footprints have been identified at Happisburgh within laminated clays that are correlated with the HHF (Ashton et al. 2014); this is the oldest known hominin footprint surface outside Africa.
- 2.1.5 At Pakefield lithic artefacts have been recovered from four different contexts within CF-bF deposits which are within a channel incised into marine sediments of the Norwich Crag. Here, CF-bf deposits are overlain by marine sands, glaciofluvial sediments and Lowestoft Till. These CF-bF deposits are equated with the floodplain of the lower reaches of the erstwhile Bytham River that drained the English Midlands at this time (Parfitt et al. 2005). Associated paleoenvironmental indicators suggest hominin occupation at Pakefield occurred during interglacial conditions associated with a warm, seasonally dry Mediterranean climate; lithostratigraphy, palaeomagnetism, amino acid geochronology and biostratigraphy, indicate a minimum age of 700 ka for these occupations (Parfitt et al. 2005).
- 2.1.6 There is a rich record of Middle Pleistocene Lower Palaeolithic locales in East Anglia (Wymer 1999). These date to both prior and post to the Anglian glaciation (478-428 ka), a period when ice sheets fundamentally altered the palaeogeography of the region.
- 2.1.7 Known Middle Pleistocene deposits in the study area are found within the modern lower reaches of Yare Valley river system, which drains the Rivers Yare, Wensum and Waveney. These deposits belong to the Yare Valley Formation deposited by the Palaeo-Yare river. They consist of up to 11 m of sands and gravels (Arthurton et al. 1994) that form a stacked fluvial sequence deposited over multiple glacial-interglacial cycles. Definitive age estimates are lacking, but they have been suggested to include late Anglian (MIS 12) and Devensian (MIS 5d-2; 109 – 14 ka) deposits (Coxon 1993, Cox et al. 1989). This implies that they have the potential to contain Lower, Middle and Upper archaeology, along with associated palaeoenvironmental datasets. Lower Palaeolithic artefacts have been recovered from fluvial deposits of the Palaeo-Yare river, most notably at Whitlingham (Sainty 1927, Wymer 1999).
- 2.2 Middle Palaeolithic (243 – 36 ka)**
- 2.2.1 An internationally significant early Middle Palaeolithic submerged site lies ~8 km east of Great Yarmouth in the southern North Sea, within an aggregate dredging zone known as Area 240. Here, a total of 88 flint lithics, including handaxes and Levallois artefacts (the latter often equated with the early middle Palaeolithic), along with some 130 faunal remains including woolly mammoth, woolly rhinoceros, bison, reindeer and horse, were recovered during dredging operations (Tizzard et al. 2015).
- 2.2.2 This site is not located within the proposed scheme boundary, or within the search buffer adopted during the cultural heritage assessment (WSP 2018). However, it is of relevance

to the proposed scheme as these key archaeological finds are associated with the offshore extension of the Palaeo-Yare river (Tizzard et al. 2015), and similar assemblages may be preserved within Yare Valley Formation deposits preserved onshore.

- 2.2.3 Indeed, Levallois artefacts have been reported from onshore fluvial deposits of the Palaeo-Yare at Keswick Mill Pit (Wymer 1985, 1999), Carrow Road, Norwich (Sainty 1927) and Lenwade Pits at Great Witchingham on the River Wensum (Wymer 1985, 1999). However, correlating Palaeo-Yare deposits between marine and terrestrial settings is problematic, both logistically, due to challenges surveying the nearshore coastal zone, but also stratigraphically as the sequence and age of Yare Valley Formation onshore is difficult to resolve (Arthurton et al. 1994).
- 2.2.4 Devensian deposits have been suggested to be present within the Yare Valley Formation (Coxon 1993, Cox et al. 1989). Such deposits would have the potential to preserve late Middle Palaeolithic artefacts and ecofacts. Regionally, the key late Middle Palaeolithic find spot is Lynford Quarry (Boismier et al. 2012). Here, Upper Pleistocene deposits were identified within a small oxbow lake formed in the course of the river Wissey, which produced minimally disturbed late Middle Palaeolithic artefacts. These are associated with a mammalian faunal assemblage and a range of paleoenvironmental indicators. Optical stimulated luminescence (OSL) age estimates on the associated sediments date hominin activity at the locale to the interval ~65-57 ka.

### **2.3 Early Upper Palaeolithic (36 – 13 ka)**

- 2.3.1 No early Upper Palaeolithic (~30,000-26,000 BP) archaeology has been recovered from the study area, although a possible terminal Middle/early Upper Palaeolithic leaf point has been identified from the Holmes Housing Estate, Gorleston, Great Yarmouth (TG 5200030; Wymer 1985). Additionally, deposits belonging to this period may be present within Yare Valley formation (Coxon 1993, Cox et al. 1989).
- 2.3.2 There appears to exist major hiatus in the British archaeological between 26,000 and 13,000 BP, which may reflect human absence from Britain (Jacobi and Higham 2011).

### **2.4 Late Upper Palaeolithic to Medieval (13,000 BC – AD 1500)**

- 2.4.1 Great Yarmouth is located in a low-lying basin where the River Yare and River Bure become confluent, flowing through Breydon Water towards the North Sea. Post glacial sea-level rise during the Holocene would have flooded the valleys transforming the rivers into estuaries with marshlands forming along the margins. These Holocene environments are represented by alluvium and intercalated peats of the Breydon Formation.
- 2.4.2 There are three peat layers associated with the Breydon Formation; the basal, middle and upper peat.
- 2.4.3 The basal peat is recorded to have formed 6,600 to 6,240 cal. BC (Mesolithic) at a depth of around -19 m OD and is up to 2 m thick (Arthurton et al. 1994). The Mesolithic record in and around Yarmouth is relatively sparse with only 12 Mesolithic findspots located within 10 km of the town ([www.archiuk.com](http://www.archiuk.com)).
- 2.4.4 This may reflect the small number of excavated sites and palaeoenvironmental records of Mesolithic date within Norfolk in general (Austin 2011). It may also be related to the distribution of Mesolithic findspots, as most of them are restricted to the upper reaches of river valleys within the Norfolk Broads (Wessex Archaeology 2013).



- 2.4.5 The middle peat is generally 2-4 m thick and occurs within the range of -4 m to -9 m OD. Dates from this peat range from ~4700 BP to 2000 BP (uncalibrated) (Arthurton et al. 1994) suggesting peat formation occurred from the Neolithic to Iron Age. Records of Neolithic to Iron Age activity in and around Great Yarmouth are also poor, with only 31 findspots within 10 km ([www.archiuk.com](http://www.archiuk.com)).
- 2.4.6 The upper peat developed sometime after AD 500, most likely in response to the growth of the Great Yarmouth coastal barrier/spit which would have created a back-barrier marshland allowing peat to form (Boomer and Godwin 1993). North Denes Formation are the deposits associated with the Great Yarmouth barrier and they are expected to be of a similar date.

### **3 AIMS AND OBJECTIVES**

- 3.1.1 The principle aims of the geoarchaeological borehole review and deposit modelling are as follows:
- Review geotechnical borehole logs to identify deposits of potential archaeological interest, assigning high, medium and low priority status;
  - Interpret the probable environments represented;
  - Model the distribution and depth of deposits across the site using a representative selection of boreholes, considering all available geotechnical data;
  - Determine the importance of the deposits, with regard to their archaeological and palaeoenvironmental potential, and;
  - Make recommendations for additional work, if required.

### **4 METHODOLOGY**

#### **4.1 Geotechnical data**

- 4.1.1 Geotechnical data acquired during Ground Investigation (GI) works in support of the proposed scheme was provided by WSP, and included;
- Borehole logs (digital), and;
  - Borehole coordinates and elevations.
- 4.1.2 Samples were recovered from the shallow subsurface using either a percussive window sampling (WS) rig (Dando), or a cable percussion rig (BH). Boreholes located within the River Yare were acquired by cable percussion from a barge (MB)
- 4.1.3 Where a cable percussion rig was used, samples recovered were typically disturbed and collected in bags. Intermittently, in cohesive strata, a 100 mm length open sampling tube was used to collect an undisturbed sample. However, these samples were subsequently tested by geotechnical contractors and are now disturbed.
- 4.1.4 The window sampling rig was used to collect near continuous undisturbed samples in cylindrical tubes. These tubes were sealed on site and transported to the geotechnical laboratory for further analysis. These samples are no longer undisturbed due to subsequent geotechnical testing.



- 4.1.5 To aid interpretations, GI data were supplemented by publicly available records including;
- Borehole records held by BGS, and;
  - BGS superficial deposits and bedrock geology maps.

## 4.2 Review of geotechnical data

4.2.1 A total of 48 geotechnical logs were reviewed by a trained geoarchaeologist to determine the geoarchaeological and palaeoenvironmental potential of deposits recovered.

4.2.2 A summary of each borehole is itemised in **Appendix 1**, and includes the following:

- Borehole location;
- Borehole elevation (m below Ordnance Datum [OD]);
- Description of deposits;
- Depths of boundaries between deposits, and;
- Interpretation of stratigraphy.

4.2.3 Boreholes were assigned either a high, medium or low priority status based on their perceived geoarchaeological significance and potential to preserve palaeoenvironmental material, as itemised in **Appendix 1**.

4.2.4 Of greatest geoarchaeological potential are sediments from former terrestrial depositional environments, as well as certain features or inclusions of possible archaeological and palaeoenvironmental interest, specifically:

- Peat layers;
- Deposits containing other organic material such as wood fragments and roots etc.;
- Clay or silt deposits, especially those containing laminated features such as lacustrine varves or tidal rhythmites;
- Inorganic fossils (such as molluscs);
- Concentrations of charcoal;
- Individual artefacts such as pieces of flint or pottery (though finding these within core samples is rare), and;
- Any other feature that may indicate a terrestrial depositional environment.

## 4.3 Deposit modelling

4.3.1 Given the linear nature of the proposed scheme, i.e. a bridge and associated transport links across the River Yare, a two-dimensional section diagram showing the nature, extent and thickness of deposits was considered the most appropriate method of deposit modelling (**Figure 2**).



- 4.3.2 A transect ~0.6 km in length, running broadly east to west across the proposed scheme was selected for the cross section (**Figure 1**). A total of 14 representative boreholes are included in the cross section in **Figure 2**.
- 4.3.3 As part of the deposit modelling processes, any borehole records held by BGS that were located within the boundary of the proposed scheme were reviewed and considered for incorporation into the model. However, the level of detail recorded on BGS logs was not considered sufficient enough to improve the quality of the model output. Therefore, only boreholes acquired as part of the GI for the proposed scheme were included.

## 5 RESULTS

### 5.1 Review of geotechnical logs

- 5.1.1 A total of 48 geotechnical borehole logs were reviewed as part of the borehole review, with the aim of identifying deposits of potential geoarchaeological significance. Outline descriptions based on preliminary geotechnical logs are presented in **Appendix 1**, accompanied by an interpretation of the deposits.
- 5.1.2 Bedrock comprised of London Clay was encountered in seven of the 48 boreholes (BH10, BH10a, BH11, BH12, BH12b, BH13 and BH13a).
- 5.1.3 Overlying bedrock, deposits associated with Crag Group were recovered, forming the most extensive and thickest sequences (>40 m at BH11) across the site. Crag is characterised by silty sand that is occasionally gravelly with shell, interbedded with discrete beds of firm to stiff silty clay. Crag Group deposits were recovered in 34 of the 48 boreholes reviewed and were only absent from the boreholes when they terminated at shallow depths.
- 5.1.4 In seven of the boreholes, Crag Group was overlain by gravelly sand (BH4, BH4a, BH4d and BH6) and sandy gravel (BH8, BH9 and BH15) interpreted to be deposited in a glaciofluvial environment as part of the Happisburgh Glacigenic Formation. These deposits can be distinguished from the underlying Crag Group as they are coarser-grained and do not comprise shells.
- 5.1.5 Breydon Formation was recovered in 19 boreholes (WS1, WS3, WS4, WS6, WS7, WS9, BH1, BH2, BH4, BH4a, BH5, BH5a, BH6, BH7, BH4BU, BH8, BH9, MB01 and BH4A3), comprising peat (BF-p) and/or alluvium (BF-a). Where both peat and alluvium are present in the same borehole, the peat is overlain by alluvium, but can be intercalated as is the case in BH2. The peat deposits range in thickness from 0.6 m (BH2) to 2.3 m (WS7), whereas the overlying alluvium can reach thicknesses in excess of 6 m (BH1). The alluvium is fine-grained silts and clays that can be organic rich or comprise discrete organic lenses.
- 5.1.6 In seven of the boreholes, North Denes Formation was recovered (BH13, BH13a, BH14, BH15, BH16, BH17 and BH18). This deposit, although younger than Breydon Formation, directly overlies Crag Group and is characterised by coarse grained sands and gravels with occasional silt, often forming thin laminae. These deposits are part of the coastal barrier system that presently lies between Caster-on-Sea and Gorleston-on-Sea.
- 5.1.7 The youngest deposits recovered in all boreholes, with the exception of MB04a, MB07, MB09 and MB10, are characterised by Made Ground and Modern Alluvium.
- 5.1.8 Modern Alluvium is restricted to those boreholes located within and along the margins of the River Yare (MB01, MB01a, MB03, MB05, MB06, BH10, BH10a, BH11, BH12, BH12a, BH12b, BH13, BH14, BH16, BH17 and BH18) and comprises soft silty clay which is

occasionally sandy and gravelly. Made Ground is present in the remaining boreholes and is characterised by a heterogenous mixture of sand and gravel including concrete and brick. The thickness of Made Ground and Modern Alluvium varies from 0.10 m (MB08) to 5.95 m (BH12a).

## 5.2 Deposit modelling

- 5.2.1 Given the linear nature of the proposed scheme, a two-dimensional cross section has been created providing an outline model of the stratigraphy and deposits across the site (**Figure 2**).
- 5.2.2 The cross section runs broadly perpendicular from the A12 on the western side of the River Yare, to Sutton Road on the east (**Figure 1**).
- 5.2.3 The deposit model comprises a total of 14 boreholes **Figure 2**. The deposit model captures the stratigraphy within 50 m of the present ground level which includes the full depth potentially impacted by pile foundations associated with the bridge structure.
- 5.2.4 Bedrock is expected to be reached at depths greater than 40 m below OD but Crag Group is the dominant geology at depth across the site, with the top of Crag Group deposits present at elevations between -7 and -12 m OD.
- 5.2.5 Within the River Yare channel, Crag is present at, or within 1 m of the river bed. Elsewhere, along the margins of the River Yare, Crag is overlain by up to 15 m of Pleistocene and/or Holocene sediments.
- 5.2.6 Deposits interpreted to be Happisburgh Glacigenic Formation are present on the western side of the River Yare where they appear to thin towards the west from 3.75 m (BH9) to 2.00 m (BH6). They are no longer present west of BH5a (**Figure 2**).
- 5.2.7 Peat deposits of the Breydon Formation (BF-p) are present to the west of BH5a. They are located at elevations between -4 m OD (WS7) and -6.85 m OD (BH2) and reach a maximum depth of -10.35 m OD (BH2). In BH2, there are two discrete beds of peat separated by a thin (0.6 m) lens of alluvium. This is the only location where two discrete peats are identified. Peat is not present in boreholes to the east of the River Yare.
- 5.2.8 Overlying Breydon Formation peat and Happisburgh Glacigenic Formation, are Breydon Formation alluvial sediments (BF-a). These deposits only occur to the west of the River Yare and are not present to the east. The alluvium is extensive and is present between depths of -0.23 m OD (WS3) and -1.95 m OD (BH2), reaching a maximum depth of -10 m OD (BH2).
- 5.2.9 To the east of the River Yare, Crag Group is overlain by deposits interpreted to be part of the North Denes Formation. These deposits are present at elevations between -0.10 m OD (BH18) and -12.60 m OD. North Denes Formation is not present to the west of the River Yare. It appears the river channel limits the extent of these coastal deposits.
- 5.2.10 Modern Alluvium is present in boreholes located within the River Yare channel and directly adjacent to its margins. Modern Alluvium deposits appear to be thicker on the eastern side of the River Yare where they overlay North Denes Formation. The thickness of Made Ground deposits broadly varies from 0.40 m (WS3) to 3.50 m (BH2).





## 6 DISCUSSION

### 6.1 Geoarchaeological potential

6.1.1 The stratigraphy of the deposits within the proposed scheme boundary is summarised in **Table 3**, and the geoarchaeological potential of each of these deposits is outlined below.

**Table 2** Stratigraphy of deposits with the proposed scheme

WA Unit No	Unit Name (age)	Sediment Characteristics	Depositional history	Geoarchaeological potential
MG/MA	Modern Alluvium and Made Ground (Modern)	Silt and clay or heterogeneous clay, silt, sand and gravel inc. concrete and brick	Influenced by human activity post-medieval	Low – although Made Ground may include near-surface archaeology
ND	North Denes Formation (Holocene)	Sand with subordinate layers of gravel and thin layers of silty clay.	Coastal barrier/spit that has developed from AD 500 to present day	Low - but may contain archaeology
BF-p	Breydon Formation – peat (Holocene)	Peat comprised of partially decomposed organics matter	Deposited in and around the valleys of the River Yare and associated tributaries during the Holocene under the influence of rising sea level.	High - preservation of palaeoenvironmental material likely
BF-a	Breydon Formation – alluvium (Holocene)	Silt and clay, occasionally organic rich with shelly marine fauna. Sand is generally subordinate but may be substantial locally.	Deposited in the valleys of the River Yare and associated tributaries during sea-level rise when the area became an estuary with associated saltmarsh and mudflats.	Medium - preservation of palaeoenvironmental material is possible.
HGF	Happisburgh Glacigenic Formation – sand and gravel (Anglian)	Sands and gravels	Glaciofluvial deposits	Low – landscape not suitable for occupation
Crag	Crag Group - Wroxham Crag Formation (Pleistocene)	Sands interbedded with silt and clay	Deposited in shallow marine-estuarine setting on the edge of the North Sea Basin.	Low – predates occupation
Bedrock	London Clay (Eocene)	Silt and clay	Marine	Low – predates occupation

6.1.2 The geoarchaeological potential of the solid geology London Clay is low as these deposits pre-date hominin occupation.

6.1.3 Crag Group deposits are Pliocene to Pleistocene in age. The Crag Group deposits within the proposed scheme boundary are generally fine to medium sand which are occasionally laminated and interbedded with beds of clay and silt. These most likely belong to the



Wroxham Crag Formation, which are the youngest of Crag Group deposits dating to the Middle Pleistocene/Lower Palaeolithic.

- 6.1.4 The earliest evidence of hominin occupation in north-west Europe was discovered at Happisburgh ~30 km to the north of Great Yarmouth on the Norfolk coast (Parfitt et al. 2005; 2010; Ashton et al. 2008, 2014). The archaeological and palaeoenvironmental discoveries were associated with deposits from Cromer Forest-bed Formation which overlies Wroxham Crag. Cromer Forest-bed was not identified within the proposed scheme boundary.
- 6.1.5 Given that Wroxham Crag predates the known occupation history of Britain, and that it contains shells suggesting deposition in a shallow marine environment, the geoarchaeological potential of Crag Group deposits within the proposed scheme boundary is considered low.
- 6.1.6 Happisburgh Glacigenic Formation sediments were deposited during the Anglian glacial period approximately 450,000 years ago. The geoarchaeological potential of these deposits is low.
- 6.1.7 Of all the deposits within the proposed scheme boundary, Breydon Formation peat and alluvial deposits have the greatest geoarchaeological potential. These deposits represent a freshwater-brackish low-lying marshland that formed in and around the River Yare throughout the Holocene.
- 6.1.8 The peat deposits of Breydon Formation have high geoarchaeological potential due to their potential to preserve paleoenvironmental material e.g. pollen, and macrofossils suitable for radiocarbon dating. In comparison, the alluvium has medium potential due to a lesser organic matter content, although these deposits have potential to preserve other environmental proxies such as diatoms and foraminifera.
- 6.1.9 Collectively, the intercalated nature of alluvium and peat deposits may reflect changing sea-levels with evidence for multiple transgressions from the Mesolithic to Anglo-Saxon period in the area. Changes in landscape (wetland/estuarine/marine environments) and proximity to marine resources driven by fluctuating sea levels would have influenced land-use and associated industries such as fishing and peat cutting.
- 6.1.10 Within the proposed scheme boundary, there is at least one, but possibly two distinct peat deposits preserved on the western side of the River Yare. The Breydon Formation is expected to have three distinct peat bodies separated by estuarine alluvium, with each peat representing a different time periods as follows (Boomer and Godwin 1993);
- Upper peat – post AD 500 (Anglo-Saxon to Early Medieval);
  - Middle peat – 2,700 BC to AD 0 (Neolithic to Iron Age), and;
  - Lower peat – pre- 5,500 BC (Mesolithic)
- 6.1.11 It is not possible to establish which of these peats are present within the proposed scheme without further paleoenvironmental works. Based on their depth and thickness, they may be part of the middle peat forming at some point between the Neolithic and Iron Age. It is anticipated the upper peat has been removed due to extensive peat extraction for fuel between 12<sup>th</sup> and 15<sup>th</sup> centuries AD (Lambert and Jennings 1960).



- 6.1.12 The North Denes Formation deposits are associated with a coastal barrier system that extends from the present-day coast to the River Yare. These deposits are younger than Breydon Formation and documentary evidence supports the existence of the barrier from 500 AD onwards (Arthurton et al. 1994). Given its age, there is potential for the deposits to contain archaeological material, although the presence of significant layers or occupation is unlikely. Given the coarse-grained nature of these deposits, their geoarchaeological potential is considered low.
- 6.1.13 The potential of Modern Alluvium is considered low. Made Ground is also considered to be of low potential, although it is important to note that should any near-surface archaeological remains be present, they would be included within this designation.

## 6.2 Potential impact

- 6.2.1 Within the proposed scheme, Breydon Formation are the only deposits identified as having high and medium geoarchaeological potential. These deposits are located on the western side of the River Yare (**Figure 2**) at depths between -0.23 m OD (WS3) and -10.35 m OD (BH2).
- 6.2.2 Any impact on these deposits will likely occur during construction of the road network and associated landscaping on the western side of the River Yare.
- 6.2.3 The Breydon Formation peat, which has the highest geoarchaeological potential, is located at depths typically between 5 m and 10 m below ground level. Any ground works at these depths will impact the peat. At shallower depths, between 1 m and 5 m below ground level, the Breydon Formation alluvial deposits may be impacted during construction.
- 6.2.4 The installation of piles to support the bridge structure within and along the margins of the River Yare, will not impact deposits with high to medium geoarchaeological potential. However, if pile structures are used elsewhere on the western side of the River Yare, these may impact the deposits depending on their penetration depth.

## 7 RECOMMENDATIONS

- 7.1.1 Based on the results of the borehole review and deposit modelling, Breydon Formation deposits interpreted to have high (peat) and medium (alluvium) geoarchaeological potential, were identified with the proposed scheme site boundary to the west of the River Yare. There is potential for these deposits to be impacted during the construction phase of the road network associated with the Third River Crossing bridge, depending on the depth of ground works.
- 7.1.2 Due to the geotechnical testing schedule, samples from these deposits have been disturbed and are no longer suitable for geoarchaeological recording and sub-sampling for palaeoenvironmental assessment.
- 7.1.3 If the depth of impact exceeds 5 m below ground level, it is recommended a dedicated geoarchaeological borehole survey is undertaken to recover undisturbed core samples from the Breydon Formation deposits. Drilling a single borehole to a maximum depth of 15 m in close proximity to BH2 should capture the most extensive sequence of deposits. Depending on the nature of deposits recovered, further paleoenvironmental works may be recommended.



- 7.1.4 Alternatively, if the depth of impact associated with construction of the road network is less than 5 m below ground level, it is unlikely the peat deposits will be impacted, and no further works are recommended.

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## APPENDIX 1

id	Description	Potential	Easting (m)	Northing (m)	Elevation m (OD)
MB01	loose sand and gravel (0.80 m) (MA) firm laminated clay (1.70 m) (BF-a) gravelly sand (3.60 m) (Crag) mottled brown sand (4.00 m) (Crag)	Low	652421	306010	-6.59
MB01a	soft silty sandy clay (1.40 m) (MA) silty sand with occasional shell and fine gravel (20.60 m) (Crag) firm silty clay (23.7 m) (Crag) silty sand with occasional shell (25.00 m) (Crag)	Low	652421	306014	-7.88
MB02	soft silty gravelly clay (1.00 m) (MA) sand and gravel with occasional shell (Crag) (2.00 m) silty slightly gravelly sand with occasional shell (20.80 m) (Crag) firm silty clay (23.20 m) (Crag) silty slightly gravelly sand with occasional shell (35.40 m) (Crag) silty sand with clay laminations (36.40 m) (Crag) stiff silty clay (4.00 m) (Crag)	Low	652432	305996	-7.87
MB03	soft mottled silty sandy clay (1.30 m) (MA) silty sand with occasional shell and fine gravel (19.70 m) (Crag) stiff silty sandy clay (20.50 m) (Crag) sand with clay laminations (25.00 m) (Crag)	Low	652422	305978	-7.67
MB04	clay, sand and gravel of concrete (1.00 m) (MG)	Low	652434	305964	-8.1
MB04a	gravelly sand (2.30 m) (Crag) silty sand with occasional fine gravel and shell (18.30 m) (Crag) silty sand with clay laminations (20.40 m) (Crag) firm silty sandy clay (24.30 m) (Crag) silty sand with occasional shell (38.20 m) (Crag) stiff silty clay (41.70 m) (Crag)	Low	652435	305962	-7.99
MB05	soft silty clay and sandy silt (1.00 m) (MA) silty sand with occasional fine gravel (20.30 m) (Crag) clayey silty sand (22.40 m) (Crag) firm silty clay (24.40 m) (Crag) silty sand (25.00 m) (Crag)	Low	652426	305946	-5.77
MB06	silty sand (2.40 m) (MA) silty sand with occasional fine gravel and shell (Crag) firm sandy clay (22.60 m) (Crag)	Low	652494	306024	-6.56
MB07	silty gravelly sand (1.30 m) (Crag) sand with occasional fine gravel and shell (18.90 m) (Crag) clayey silty sand (19.5 m) (Crag) firm sandy clay (22.20 m) (Crag) silty sand (37.40 m) (Crag) stiff silty clay (40.00 m) (Crag)	Low	652485	306003	-6.85
MB08	soft silty clay (0.10 m) (MA) silty slightly gravelly sand (13.50 m) (Crag) stiff clay (18.80 m) (Crag) clayey silty sand (21.00 m) (Crag) stiff silty clay (23.30 m) silty slightly gravelly sand (25.00 m) (Crag)	Low	652499	305988	-6.7
MB09	slightly gravelly sand (1.30 m) (Crag) silty sand with occasional gravel and shell fragments (19.50 m) (Crag) silty sand with clay laminations (21.20 m) (Crag) firm silty clay (24.30 m) (Crag) silty sand with occasional shell fragments (37.40 m) (Crag) stiff silty clay (37.70 m) (Crag) gravelly sand ( 38.00 m) (Crag) silty clay (40.00 m) (Crag)	Low	652490	305973	-6.13





id	Description	Potential	Easting (m)	Northing (m)	Elevation m (OD)
MB10	silty sand (3.70 m) (Crag) silty slightly gravelly sand (14.40 m) (Crag) hard claystone (14.55 m) (Crag) silty sand with occasional gravel (14.55 m) (Crag) silty sand with clay laminations (19.70 m) (Crag) clayey silty sand (22.00 m) (Crag) stiff silty clay (22.33 m) (Crag) slightly gravelly sand with shell fragments (25.00 m) (Crag)	Low	652502	305958	-5.87
BH4AS	sand and gravel (0.50 m) (MG) soft silty clay (2.20 m) (BF-a) peat (3.20 m) (BF-p) sand with occasional gravel (4.80 m) (Crag)	High	652283.975	305846.552	2.128
BH4B	gravel and sand (1.40 m) (MG)	Low	652312.473	305826.346	1.831
WS1	slightly gravelly sand (3.90 m) (MG) soft clay (5.00 m) (BF-a)	Low	652124.658	305894.619	1.547
WS2	silt (0.10 m) (MG) gravelly sand becoming sand and gravel with depth (2.00 m) (MG)	Low	652124.438	305896.963	0.854
WS3	gravelly clay (0.40 m) (MG) clayey sandy silt (1.60 m) (BF-a) black organic clay (5.00 m) (BF-a)	Medium	652124.299	305899.154	0.178
WS4	gravelly sand (4.90 m) (MG) soft clay (5.00 m) (BF-a)	Low	652156.628	305892.961	1.592
WS5	slightly gravelly sand becoming sand and gravel with depth (1.10 m) (MG)	Low	652156.195	305894.429	1.092
WS6	silty sand (0.60 m) (MG) silty clay (1.50 m) (BF-a) sand (2.50 m) (BF-a) soft black organic clay (5.00 m) (BF-a)	Medium	652156.473	305896.786	0.135
WS7	sand and gravel (3.30 m) (MG) black silty clay (5.70 m) (BF-a) peat (8.00 m) (BF-p)	High	652203.884	305884.993	1.701
WS8	sand (0.40 m) (MG)	Low	652202.85	305887.222	0.874
WS9	sand and gravel (1.30 m) (MG) clayey silt (3.50 m) (BF-a) peat (5.00 m) (BF-p)	High	652203.029	305889.802	0.271
BH1	slightly gravelly silty sand (1.70 m) (MG) slightly gravelly silty clay with lenses of organic matter (8.50 m) (BF-a) peat (11.40 m) (BF-p) organic silt and sand (13.00 m) (BF-a) silty sand with occasional shell and fine gravel (26.10 m) (Crag) laminated silty sandy clay (28.80 m) (Crag) silty sand with occasional clay laminations (30.45 m) (Crag)	High	652102.434	305897.297	1.7
BH2	sand and gravel (3.50 m) (MG) silty clay with organic lenses (4.30 m) (BF-a) slightly gravelly clay (8.40 m) (BF-a) peat with organic clay lenses (9.00 m) (BF-p) peat (10.90 m) (BF-p) silty sand (11.5 m) (BF-a) peat (11.90 m) (BF-p) silty sand (14.00 m) (Crag) silty gravelly sand (19.35 m) (Crag) clayey silty sand (27.00 m) (Crag) laminated silty clay and sandy silt (30.00 m) (Crag)	High	652152.032	305894.197	1.556
BH4	sand and gravel (3.30 m) (MG) soft silty clay (4.30 m) (BF-a) peat (6.00 m) (BF-p) silty gravelly sand with occasional organic fragments inc. wood (8.50 m) (BF-a) gravelly sand with thin beds of sand (9.45 m) (HGF) sand (18.00 m) (Crag) gravelly sand (19.00 m) (Crag) silty sand with clay laminations (24.45 m) (Crag) sand with occasional shell fragments (29.50 m) (Crag) laminated silty clay (30.45 m) (Crag)	High	652233.11	305879.934	1.769





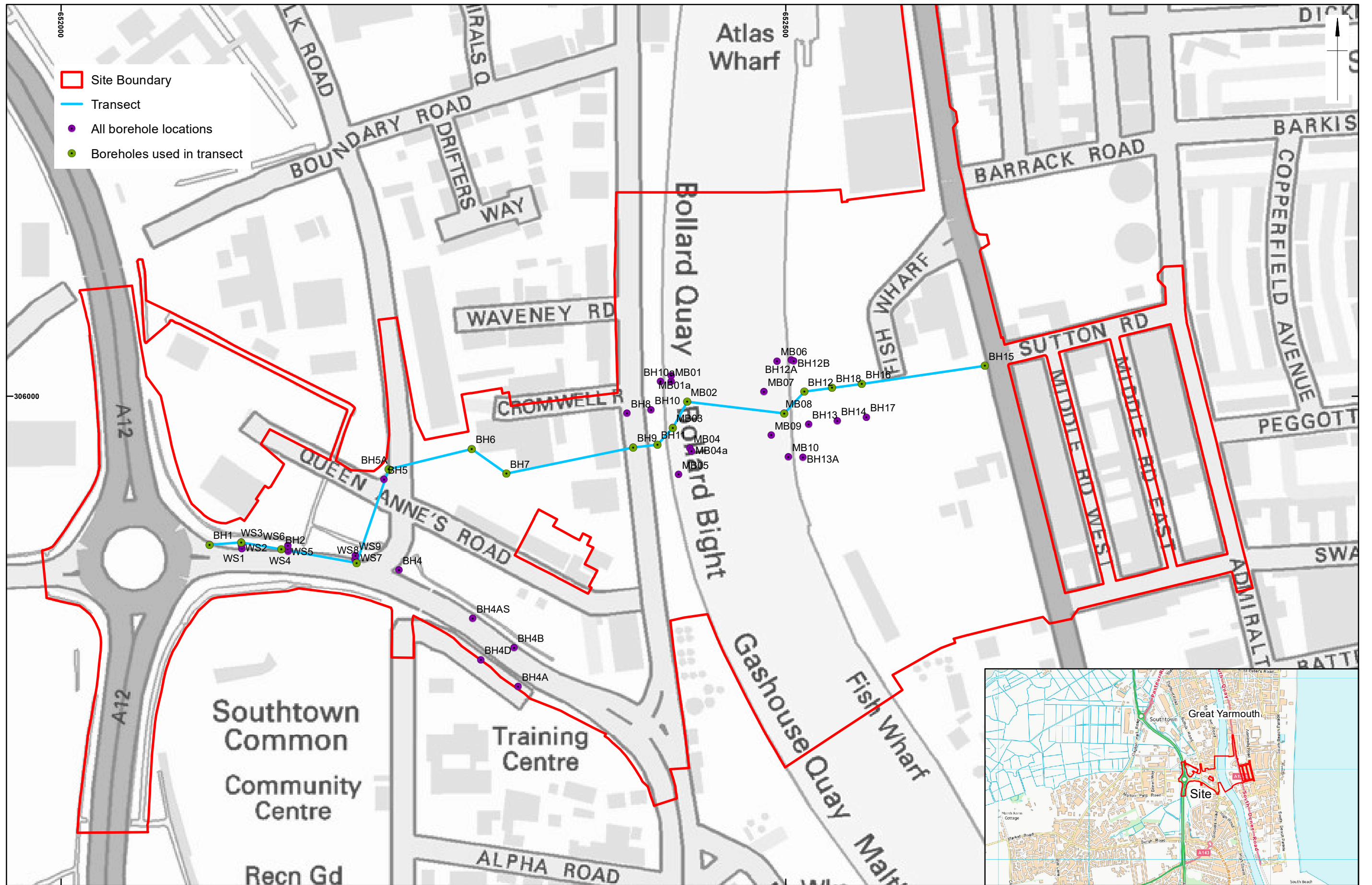
id	Description	Potential	Easting (m)	Northing (m)	Elevation m (OD)
BH4A	clayey gravelly sand (1.00 m) (MG) laminated clay and silt (BF-a) peat (3.50 m) (BF-p) gravelly sand (5.00 m) (HGF)	High	652315.409	305799.625	1.25
BH4D	sand and gravel (4.20 m) (MG) gravelly sand (7.00 m) (HGF) silty gravelly sand with lenses of clay and occasional shell (10.00 m) (Crag) sand (19.45 m) (Crag) laminated silty sand (21.50 m) (Crag) sand with clay laminae (25.00 m) (Crag) laminated silt and clay (26.45 m) (Crag) sand with clay laminations (26.45 m) (Crag) silty clay (30.45 m) (Crag)	Low	652289.573	305817.952	1.38
BH5	sand, gravel silt and clay (1.70 m) (MG) silty clay with peat lenses (2.50 m) (BF-a) organic gravelly sandy silty clay (3.40 m) (BF-a) organic slightly clayey gravelly sand (3.80 m) (BF-a) silty clay with sand laminations (5.00 m) (BF-a)	Medium	652222.816	305942.58	0.877
BH5A	sandy gravel and clay (1.70 m) (MG) silty clay with peat lenses (2.40 m) (BF-a) clayey silty sand with peat lenses (3.00 m) (BF-a) sandy gravelly clay with lenses of peat (3.40 m) (BF-a) sandy silty clay (4.80 m) (BF-a) silty sand with clay laminations (5.60 m) (BF-a) gravelly sand (9.70 m) (Crag) silty sand with occasional shell (13.00 m) (Crag) gravelly sand with shell (15.45 m) (Crag) silty sand with shell (25.80 m) (Crag) sandy silty laminated clay (30.50 m) (Crag)	Medium	652225.894	305949.534	0.91
BH6	silty gravel and sand (2.00 m) (MG) organic clayey gravelly sand (3.00 m) (BF-a) clayey sand (4.00 m) (BF-a) slightly gravelly sand (5.00 m) (HGF) sand and gravel (6.00 m) (HGF) slightly gravelly sand (12.50 m) (Crag) silty sand (16.00 m) (Crag) laminated sandy silt and silty clay (17.45 m) (Crag) silty sand with shell (23.00 m) (Crag) clayey silt (24.50 m) (Crag) sand with occasional shell (27.00 m) laminated silty sandy clay (30.45 m) (Crag)	Medium	652283.411	305963.434	0.927
BH7	sandy gravel (1.00 m) (MG) slightly organic clayey sandy silt (1.65 m) (BF-a) silty clay with peat lenses (2.45 m) (BF-a) organic silty clay (3.00 m) (BF-a) sandy silty clay with lenses of peat (4.00 m) (BF-a) slightly gravelly silty sandy clay (6.00 m) (BF-a)	Medium	652307.183	305946.458	1.226
BH14	silty gravelly sand (1.80 m) (MG) sand (2.60 m) (MA) silty sandy clay (3.20 m) (MA) silty sand (9.20 m) (ND) sand and gravel (11.70 m) (ND) gravelly sand (14.70 m) (ND) gravelly sand with occasional shell and fine gravel (27.50 m) (Crag) laminated sandy silt (32.60 m) (Crag) stiff clay (33.20 m) (Crag) sand (40.00 m) (Crag)	Low	652535.684	305982.793	1.955
BH15	gravel (0.35 m) (MG) gravelly sand (5.00 m) (ND) sand and gravel (8.00 m) (ND) silty sand with occasional shell and fine gravel (14.30 m) (Crag) silty clay (14.60 m) (Crag) gravel and sand (15.40 m) (Crag) sand with occasional clay laminae (26.45 m) (Crag) laminated silty clay (30.45 m) (Crag)	Low	652637.441	306020.811	1.915
BH16	sand and gravel (2.00 m) (MG) silty sandy clay (3.00 m) (MA) silty sand (4.00 m) (MA) silty sand with occasional clay laminae (8.00 m) (ND) clayey sand (8.90 m) (ND) sandy gravel (14.30 m) (ND) silty sand with rare shell (37.00 m) (Crag) silty clay (38.90 m) (Crag) silty sand with clay laminations (40.45 m) (Crag)	Low	652552.53	306008.468	2.002
BH17	sand and gravel (1.00 m) (MG) sandy silty clay (1.50 m) (MA) sandy silt (3.00 m) (MA) sand (8.00 m) (ND) clayey silty sand (9.80 m) (ND) clayey gravelly sand (15.60 m) (ND) silty sand (27.00 m) (Crag) clayey silty sand (29.00 m) (Crag)	Low	652555.669	305985.372	2.047




id	Description	Potential	Easting (m)	Northing (m)	Elevation m (OD)
	m) (Crag) firm silty clay (31.00 m) sand with clay and silty laminations (36.00 m) (Crag) clayey silty sand (40.45 m) (Crag)				
BH18	sand and gravel (1.50 m) (MG) sandy gravelly silty clay (2.10 m) (MA) clayey sand with shell fragments (4.70 m) (ND) sand becoming silty and gravelly with depth (11.70 m) (ND) sand and gravel (14.6 m) (ND) silty sand with occasional gravel (30.00 m) (Crag) sandy silt with clay laminations (34.00 m) (Crag) silty sandy clay (40.45 m) (Crag)	Low	652531.997	306005.595	1.995
BH10	gravelly silty sand (0.90 m) (MG) gravelly sandy silty clay w/ shell (2.00 m) (MA) slightly sandy silty clay (3.50 m) (MA) slightly organic silty sand (5.00 m) (Crag) laminated sandy silt and clay (11.20 m) (Crag) silty sand (22.40 m) (Crag) sand with lenses of clay (28.00 m) (Crag) laminated sandy silty clay (34.00 m) (Crag) sand with shell (45.60 m) silty clay (50.45 m) (bedrock)	Low	652407.07	305990.473	2.446
BH10a	sand and gravel (1.30 m) (MG) silty sand with clay lamination (2.30 m) (MA) organic clayey gravelly sand with brick (4.00 m) (MA) organic silty clay and sand (4.30 m) (MA) silty gravelly sand with clay lenses (10.00 m) (Crag) laminated silty sandy clay (12.00 m) (Crag) silty sand (22.40 m) (Crag) silty sand with lenses of clay (28.30 m) (Crag) laminated silty clay (32.00 m) (Crag) sand with shell (45.80 m) (Crag) laminated clay (50.00 m) (bedrock)	Low	652413.494	306009.977	2.546
BH11	sand and gravel (2.80 m) (MG) slightly organic sandy clay with shell (4.50 m) (MA) sand and gravel (6.30 m) (HGF) sandy gravel (6.80 m) (HGF) gravelly sand with shell (7.50 m) (Crag) sand (11.00 m) (Crag) sand with lenses of clay (14.00 m) (Crag) silty sand (21.80 m) (Crag) silty sand with lenses of clay (28.50 m) (Crag) silty sand (29.50 m) (Crag) laminated silty sandy clay (35.50 m) (Crag) silty sand with shell (44.00 m) laminated silty sand and clay (46.45 m) (Crag) silty clay (50.00 m) (bedrock)	Low	652411.396	305966.5	2.462
BH12	silty gravelly sand ( 2.00 m) (MG) sandy clayey silt (3.50 m) (MA) sand with shell (4.00 m) (MA) organic gravelly silty sand (6.50 m) (MA) gravelly silty sand with shell (9.50 m) (Crag) gravelly sand (10.50 m) (Crag) sand with clay an silt laminations (12.50 m) (Crag) silty sand with shell (15.00 m) silty sand with clay laminations (20.50 m) sand (22.50 m) (Crag) slightly gravelly sand with clay laminations (28.70 m) (Crag) laminated silty clay (31.00 m) (Crag) sandy silt and clay (32.50 m) (Crag) laminated sandy silt and clay (34.50 m) (Crag) silty sand (45.50 m) (Crag) silty clay (50.00 m) (bedrock)	Low	652512.874	306003.018	2.283
BH12A	sand and gravel (4.80 m) (MG) gravelly sand (5.90 m) (MA) gravel (5.95 m) (MG)	Low	652503.732	306024.912	2.368
BH12B	gravelly sand (4.50 m) (MG) organic gravelly sandy silty clay with brick (6.50 m) (MA) laminated sandy silty clay with shell (7.50 m) (MA) organic gravelly sand with brick (6.50 m) (MA) sandy silty clay with shell (7.50 m) (MA) silty sand (11.60 m) (Crag) silty clay (12.20 m) (Crag) silty sand with laminations (29.30 m) (Crag) laminated silty clay (31.80 m) (Crag) silty sand (33.50 m) (Crag) slity gravelly sand (36.50 m) (Crag) silty sand with shell (44.00 m) laminated silty clay (50.00 m) (bedrock)	Low	652505.498	306024.187	2.328



id	Description	Potential	Easting (m)	Northing (m)	Elevation m (OD)
BH13	sand, gravel and clay (2.10 m) (MG) silty clay (2.60 m) (MA) sandy clayey silt (5.00 m) (MA) sand with shell (6.00 m) (ND) gravelly clayey silty sand (9.40 m) (ND) sandy gravel with shell (10.00 m) (ND) gravelly sand (11.00 m) (ND) laminated silty sand with shell (14.00 m) (ND) silty sand with clay laminations (27.70 m) (Crag) sandy clay with laminations (33.00 m) (Crag) clayey silty sand with shell (44.80 m) (Crag) silty clay with laminations (45.20 m) (Crag) clay (50.00 m) (bedrock)	Low	652515.83	305980.383	2.269
BH13A	gravelly sand (1.40 m) (MG) sandy silty gravel (2.70 m) (MG) gravelly sandy silty clay (4.90 m) (MG) gravelly sand with shell (5.90 m) (ND) gravelly sand (9.50 m) (ND) gravelly silty clayey sand with laminations (12.00 m) (ND) sand with clay laminations and shell (27.20 m) (Crag) laminated silty sandy clay (31.30 m) (Crag) sand with clay laminations and shell (45.70 m) (Crag) silty clay (46.00 m) (Crag) clay (50.00 m) (bedrock)	Low	652511.877	305957.733	2.379
BH4BU	sand and gravel (0.40 m) (MG) silty gravelly sand (1.35 m) (MG) sand and gravel (1.85 m) (MG) silty sand (1.95 m) (BF-a) organic silty clay (2.65 m) (BF-a) gravelly clay with organic lenses (2.85 m) (BF-a) silty gravelly sand (4.00 m) (Crag) sand (5.00 m) (Crag)	Medium	N/A	N/A	N/A
BH8	sand and gravel (1.90 m) (MG) organic sandy silt (2.20 m) (BF-a) peat (2.60 m) (BF-p) gravelly silty sand with peat lenses (3.60 m) (BF-a) sandy gravel (5.00 m) (HGF) sand with shell and clay laminations (27.00 m) (Crag) silty clay (27.70 m) (Crag) sand (29.00 m) (Crag) sand with shell and clay laminations (40.37 m)	High	652390.553	305988.115	1.892
BH9	sand and gravel (1.20 m) (MG) gravelly sandy silty clay (1.80 m) (BF-a) organic sandy gravelly silty clay (2.60 m) (BF-a) sand with rootlets (3.25 m) (BF-a) gravelly sand (6.00 m) (HGF) sand and gravel (7.00 m) (HGF) silty sand with shell and clay laminations (21.80 m) (Crag) silty sandy laminated clay (22.00 m) (Crag) silty sand (27.10 m) silty sand with clay laminations (30.00 m) (Crag) laminated silt and clay (32.00 m) (Crag) gravelly sand (34.00 m) (Crag) sand with clay laminations (38.50 m) (Crag) gravelly sand (40.45 m) (Crag)	Medium	652394.829	305964.55	1.827



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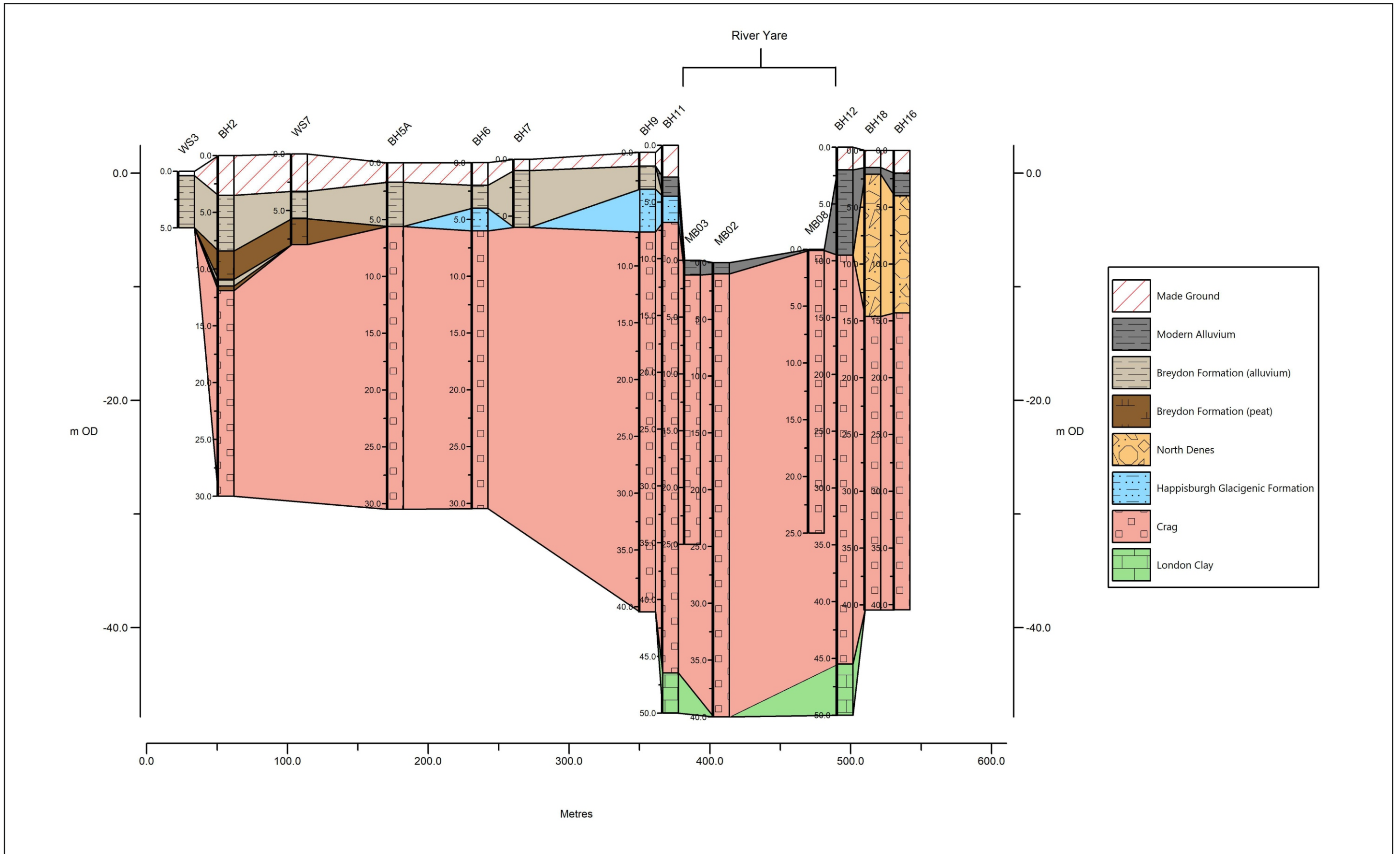


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Site location plan showing transect

Figure 1





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Sub-surface transect across the Site

Figure 2



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