

**Quinn Estates Ltd**

**Proposed Wetland Area**

**Environmental Statement: Volume 3,  
Non-Technical Summary**



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Non-Technical Summary**

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# 1 INTRODUCTION

1.1 This document provides a non-technical summary of the findings of the Environmental Statement (ES), which has been prepared on behalf of Quinn Estates to accompany a detailed planning application for a proposed wetland area at Conningbrook Park, Ashford (the 'Application Site').

1.2 Entran Ltd was commissioned by the Applicant to prepare an ES in support of a detailed planning application for the proposed wetland area.

1.3 The proposed wetland area (hereafter referred to as the 'Proposed Wetland Area') is designed to ensure delivery of nutrient neutrality at the designated sites at Stodmarsh as a result of impacts arising from the proposed development at Conningbrook Park, Land NE of Willesborough Road (hereafter referred to as 'Land NE of Willesborough Road'). The Proposed Wetland Area is proposed as off-site mitigation for the proposed development at Land NE of Willesborough Road for which a planning application has been submitted (19/00025AS).

1.4 The ES identifies and records the results of assessments of the construction and operational phases and considers the potentially significant environmental effects the Proposed Wetland Area will create. The ES suggests a range of measures to mitigate the identified effects and, where opportunities exist, to introduce improvement measures.

1.5 The ES Addendum and this Non-Technical Summary have been prepared in accordance with the requirements set out in *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017*.

1.6 Cumulative effects from proposed or committed developments in the vicinity of the Site have been considered within each of the technical chapters.

1.7 This report provides a Non-Technical Summary of the findings of the ES.



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## 2 THE SITE AND SURROUNDINGS

2.1 The Proposed Wetland Area lies within the administrative area of Ashford Borough Council (ABC) and is approximately 250m to the east of the site of the proposed development at Land NE of Willesborough Road, for which the Proposed Wetland Area provides off-site mitigation to achieve nutrient neutrality at the designated sites at Stodmarsh. It is located to the east of Conningbrook Lakes Country Park. It is not subject to any statutory or non-statutory landscape designations and is not considered to represent a 'valued landscape' as it does not contain any physical attributes to elevate it above that of 'ordinary countryside'.

2.2 The Kent Downs AONB is located 1km to the north east and east of the Application Site.

2.3 The Application Site covers an area of approximately 6ha and is currently in agricultural use. The topography is relatively flat and ranges from 31.68m AOD in the central drainage ditch to 33.45 AOD at the south-western corner. It is bounded to the west by the River Great Stour and on the western side of the River Great Stour is the Conningbrook Lakes Country Park and a partially developed residential development (Conningbrook Willesborough Road). The eastern boundary is defined by existing agricultural field boundaries and to the north and south are further areas of agricultural land.

2.1 The nearest main river is the Great Stour which borders the Application Site to the west and south. The Great Stour flows northeast towards Canterbury eventually flowing into the North Sea at Pegwell Bay. There are a number of large farm ditches (non-main river) within the boundary which carry surface flows from the Application Site and upstream catchment to the River Great Stour.

2.2 From review of the SFRA and EA hydraulic modelling results, the Application Site lies predominantly within Flood Zone 3b, defined as the 5% AEP fluvial flood event in the River Great Stour. Due to the well-defined floodplain at this location, there is limited variation between the extents of Flood Zones 3b and Flood Zone 2. There are small areas along the eastern boundary which may lie within Flood Zone 1.

2.3 The Application Site is not subject to any nature conservation designations, although Great Stour, Ashford to Fordwich Local Wildlife Site (LWS) which forms the western boundary of the Application Site is designated for its riverine habitats and associated flora and fauna. The nearest statutory designation is Ashford Green Corridors Local Nature Reserve (LNR) located 1.2km to the southwest of the Site.



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2.4 The Application Site is not located within or near to an Air Quality Management Area (AQMA).



### 3 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

3.1 This ES is submitted as a requirement of the EIA Regulations. The key requirements of the EIA Regulations with regards to the assessment methodology are as follows:

- Provision of a description of the relevant aspects of the current state of the environment (baseline scenario) and future baseline scenario;
- Description of the likely significant effects of the development on the environment resulting from:
  - a) The construction of the development, including where relevant demolition works;
  - b) The use of natural resources;
  - c) The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and disposal and recovery of waste;
  - d) The risks to human health, cultural heritage or the environment due to accidents or disasters;
  - e) The cumulation of effects with other existing or approved projects; and
  - f) The impact of the project on climate and the vulnerability of the project to climate change
- Description of methods used to assess the significant effects and a description of the measures envisaged to avoid, prevent, reduce or offset identified significant adverse effects on the environment;
- Description of the expected significant adverse effects of the development on the environment from the vulnerability of the development to risks of major accidents or disasters where relevant.

3.2 The main objectives of the ES comprise:

- Establishing the existing baseline;
- Determine environmental conditions. This task was divided into two phases:
  - (i) collection and review of existing data relating to the Site, including a review of information held by statutory and non-statutory consultees; and
  - (ii) the enhancement of existing data, where necessary with information collected through site investigation and surveys.



- identifying, predicting and assessing the significance of the environmental impacts including beneficial, adverse, direct, indirect, long term, medium term, short term, temporary, permanent and cumulative impacts which could be expected as a result of the development proposals on those environmental issues that were considered to be potentially significant during the scoping process; and
- determining mitigation and management measures, which would be required in order to prevent, reduce or remedy any significant adverse effects along with consideration of enhancement measures which could be implemented to ensure positive benefits as a result of these proposals.

## **CONSULTATION**

3.3 Pre-application consultation is an essential part of the EIA process and has been used to:

- identify available baseline data and the need for any further field surveys; and
- identify the main environmental issues that need to be assessed in detail.

3.4 Both statutory and non-statutory consultees have been consulted as part of the EIA for the proposed development at Land NE of Willesborough Road for which the Proposed Wetland Area forms off site mitigation.

## **SCOPE OF THE EIA**

3.5 The purpose of an EIA scoping exercise is to ensure that all relevant environmental issues with respect to a development are identified from the outset and to confirm that the EIA process would conform to the requirements of the EIA Regulations. The EIA Regulations require *'a description of the likely significant effects of the development on the environment.'*

3.6 An assessment of all environmental effects is not required, only those likely to be significant. By applying relevant guidance and professional judgement it is possible to identify those environmental areas that should be assessed.

3.7 Following completion of the scoping process undertaken for the December 2018 ES for the development at Land NE of Willesborough Road, a scoping report was issued to ABC. The scoping report detailed the findings of the scoping assessment and set out the proposed methodology for those technical areas deemed potentially likely to experience a significant effect as a result of the Proposed Development. These were identified as follows:



- 
- Transport and Access;
  - Air Quality;
  - Noise and Vibration;
  - Landscape and Visual Amenity;
  - Ecology and Nature Conservation;
  - Water Quality, Hydrology and Flood Risk;
  - Soils, Geology, Contaminated Land;
  - Archaeology and Cultural Heritage; and
  - Socio-Economics and Human Health

3.8 A scoping opinion was received from ABC in October 2018. A copy of the scoping report and scoping opinion are included as **Appendix 3.1 and 3.2**.

3.9 Further to the submission of the 2018 ES and 2019 ES Addendum for the development at Land NE of Willesborough Road a Climate Change Technical Note was submitted to provide clarification on a number of climate change issues raised during the review of the 2019 ES Addendum by Temple Group on behalf of Ashford Borough Council. This Climate Change Technical Note, which provides justification for scoping out climate change issues is included and **Appendix 3.3**.

3.10 The scope of this ES covers the following technical areas which are relevant to the Proposed Wetland Area:

- Archaeology and Heritage;
- Air Quality;
- Noise and Vibration;
- Landscape and Visual Impact;
- Ecology;
- Water Quality, Hydrology and Flood Risk; and
- Ground Conditions.

### **Environmental Topics Scoped out of ES**

3.11 Climate change was considered as part of the Flood Risk Assessment and Drainage Strategy which has been referred to and appended to the ES (**Appendix 12.1**). The risk of flooding to the Application Site is considered in the Water Quality, Hydrology and Flood Risk



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Chapter of this ES and in the FRA. Climate change has therefore been addressed within the EIA process.

3.12 Consideration was given to the increased likelihood of drought periods as a result of climate change. If the abstraction licence has the potential to threaten water quality in the River Great Stour during periods of extreme low flows, the Environment Agency has authority through the application of a Drought Order, to modify or suspend the conditions of the abstraction licence. By this mechanism the surface water quality of the River Great Stour can be protected during any periods of drought. The wetland design takes this into account by utilising a variable extraction rate to protect the long term management of the wetlands and river. Therefore the proposed wetlands are not expected to result in adverse impacts to water quality as a result of increased instances of drought arising from climate change.

3.13 The wetland itself has been designed to be resilient to extended periods of low flow. *Phragmites Australis* will be the majority reed planted in the wetland and is known to be able to tolerate extensive periods of drought. In extreme cases of drought where the reed population dies back completely, the wetland can be re-planted to secure an ongoing reed population. In the design of the wetland, a conservative evapotranspiration rate has been assumed which is likely to overestimate water loss from the wetland. The wetland will therefore likely over-perform in low flow conditions when compared to its design.

3.14 It is not considered that any other climate change matters are of relevance to the Proposed Wetland Area in this instance. Any carbon emissions generated by the Proposed Wetland Area would be insignificant in the context of global climate change. It is considered likely that Greenhouse Gas emissions associated with the Proposed Wetland Area will be minimal and the carbon sequestration associated with the wetlands may further reduce the net GHG emissions over the life of the project, therefore an assessment of GHG emissions for the wetland is not considered necessary. Further assessment of the impact of the Proposed Wetland Area on climate change is therefore not considered further in the assessment.

3.15 The vulnerability of the Proposed Wetland Area to risks from major accidents and / or disasters was considered and a risk assessment completed. A summary of the findings of the risk assessment are presented in Table 3.1 below.



**Table 3.1: Vulnerability to Risks from Major Accidents and / or Disasters Risk Assessment**

Potential Major Accident / Disaster	Further Consideration Required	Where addressed in ES
Industrial Accident / Biological Hazard	No (screened out)	NA
Natural Disaster (Earthquake, Volcanic Eruptions, Severe Weather, Flooding)	Further assessment for Flooding only	Chapter 12: Water Quality, Hydrology and Flood Risk and Appendix 12.1: Flood Risk Assessment
Transport Accidents	Yes	Chapter 7: Transport and Access
Terrorist Incident	No (screened out)	NA

3.16 All soil material will be retained within the agricultural land holding associated with the wetland, the retained material will be moved to an area of the site that is outside of the floodplain. There will be no material exported from the Application Site, the anticipated construction traffic is therefore minimal. Construction and operational effects of transport associated with the Proposed Wetland Area are considered to be negligible and therefore Transport and Access is not considered within this ES. The construction and operational effects of the Proposed Wetland Area on socio-economics and human health are also considered to be negligible, therefore Socio-Economics and Human Health are also not considered within this ES.

## PROJECT TEAM

3.17 This ES has been completed by a team of specialist consultants with suitable qualifications as illustrated in Table 3.2 below. Further details of the qualifications and experience of the consultants undertaking the technical assessments are included in the statement of competence in **Appendix 3.3**:

**Table 3.2: Consultant Team**

Section	Consultant
Chapters 1 to 6	Entran
Chapter 7: Archaeology and Cultural Heritage	Wessex Archaeology
Chapter 8: Air Quality	Entran
Chapter 9: Noise and Vibration	Entran
Chapter 10: Landscape and Visual Impacts	Aspect
Chapter 11: Ecology	Aspect



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Chapter 12: Water Quality, Hydrology and Flood Risk	Water Environment
Chapter 13: Soils, Geology and Contaminated Land	Ecologia

## **ASSESSMENT CRITERIA**

3.18 A number of criteria have been used to determine whether or not the potential effects of the Proposed Wetland Area are significant. Where possible, the effects have been assessed quantitatively.

3.19 The significance of effects have been assessed using one or more of the following criteria:

- international, national and local standards;
- relationship with planning policy;
- sensitivity of receiving environment;
- reversibility and duration of effect;
- inter-relationship between effects; and
- the results of consultations.

3.20 The effects that were considered to be significant prior to mitigation have been identified within this ES. The significance of these effects reflects judgement as to the importance or sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes. For example, a large adverse impact on a feature or site of low importance will be of lesser significance than the same impact on a feature or site of high importance.

3.21 The following terms have been used to assess the significance of effects where they are predicted to occur:

- Major Beneficial or Adverse effect – where the Proposed Development would cause a significant improvement (or deterioration) to the existing environment;
- Moderate Beneficial or Adverse effect – where the Proposed Development would cause a noticeable improvement (or deterioration) to the existing environment;
- Minor Beneficial or Adverse effect – where the Proposed Development would cause a barely perceptible improvement (or deterioration) to the existing environment; and
- Neutral/ Negligible – no discernible improvement or deterioration to the existing environment.



3.22 Where individual assessment sections deviate from these terms, the alternative terminology has been explained as appropriate within the relevant chapter.

3.23 A non-technical summary of the ES is provided as **Volume 3**.

## CUMULATIVE EFFECTS AND EFFECTS INTERACTIONS

3.24 Cumulative impacts from proposed or committed developments in the vicinity of the Application Site have been considered within each of the following technical chapters. The proposed or committed schemes considered are identified in Table 3.2.

**Table 3.2: Proposed or Committed Developments**

Site Name	Application No.	Distance from the Site	Location	Description
Land NE of Willesborough Road	19/00025/AS	250m	603425 / 144100	Creation of a residential led, mixed-use development providing upto 725 residential dwelling, a two form entry primary school, a bowls centre, a local centre, gym and open space.
Conningbrook, Willesborough Road, Kennington, Kent	12/01245/AS	Adjacent	603115/ 143739	Creation of a country park for recreational and water-sports purposes with a range of associated facilities including an activity centre, a public house/restaurant, change of use of Manor to offices, car parks and other ancillary works and structures including works to the Julie Rose Stadium; construction of 300 dwelling residential development with associated infrastructure and landscaping; and provision of an aggregates storage and distribution facility
Land adjoining 1 Willesborough Court, Blackwall Road South, Willesborough, Kent	14/01456/AS	1.3km	603517 / 142590	Erection of 34 dwellings to include car parking, new access, landscaping and associated infrastructure
Land north east of Kelston, Churchfield Way, Wye, Kent	14/00362/AS	3.0km	605111 / 147057	Erection of 27 dwellings with access from Churchfield Way, together with associated parking, landscaping and open space.
Land at Luckley Field Site Wye 2	14/00195/AS	2.7km	605073 / 146457	Erection of 25 dwellings with a vehicle access off Little



South of 128, Little Chequers, Wye, Kent				Chequers. Parking, drainage works, structural and on site landscaping
Land between Hinxhill Road and Hythe Road, Willesborough, Kent	16/01512/AS	2.6km	604252 / 141740	New link road to the rear of the William Harvey Hospital from the A20 and up to 207 dwellings together with associated open space, play equipment, landscaping, drainage, infrastructure and earthworks.
Highmead House, Hythe Road, Willesborough, Ashford, Kent, TN24 0NE	15/01550/AS	2.6km	604265 / 141498	Residential development for the retention of Highmead House and the construction of 28 residential units with vehicular access from the A20 (to be either the provision of a priority junction or only an internal access link to a signalised junction if and when constructed on adjoining land to the west, with the closure/removal of the priority junction if constructed).
Land opposite 1-8 Elwick Road, Ashford, Kent	15/01282/AS	2.4km	600735 / 142560	Outline application for residential development of up to 200 units within Class C2 (residential institution) and Class C3 (dwellinghouses) uses and associated access arrangements (Phase 2).
Site of former Klondyke Works, Newtown Road, Ashford, Kent	18/00584/AS	2.5km	601540 / 141650	The erection of 93 dwellings with associated highways, parking and landscaping
Brundrett House, Tannery Lane, Ashford, TN23 1PN	18/01168/AS	2km	601310 / 142400	Demolition of existing buildings (except Whist House) and redevelopment to provide 251 residential units within four apartment buildings and works associated with the restoration of Whist House to provide a 4-bed dwelling. All together with associated areas of new public realm, hard and soft landscaping, parking, plant and storage and access works.
Land at junction of Romney Marsh Road and north of Normal Road, Ashford	19/00709/AS	2.7km	601195 / 141425	Development of 212 flatted units, in six blocks, new vehicular and pedestrian access, internal estate road, footpaths and car parking, earthworks, creation of a new section of active floodplain and floodplain compensation for the development, sustainable drainage systems, open space and hard and soft landscaping.



<p>Newtown Railway Works, Newtown Road, Ashford, Kent, TN24 0PN</p>	<p>19/01476/AS</p>	<p>2.4km</p>	<p>601800 / 141615</p>	<p>Detailed application for a mixed-use development comprising:</p> <ul style="list-style-type: none"><li>(i) Film / TV Studios with associated post-production offices and workshop and media village (18,845 sqm) (Use Class B1);</li><li>(ii) A hotel (Use Class C1) including ancillary space and circa 62 serviced apartments (Use Class C3) (max. 112m AOD);</li><li>(iii) A multi-storey carpark (max. 62m AOD);</li><li>(iv) Change of use, internal and external alterations to the listed Locomotive Shed buildings, including increasing the height by an additional two-storeys (max. 62m AOD), to provide flexible commercial floorspace (7,185 sqm) for use in connection with the film / TV studios (Use Class B1 / D1) including 265 sqm café (Use Class A3) and circa 302 residential units (Use Class C3) and internal parking spaces;</li><li>(v) Change of use, internal and external alterations to listed Engine Shed Building, including increasing the height by an additional two storeys (max. 53m AOD), to provide (2, 605 sqm) flexible</li></ul>
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				<p>commercial space (Use Class B1 / D2 / A3) and;</p> <p>(vi) Change of use, internal and external alterations of the Paint Shop building, Acetylene Store and Clock Tower listed buildings to provide ancillary uses to the film / TV studios (Use Class B1);</p> <p>(vii) Plus associated infrastructure including open space, landscape and public realm provision, external parking, servicing, pedestrian and vehicular access and associated engineering, utilities and infrastructure works.</p>
Home Plus, Beaver Road, Ashford, Kent, TN23 7RR	19/01597/AS	2.4km	601080 / 142070	The erection of 216 residential units comprising 207 apartments and 9 townhouses (C3) and commercial floorspace comprising 3 commercial units (Units A, B and C) for a flexible range uses (A1, A3, A4, A5, B1, D1 and D2) and roof top restaurant, with associated access and landscaping.
Waterbrook Park, Waterbrook Avenue, Sevington, Kent	18/00098/AS	3.4km	603355 / 139950	Hybrid planning application for mixed-use development comprising (1) Application for full planning permission for the construction and operation of a 600-space truck stop; a 2,162 sqm GIA service building providing 1,734 sqm GIA of ancillary truck stop service facilities and 878 sqm GIA of B1 offices; buildings providing 6,308 sqm GIA B1 (b and c only), B2 and B8 floorspace for small and medium enterprises; associated access, parking and landscaping, including highway



				<p>infrastructure works to Waterbrook Avenue and (2) Application for outline planning permission (with all matters reserved) for 8.9ha of employment uses comprising uses falling within use classes B1, B2 and B8, a class A1 superstore of up to 2,323 sqm, drive-through restaurants (use classes A3/A5), a petrol filling station and ancillary convenience store, and car showrooms (sui generis); and up to 400 residential dwellings, with class A1, A3 and A5 neighbourhood retail uses, associated drainage, parking, landscaping and infrastructure.</p>
Waterbrook Park, Waterbrook Avenue, Sevington, Kent	20/00943/AS	3.4km	603355 / 139950	<p>Reserved matters application pursuant to outline planning permission 18/00098/AS to consider layout, scale, appearance, access and landscaping in relation to the erection of a new fast food restaurant and drive-through including associated access, signage, parking, landscaping and associated works.</p>
Waterbrook Park, Waterbrook Avenue, Sevington, Kent	21/01595/AS	3.4km	603355 / 139950	<p>Reserved matters application to consider access, appearance, landscaping, layout and scale pursuant to outline planning permission 18/00098/AS (Hybrid planning application for mixed-use development comprising (1) Application for full planning permission for the construction and operation of a 600-space truck stop; a 2,162 sqm GIA service building providing 1,734 sqm GIA of ancillary truck stop service facilities and 878 sqm GIA of B1 offices; buildings providing 6,308 sqm GIA B1 (b and c only), B2 and B8 floorspace for small and medium enterprises; associated access, parking and landscaping, including highway infrastructure works to Waterbrook Avenue and (2) Application for outline planning permission (with all matters reserved) for 8.9ha of employment uses comprising</p>



				uses falling within use classes B1, B2 and B8, a class A1 superstore of up to 2,323 sqm, drive-through restaurants (use classes A3/A5), a petrol filling station and ancillary convenience store, and car showrooms (sui generis); and up to 400 residential dwellings, with class A1, A3 and A5 neighbourhood retail uses, associated drainage, parking, landscaping and infrastructure) for the development of 400 dwellings, a community/café/deli/workspace hub, landscaping, open space, drainage, parking and other associated infrastructure.
The Invicta Press, Lower Queens Road, Ashford, Kent, TN24 8HH	21/00028/AS			Outline application for the erection of 157 dwellings with all matters reserved aside from access.

3.25 Consideration has also been given to the effects arising from the interaction of impacts on different environmental topic areas arising from the Proposed Wetland Area.



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## 4 ALTERNATIVES AND DESIGN EVOLUTION

### INTRODUCTION

4.1 This chapter sets out the need for the Proposed Wetland Area and the reasonable alternatives considered by the developer. The EIA Regulations (Ref 1.1) states that an ES should include:

*“a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.”*

4.2 The following sections describe the reasonable alternatives considered by the developer in addition to the Proposed Wetland Area. Consideration has been given to and commentary is provided on the following:

- The 'No Development' alternative;
- Alternative Sites; and
- Alternative Designs and Layouts.

### **'NO DEVELOPMENT' ALTERNATIVE**

4.3 The 'No-Development' in this case, refers to not providing a wetland area to provide off-site mitigation for the proposed development at Land NE of Willesborough Road to achieve nutrient neutrality.

4.4 An alternative to providing an off-site wetland area was considered, this involved maximising the onsite mitigation measures by creating an onsite wetland park coupled to the SuDS system for the proposed development at Land NE of Willesborough Road to reduce the nutrient content of the site's surface water runoff. This measure alone was determined not to achieve nutrient neutrality.

4.5 It has therefore been determined that the proposed development at Land NE of Willesborough Road cannot achieve nutrient neutrality without the provision of offsite measures, therefore the 'No Development' scenario has been dismissed.



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## ALTERNATIVE SITES

4.6 The Applicant has control of the Application Site and it is available for development.

## ALTERNATIVE DESIGNS AND LAYOUTS

4.7 In addition to the onsite mitigation measures considered (as described above) a number of alternative offsite solutions were considered.

4.8 One option was the creation of a woodland. However, 180ha of woodland would be required in order to achieve the same level of offsetting as the Proposed Wetland Area. This was therefore determined not to be viable.

4.9 Another alternative offsite solution was the creation of an offsite wetland which intercepted surface water runoff from the incoming catchment rather than extracting flow from the river. This measure was determined not to provide sufficient incoming nutrient loading to the wetland.

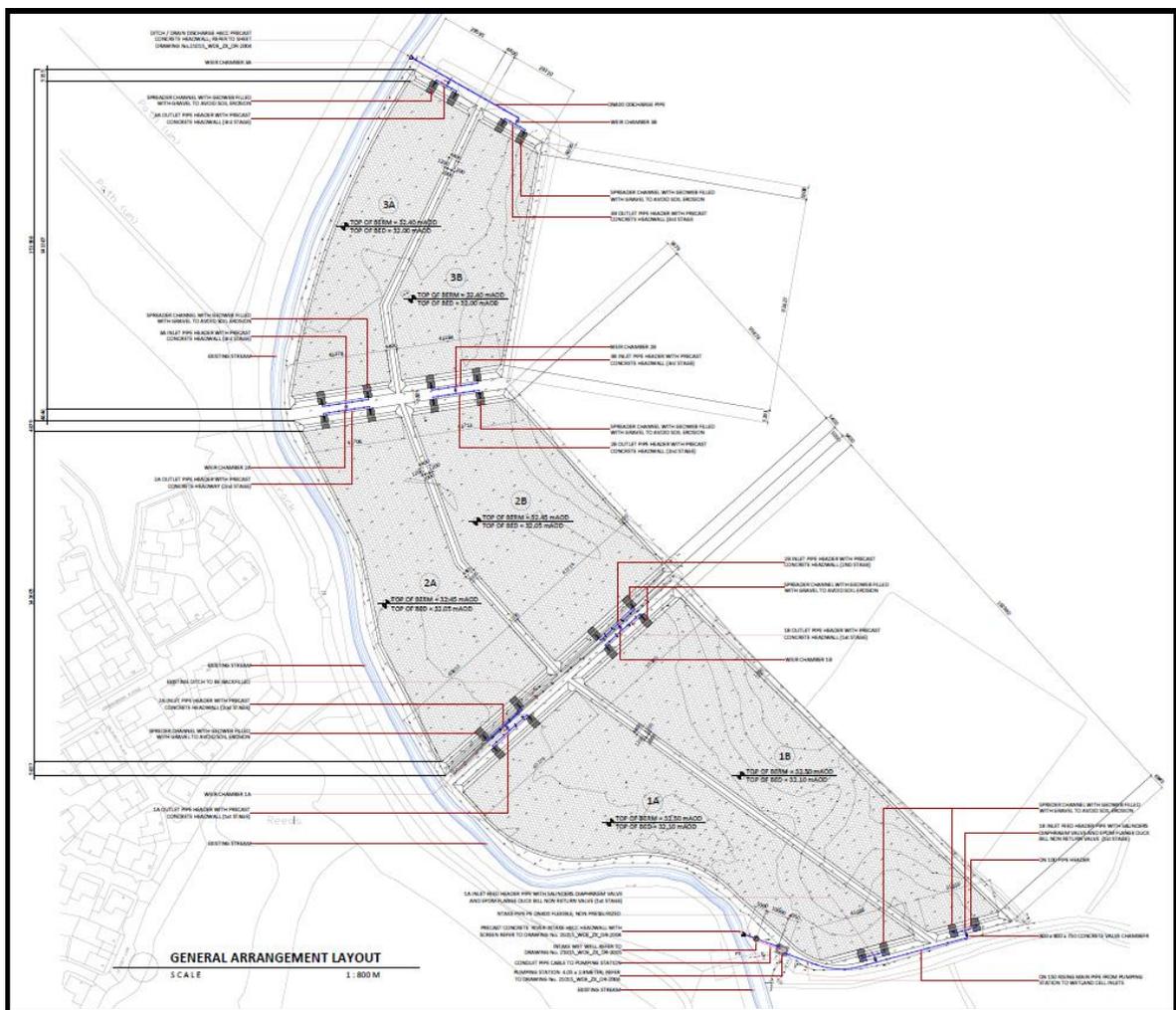
4.10 The only viable solution was for a wetland scheme which involves extracting flow from the Great Stour River.

4.11 The final layout of the Proposed Wetland Area is identified in Chapter 5 and **Appendix 5**.

## 5 THE PROPOSED DEVELOPMENT

- 5.1 The Proposed Off Site Wetland Area covers an area of approximately 6 ha.
- 5.2 The Proposed Wetland Area is proposed as mitigation for the proposed development at Land NE of Willesborough Road.
- 5.3 The proposed site layout is presented in Figure 5.1.

**Figure 5.1: Proposed Site Layout**



- 5.4 The proposals comprise the creation of a series of nutrient removing wetland cells which will occupy the majority of the Application Site.



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5.5 A precast concrete river intake headwall will be constructed on the bank of the Great Stour River, the intake will be submerged throughout the year. A Wet Well station will be installed adjacent to the riverbank and will be connected to the intake headwall via a buried pipe of diameter 400mm. Water shall be extracted from the river through the intake headwall.

5.6 The headwall shall be screened to prevent debris and aquatic wildlife from being drawn into the Wet Well.

5.7 A pumping station consisting of two self-priming progressive cavity pumps will be installed within a small plant room of size 2.90m by 4.05m along with the necessary electrical control and pumping infrastructure (pipework, valves, instrumentation and control panel). The water will be pumped from the Wet Well to the wetland.

5.8 A series of cells will be installed. Each cell is surrounded by raised earth 'berms' which enclose heavily planted areas of open water. The cells are arranged in a 2 x 3 array. The total area of the proposed wetland cells, including the berms is approximately 4.25ha. The flow will be split equally between two flow paths. Each flow path consists of 3 cells connected in series. Nutrient rich water will be pumped from the Great Stour River into the wetland cells. A proportion of the nutrients within the intake water will be removed through sedimentation, plant growth and denitrification processes.

5.9 If a major problem occurs within one of the cells, the relevant flow path can be temporarily isolated and drained to allow remedial works to take place. The remaining flow path can remain in use. The annual flow regime allows for one flow path to be routinely isolated and drained for maintenance for one month per year (allowing for cutting of reeds and removal of leaf litter).

5.10 The treated water will be returned to the Great Stour River through an outfall headwall in the bank of the existing drainage ditch at the northern boundary of the Application Site. The drainage ditch discharges back into the Great Stour River downstream of the Application Site.

5.11 The amount of flow returning to the river will not equal the amount of flow extracted from it, due to losses through evapotranspiration and infiltration and gains through precipitation.

5.12 Vegetation at a planting density of 4 plants per m<sup>3</sup> (40,000 plants per ha) will be established.



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## **6 DEVELOPMENT PROGRAMME AND CONSTRUCTION**

6.1 The construction period is anticipated to be approximately 16 to 20 weeks to complete the Proposed Wetland Area in its entirety.

6.2 The construction effects of the Proposed Wetland Area would be managed through the development of a project and site-specific Construction Environmental Management Plan (CEMP).

6.3 The CEMP would outline methods for contractor and general public liaison, hours of work, methods to deal with complaints and outline management practices to control dust, traffic and access, waste, water resources, ecological and archaeological effects, ensuring a high level of control throughout the construction works.

6.4 The procedures within the CEMP would ensure the delivery of a high level of environmental control throughout the construction phase, thereby minimising the potential for adverse effects.



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## 7 ARCHAEOLOGY AND CULTURAL HERITAGE

### Introduction

7.1 This chapter reports on the effects of the Proposed Wetland Area on Archaeology and the Historic Landscape.

### Predicted Impacts

7.2 The scope of the assessment includes an assessment of both construction and operational phases.

#### Effect during construction phase: short to medium term

7.3 An assessment of the potential impacts during the construction phase has been carried out. Construction activities associated with the Proposed Wetland Area will result in the damage or removal of archaeological remains within the footprint of these works and this is considered to be an effect of high magnitude. The significance of this effect is related to the importance of each of the assets/receptors, however as no intrusive archaeological investigation has been undertaken the presence and significance of archaeological remains within the Application Site remains unconfirmed. A heritage significance rating has been tentatively assigned to possible Palaeolithic deposits which may exist within the Proposed Wetland Area, as being of possible high heritage significance and a possible low to medium significance for possible Paleoenvironmental desposits. The possible significance of these effects have been identified as being either moderate adverse effect or minor to moderate adverse effect, prior to mitigation. The heritage significance of archaeological remains of other periods is considered to be currently unknown and as such the significance of the effect remains unknown. Archaeological remains are an irreplaceable resource and whilst the construction activities may be short to medium term, the effect to buried archaeological remains within the construction phase will be permanent.

7.4 The construction activities that will occur during the construction phase will change the historic landscape character of the Application Site. Across the Application Site in general the change will be from a predominantly rural character to an area of wetland mitigation. A neutral effect to Historic Landscape Character type within the Application Site was identified through the assessment process.



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### **Effect during operational phase: long term**

7.5 There are not expected to be any additional direct effects to archaeological remains during the operational phase.

7.6 The completed development will finalise the change from the former landscape character types of predominantly agricultural to an area of wetland mitigation. Aside from the changes implemented above during the construction phase there are not expected to be any additional changes during the operational phase. As such the effects identified during the construction phase will remain.

### **Mitigation**

7.7 As there is limited data from geoarchaeological or GI investigation within the Application Site, boreholes in the form of window samples would help to define the contact between Terrace 3 and 4 deposits and provide a detailed geoarchaeological deposit model for the area. These deposits are likely to be buried beneath the alluvium and would require sampling to a minimum of 4 meters BGL. Palaeolithic and geoarchaeological test pit evaluation would be undertaken within areas where less deeply buried deposits of geoarchaeological potential are known to exist. The test pit evaluation should encompass all Pleistocene deposits across the Application Site and be focussed on areas where Head-Brickearth deposits are known to be present. Such deposits, along with underlying soliflucted Coombe material, have high known potential to preserve significant Middle and Upper Palaeolithic archaeology.

7.8 In order to mitigate the potential effects on post-palaeolithic archaeological heritage assets, a programme of targeted trial trenching is proposed to inform an appropriate mitigation strategy. This will be undertaken in consultation and agreed with the Kent County Council Heritage Team. The trial trench evaluation will inform the need for and scope of further archaeological mitigation appropriate to the established significance of the archaeological remains identified. This may take the form of an archaeological excavation or preservation in situ where significant remains are discovered.

### **Summary of Effects**

7.9 A neutral effect on the historic landscape characterisation is predicted through the implementation of the Proposed Wetland Area. In terms of archaeological heritage assets, 'preservation by record' and appropriate publication and on-site interpretation is an established and acceptable means of reducing adverse effects on archaeological heritage assets.



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## 8 AIR QUALITY

### Introduction

8.1 This chapter assesses the likely significant effects of construction of the Proposed Wetland Area on air quality. It describes the existing air quality within the study area and assesses the impact of the construction of the Proposed Wetland Area on air quality in the surrounding area. It is considered that there will be no operational impacts to air quality from the Proposed Wetland Area.

### Predicted Impacts

#### Effect during construction phase: short to medium term

8.2 An assessment of the potential impacts during the construction phase has been carried out. This has shown that during this phase of the Proposed Wetland Area releases of dust and PM<sub>10</sub> are likely to occur during site activities. Through good site practice and the implementation of suitable mitigation measures, the impact of dust and PM<sub>10</sub> releases may be effectively mitigated and the resultant impacts are considered to be not significant.

### Mitigation

8.3 During the construction phase, a low risk of dust soiling impacts and a low risk of human health effects is predicted at adjacent receptors during construction of the Proposed Wetland Area. Appropriate mitigation measures have therefore been identified following the IAQM guidance. It is recommended that the measures identified are adhered to during the construction phase.

### Summary of Effects

8.4 Construction phase impacts are determined to be not significant when appropriate mitigation measures are applied.



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## 9 NOISE AND VIBRATION

### Introduction

9.1 This chapter has considered the potential impact of noise and vibration generated during the construction phases and the potential impact of the Proposed Wetland Area, including short-term increases in road traffic and noise from any fixed plant.

### Predicted Impacts

9.2 The scope of the assessment includes an assessment of both construction and operational phases.

#### Effect during construction phase: short to medium term

9.3 The appraisal of noise and vibration levels associated with the construction of the Proposed Wetland Area shows that there is low likelihood of noise impacts associated with construction activities. Minor to Negligible Adverse effects are calculated when works occur in close proximity to affected receptors. Any impacts that occur are likely to be of a temporary and intermittent nature and the majority of works would have a Negligible effect at distant receptors.

9.4 Short-term increases in road traffic are likely to result in a Negligible change to noise levels on the surrounding road links.

#### Effect during operational phase: long term

9.5 All plant will be specified such that rating levels at the nearest residential receptors fall below the adopted limits, such that the resulting effect is Negligible.

### Mitigation

9.6 Measures to limit noise emissions will be included within a CEMP which will be agreed with the local authority.

9.7 Effects from fixed plant would be negligible following specification and assessment of proposed plant items. Mitigation options will be specified during the detailed design stage, as appropriate



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## **Summary of Effects**

9.8 The impact of noise and vibration during construction of the Proposed Wetland Area has been predicted and assessed in accordance with BS 5228. Generic mitigation measures have been recommended, which when implemented are capable of ensuring that the impact of noise and vibration during the construction of the Proposed Off Site Wetland Area is adequately controlled and will provide Negligible to Minor Adverse effects.

9.9 The impact of construction associated traffic is likely to result in in Negligible effects at existing receptors adjacent to the surrounding roads.

9.10 Proposed plant items will be specified such that the likelihood of impacts is low.



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## 10 LANDSCAPE AND VISUAL AMENITY

### Introduction

10.1 The Proposed Wetland Area is located beside the Great Stour River as it meanders to the east of Ashford and close to the new development off Conningbrook Avenue and Leveret Lane. It is currently farmland in arable production and sits low on relatively flat land along the river corridor.

10.2 The Proposed Wetland Area and the immediate surroundings are not subject to any statutory or non-statutory landscape designations and while it lies outside of the Kent Downs Area of Outstanding Natural Beauty (AONB) it does lie within its “setting” which includes a special quality relating to views to and from it.

### Predicted Impacts

10.3 This ES includes an assessment of the construction stages, completion of the Proposed Wetland Area at Year 1 (i.e. first year as fully operational) and also the longer term effects at Year 10. The visual effects of the Proposed Wetland Area arise from the assessment of a number of representative viewpoints determined through desktop surveys, published characterisation information, OS map data, aerial imagery and field based visual analysis.

#### Effect during construction phase: short term

10.4 An assessment of the potential impacts during the construction phase has been carried out. This has shown that the construction phase will result in some major and major/moderate adverse temporary effects upon visual amenity due to the movement of construction traffic and associated construction works.

#### Effect during operational phase: long term

10.5 When completed and in operation, the Proposed Wetland Area, which comprises the installation of a reed bed in the wetland area and engineering infrastructure to deliver the nutrient mitigation required, would be seen as reed beds replacing the existing arable field parcels. The reed beds sit within engineered infrastructure at a low level and would provide good screening of the structures. The assessment in terms of the immediate site landscape and its setting would be no greater than minor neutral. It is acknowledged that the Proposed Wetland Area will



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change the character from arable land to reed bed wetland but such a change should not be considered harmful. The reeds when established will soften the engineering structures and the wetland integrating well with its context.

10.6 Views of the Proposed Wetland Area are limited to those close to its boundaries. This is partly as a result of the dense vegetation occurring along the Great Stour River corridor, woodland occurring within the Conningbrook Lakes Country Park and woody vegetation in the wider surrounding landscape. The effect of the low lying landform of the Application Site within the river corridor also contributes to limiting visibility. While the Proposed Wetland Area is represented largely by the reed planting at similarly low levels in the landscape to existing, the visible changes noted relate to arable crops being replaced by reeds with some new but low level engineering structures set within the reed beds.

10.7 Views from middle and longer distances are not affected by the Proposed Wetland Area and this includes views to and from the AONB.

#### **Effect on Published Landscape Character**

10.8 In terms of the effect of the proposals upon regional landscape character, the “Wealden Greensand” NCA, none will arise.

10.9 At a more local level during the construction period, the Proposed Wetland Area would introduce activity that results in a moderate/minor significance of effect reducing to negligible when the mitigation wetland is complete and in operation. This relates to the Stour Valley Landscape Character Area and the finer detailed SV4 Stour Valley where the proposal is seen to be in keeping with the riverine character.

#### **Effect on Landscape Designations**

10.10 There would be no harm to the AONB special quality relating to views to or from it or to its setting arising from the Proposed Wetland Area.

#### **Summary of Effects**

10.11 It is considered that the Proposed Wetland Area represents an appropriate and logical location for the Nutrient Mitigation Wetland and will not compromise the character or visual amenities of the immediate landscape or its setting.



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10.12 As a result of undertaking an extensive assessment of the existing landscape and visual baseline conditions, the Application Site and receiving environment are considered to have the capacity to accommodate the proposals. The proposals will not result in significant, long term harm to the landscape character or visual environment and, as such, it is considered that the Proposed Wetland Area could be successfully integrated in this location and is supportable from a landscape and visual perspective.



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## 11 ECOLOGY AND NATURE CONSERVATION

### Introduction

11.1 This chapter reports on the effects of the Proposed Wetland Area on ecology and nature conservation. The chapter is informed by ecology surveys of the Application Site, including a desk study, an extended Phase 1 Habitat survey and a range of Phase 2 faunal surveys.

### Predicted Impacts

11.2 The scope of the assessment includes an assessment of both construction and operational phases.

11.3 A number of ecological designations within the surrounds of the Application Site have been identified by the desk study. These are mostly well separated from the Application Site and unlikely to be subject to adverse effects, although Great Stour, Ashford to Fordwich Local Wildlife Site (LWS) which forms the western boundary of the Application Site, could be subject to potentially significant effects as a result of contaminated surface water run-off.

11.4 The Application Site itself is dominated by species-poor grassland. Habitats forming important ecological features are limited to a hedgerows at the site boundary.

11.5 Surveys of protected species have found that the watercourse adjacent to the Application Site supports Water Vole, whilst the Application Site offers some potential for foraging and commuting bats, Otter, reptiles and a range of birds.

### Mitigation and Enhancement

11.6 Mitigation and enhancement measures are proposed, including construction safeguards and provision of new habitats which could provide an overall gain in biodiversity across the Application Site.

11.7 The Proposed Wetland Area and mitigation scheme have also been designed to achieve compliance with relevant legislation and planning policy. Measures are proposed to avoid killing or injury of protected species such as Water Vole, birds and reptiles (protected under the Wildlife and Countryside Act 1981). Opportunities for enhancements to biodiversity are also proposed, in



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accordance with the National Planning Policy Framework (NPPF), the NERC Act 2006 and local policy.

### **Summary of Effects**

11.8 Following mitigation and enhancement measures, it is considered that the effects of the Proposed Wetland Area would be reduced to non-significant levels.



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## 12 WATER QUALITY, HYDROLOGY AND FLOOD RISK

### Introduction

12.1 This chapter presents an assessment of the likely significant effects of the Proposed Wetland Area in terms of Water Resources and Flood Risk. It is supported by the Flood Risk Assessment.

12.2 The main potential impacts of the Proposed Wetland Area result from any changes to flood flow mechanisms due to works in the floodplain of the River Great Stour, and the changes to surface water quality that could arise due to abstraction of water, and the treatment of surface water which is a central aim of the wetland development.

### Predicted Impacts

12.3 The scope of the assessment covers potential impacts during both the construction and operational phases.

#### Effect during construction phase: short to medium term

12.4 The most likely effects on Water Resources and Flood Risk in the construction phase relate to the potential for accidental contamination of water due to works taking place close to the watercourse and within the floodplain. These are wholly managed by construction best practice including runoff collection and storage on-site to minimise both runoff and pollution risks and a flood warning and management plan, which will be committed in the CEMP.

12.5 Works to the banks of the River Great Stour to construct the headwalls will be undertaken using coffer dams to ensure installation takes place in the dry to prevent contamination.

#### Effect during operational phase: long term

12.6 The most likely effects on Water Resources and Flood Risk in the operational phase relate to changes in the floodplain and changes in surface water quality arising from changes to the water balance, and the treatment of surface water provided by the wetland.



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12.7 Floodplain storage compensation is provided to ensure there is no change in the risk of fluvial flooding off-site. Runoff rates will reduce due to the attenuating effect of the wetlands.

12.8 The change in water balance is insignificant in relation to the total flows in the River Great Stour and consequently the abstraction will not affect the water quality status. The removal of pollutants in particular nitrogen and phosphorous from the river will have permanent major beneficial effects on the protected downstream habitats at Stodmarsh.

12.9 The cumulative impact of the Proposed Wetland Area in combination with committed developments in the area, in particular the proposed Conningbrook Park residential development for which this is proposed mitigation, is neutral in terms of the impact at Stodmarsh. However, there remains a permanent moderate beneficial effect on water quality in the River Great Stour.

### **Mitigation**

12.10 All mitigation is embedded, with construction phase environmental effects managed through measures to be committed within the CEMP. No mitigation is required for the operational phase environmental effects, with the exception of the embedded floodplain compensation scheme.

### **Summary of Effects**

12.11 The chapter concludes that there are no significant adverse effects on Water Resources and Flood Risk during either the construction phase or operational phase of the Proposed Wetland Area. There are likely significant beneficial effects on surface water quality in the River Great Stour, which reduce from major to moderate when considered in combination with nearby committed residential developments.



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## 13 SOILS, GEOLOGY AND CONTAMINATED LAND

### Introduction

13.1 This chapter documents the assessment of the likely potential significant effects of the Proposed Wetland Area in relation to Geology and Contaminated Land with consideration given to potential ground stability and contamination related impacts.

13.2 This chapter describes the baseline conditions existing at the Proposed Wetland Area and surroundings, the potential direct and indirect effects of the ground conditions, the methods used to assess the impacts, the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures are employed.

13.3 Assessment of the Proposed Wetland Area is supported by a Phase 1 Land Contamination Assessment Report prepared by Ecologia in July 2021 (Appendix 13.1).

### Predicted Impacts

13.4 The scope of the assessment has been agreed with the Local Authority and includes an assessment of both construction and operational phases.

13.5 The Application Site comprises undeveloped land and the likelihood of sources of significant potential contamination is very low relating to the use of agricultural chemicals, fuels and lubricants. There are some activities off-site that have the potential to generate contamination or land gases, however these have been considered a low to moderate risk in relation to the development of the wetland area.

13.6 The receptors considered in the assessment are those receptors identified in statutory guidance. The importance of the receptor is classified in one of five bands with a Very High classification associated with receptors of national or international importance. Human health has been identified as receptors of low to moderate importance/sensitivity, whilst controlled waters have been identified as being of high sensitivity.

### Effect during construction phase: short to medium term

13.7 An assessment of the potential impacts during the construction phase has been carried out. Through good site practice and the implementation of suitable mitigation measures (such as



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Personal Protective Equipment (PPE) and implementing techniques as part of the CEMP), any potential temporary impact on human health may be effectively mitigated and the resultant impacts are considered to be neutral.

### **Effect during operational phase: long term**

13.8 An assessment of the potential impacts during the operational phase has been carried out. This has shown that during this phase of the Proposed Wetland Area the assessed risk to sensitive receptors is assessed to be very low / low and as such, the resultant impacts are considered to be neutral.

### **Mitigation**

13.9 The proposed mitigation measure that will be adopted include further appropriate ground investigation to further inform the Conceptual Site Model and to inform further tiered risk assessment and enable any site specific remediation or mitigation measures to be agreed with the regulatory authority and implemented. In addition, it is proposed to develop a Construction Environmental Management Plan (CEMP).

13.10 Further appropriate limited ground investigation is recommended within the proposed wetland area also. A CEMP will be provided.

13.11 During the construction phase, good site practice and the implementation of suitable mitigation measures, such as construction workers wearing suitable PPE and by the development and implementation of techniques described as part of the Construction Environmental Management Plan (CEMP), will be required.

### **Summary of Effects**

13.12 The residual impact of the Proposed Wetland Area on land contamination is considered to be neutral during both the construction and operational phases providing additional further intrusive ground investigation works are adopted.

