Shepway District Council

Proposed Leisure Centre and Mixed-Use Development at Princes Parade Hythe

Environmental Statement

Main Report

August 2017

Peter Radmall Associates
environmental planning and assessment

Contents

1.	Introduction	1
2.	EIA Process	3
3.	Environmental Policy Context	12
4.	Baseline Conditions	17
5.	Proposed Development	22
6.	Cultural Heritage	30
7.	Ecology	55
8.	Flood Risk and Drainage	86
9.	Geo-Environment	96
10.	Landscape and Views	115
11.	Socio-Economics	141
12.	Transport	158
13.	Summary of Mitigation and Effects	170

Figures

1.1 Site Location
4.1 Application Site
4.2 Landuse Context
4.3 Core Strategy Policy Map
4.4 Cultural Heritage Assets
5.1 Illustrative Masterplan
5.2 Development Zones
5.3 Landuse
5.4 Storey Heights
5.5 Access
5.6 Urban Design Framework
5.7 Leisure Centre Layout
5.8 Leisure Centre Visualizations
5.9 Development Options

1. Introduction

Background

1.1 Shepway District Council (SDC) are bringing forward proposals for a mixed-use development on land at Princes Parade in Hythe. The site location is shown on **Figure 1.1**. The development description for planning purposes is as follows:

Outline planning permission for comprehensive mixed-use development comprising a 2,961sqm leisure centre (Use Class D2), up to 150 residential dwellings (Use Class C3), up to 1,270sqm of commercial uses including hotel use (Use Class C1), retail uses (Use Class A1) and/or restaurant/café uses (Use Class A3); hard and soft landscaped open space, including children's play facilities; surface parking for vehicles and bicycles; alterations to existing vehicular and pedestrian access and highway layout within and around the site; site levelling and groundworks; and all necessary supporting infrastructure and services. Within the outline application full details are submitted for the means of access, layout, scale, appearance and landscaping for the leisure centre and its associated parking, open space and children's play facility.

1.2 The proposals qualify as a Schedule 2 development under the Town and Country Planning (Environmental Impact Assessment) Regulations, 2015, being an "urban development project" greater than 5 hectares in area (Schedule 2, 10[b]). As a result, the proposals should be screened to determine whether they may give rise to "likely significant effects"; and if so, an EIA must be carried out.

1.3 Since preliminary environmental work has been carried out on the site for several years, the potential issues are well known. These include flood risk, visual impact, proximity to the Royal Military Canal (a Scheduled Monument) and the presence of contamination from historic landfill activities. The characteristics of the development and the sensitivity of the site are such that a possibility of significant effects cannot be ruled out.

1.4 It was therefore decided that an EIA should be carried out. The preparation of a voluntary EIA is acknowledged as a legitimate approach in the Planning Practice Guidance (PPG), and means that the application must be determined as "EIA development" as defined in the Regulations.

1.5 The EIA process commenced in the autumn of 2016, in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations, 2011, which were the prevailing regulations at the time. A Scoping Opinion was issued by the LPA on 30th August, 2016. New EIA Regulations came into force on 16th May, 2017. Since the EIA was well advanced by this time, and had been scoped under the 2011 Regulations, it is considered that these provide the appropriate regulatory context. The changes introduced by the 2017 Regulations are not fundamental in any event.

Structure of the ES

1.6 The ES comprises three volumes as follows:

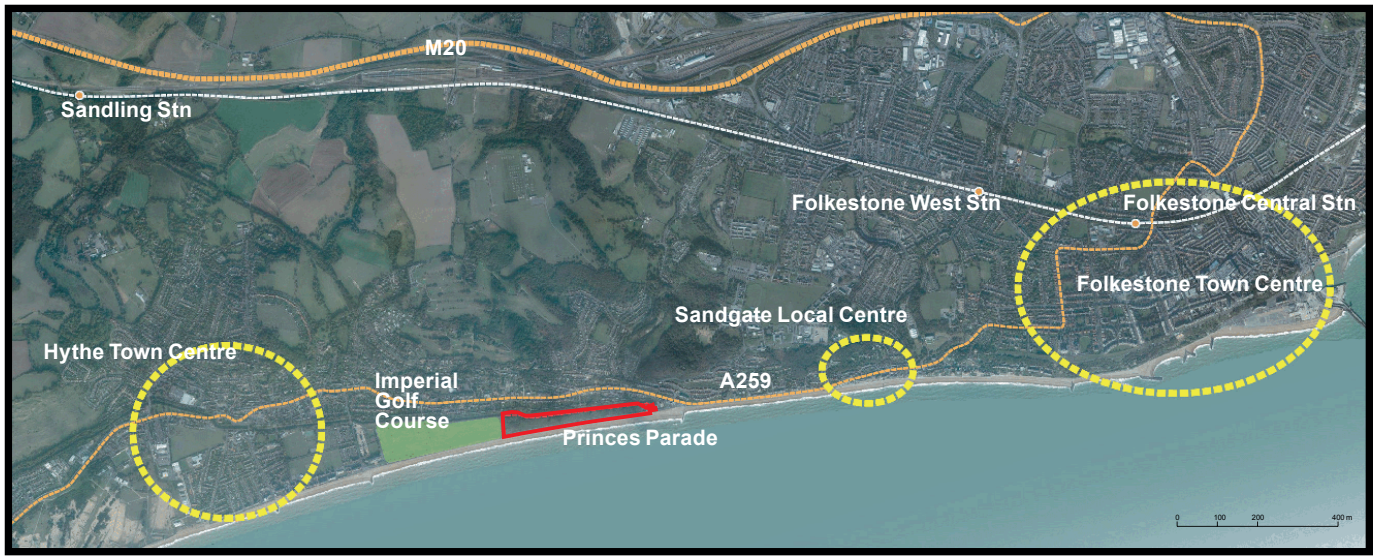
1. a Non-Technical Summary (NTS);
2. a Main Report (this document); and
4. a series of Technical Annexes.

1.7 The Main Report comprises the following chapters:

1. Introduction
2. EIA Process
3. Environmental Policy Context
4. Baseline Conditions
5. Proposed Development
6. Cultural Heritage
7. Ecology
8. Flood Risk and Drainage
9. Geo-Environment
10. Landscape and Views
11. Socio-Economics
12. Transport
13. Summary of Mitigation and Effects

1.8 The Technical Annexes present a range of supporting information related to the assessment topics, together with standalone reports required by the planning process. They are as follows:

1. Scoping Opinion and Report
2. Cultural Heritage (supporting figures and photos)
3. Ecology
4. Flood Risk Assessment (FRA)
5. Geo-Environment
6. Landscape and Visual Impact Assessment (LVIA)
7. Socio-Economics (policy references)
8. Transport Assessment (TA)
9. Lighting Assessment



Application Site

Major Highways

Railway

Main Town/Local Centres

Golf Course

N

FIGURE 1.1

Site Location

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017

2. EIA Process

Regulatory Context

2.1 EIA is a structured process for identifying the potential environmental effects of a development, and has formally been part of the UK planning system since 1988, when Regulations implementing the provisions of EC Directive 85/337/EEC were introduced. An amending Directive (97/11/EEC) was followed by the publication of new Regulations in March 1999. These were superseded by Regulations that took effect in August 2011, reflecting case law and government advice over the ensuing period. Amending Regulations, which came into force in April 2015, changed the applicable thresholds for screening urban development projects.

2.2 The 2011 and 2015 Regulations were revoked, re-enacted and updated by further Regulations that took effect in May 2017. However, the 2017 Regulations do not fundamentally change the EIA process or deliverables. In addition, this EIA was commenced, and its scope was agreed in the form of an LPA Scoping Opinion, under the previous Regulations, and the latter therefore represent the appropriate regulatory context within which the ES should be considered.

Overview

2.3 The main steps in the assessment process are as follows:

- confirming the need for EIA (screening);
- defining its scope (scoping);
- consulting relevant parties;
- carrying out baseline studies;
- predicting the potential effects;
- assessing the significance of those effects;
- identifying and incorporating mitigating measures;
- assessing the residual effects; and
- preparing the ES.

Screening

2.4 The applicant has elected to prepare an EIA without seeking a Screening Opinion from the Council, on the assumption that a likelihood of significant effects cannot be ruled out. The development is therefore assumed to fall within the remit of the Regulations.

Scoping

Background and Guidance

2.5 The EIA Regulations require an ES to identify the "likely significant effects" of a development. The primary purpose of scoping is to ensure that the assessment is focussed on those topics likely to give rise to such effects. At the same time, topics that are unlikely to give rise to significant effects can be "scoped out" of the assessment.

2.6 The latest UK guidance on the EIA process forms part of the Planning Practice Guidance (PPG). The PPG updates and simplifies the guidance previously provided in "Environmental Impact Assessment: A Guide to the Procedures" (DCLG, 2000). The PPG supports a proportionate approach to scoping, stating (in Paragraph 040) that "..*a*

particular project may give rise to significant effects, and require full and detailed assessment, in only one or two respects."

2.7 Specific advice on scoping is provided in "Guidance on EIA Scoping" (European Commission, 2001), which remains a useful reference even though the European and UK regulations relating to EIA have since changed. The EC Guidance states that:

The purpose of scoping is to identify the matters which should be covered in the environmental information submitted by the developer to a competent authority and, in particular to identify the matters which are of most importance so that these can be addressed in most detail. Scoping should ensure that all the relevant issues are identified and addressed in an appropriate manner in the environmental studies.

Schedule 4

2.8 Schedule 4 of the Regulations identifies the "Information for inclusion in environmental statements". This comprises two parts. The information in Part II is a minimum requirement, whilst the information in Part I should be provided where it "*is reasonably required to assess the environmental effects of the development" and where "the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile [it*]".

2.9 The mandatory (Part II) information is as follows:

1. *A description of the development comprising information on the site, design and size of the development*.

2. *A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects*.

3. *The data required to identify and assess the main effects which the development is likely to have on the environment*.

4. *An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects*.

5. *A non-technical summary of the information provided under paragraphs 1-4 of this Part*.

2.10 The supplementary (Part I) information (where additional to Part II) is as follows:

1. Description of the development, including in particular -

(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;

(b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;

(c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the proposed development.

3. *A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.*

4. *A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from –*

(a) the existence of the development;
(b) the use of natural resources;
(c) the emission of pollutants, the creation of nuisances and the elimination of waste;

and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.

7. *An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant or appellant in compiling the required information.*

Assessment Topics

2.11 A Scoping Opinion was sought from SDC. This is presented in **Technical Annex 1**, together with the Scoping Report that formed the basis of the request.

2.12 A number of topics have been excluded (scoped out) of the assessment. Typically, a topic has been scoped out either where there is little or no likelihood that significant effects would occur; or where there is a high probability that such effects could be avoided through specific mitigation that either has been incorporated into the design or would be implemented as part of the planning process. The topics to be scoped out are set out in **Table 2.1** below, together with a justification.

Table 2.1: Topics Scoped Out of the Assessment

Topic	Justification
Agricultural Land	The site is not, and never has been, in agricultural use.
Air Quality	The site is not located within an AQMA and the development would not affect any AQMAs. Dust emissions during construction would be controlled in accordance with best practice so as to minimise any risk of significant effects (e.g. in relation to the canal). Operational impacts (mainly traffic) would be insufficient to have a measurable impact on local air quality.
Archaeology (within the site)	The site is assumed to retain no original heritage potential, having been largely disturbed. However, a desk-based assessment and walkover will be carried out anyway as part of a wider cultural heritage study.
Climate Change /Sustainability/ Energy	Effects relating to GHG emissions are highly unlikely to be significant. A separate energy strategy is being submitted, which will demonstrate how the development would minimise its GHG emissions, provide for climate change adaptation and achieve relevant sustainability targets.
EMR, Electromagnetic Interference and Odour	The development would not introduce any relevant sources of impact.

Land Use	The site is largely inaccessible and in unproductive use, and the land-use impacts of the development would be mainly beneficial.
Lighting	Although not a formal EIA topic, a landscape assessment has been carried out and forms one of the technical annexes within the ES. The assessment of other topics has taken this into account.
Microclimate (sunlight/ daylight and wind)	No tall buildings are proposed. Any potential implications of over-shadowing of the canal would be considered under ecology.
Mineral Resources	Workable gravel deposits are assumed to have already been extracted.
Natural Resources	The development is not of a type that will require a high consumption of such resources. Best practice will be adopted to meet relevant targets (e.g. waste recycling, sustainable energy).
Noise and Vibration	The site is not subject to any existing sources of noise or vibration that could have amenity implications for the new residents or render it unsuitable for the proposed uses. Construction would not take place sufficiently close to residential properties, or for a sufficient length of time, to give rise to noise or vibration that could have amenity or structural implications. Construction noise and vibration would be managed on the basis of best practicable means to minimise any risk of nuisance. The operational development is unlikely to give rise to any measurable levels of vibration.
Utilities	Statutory undertakers would be responsible for any off-site upgrades and associated assessment. However, foul drainage would be addressed, since capacity constraints can give rise to impacts such as water pollution.
Waste	A Site Waste Management Plan (SWMP) would be adopted during construction. The quantity and nature of wastes arising are unlikely to give rise to any particular management or environmental concerns. Waste would be managed in accordance with LPA requirements.
Water Supply/Use	This will be addressed under sustainability outside the ES.

2.13 The topics included in the EIA are set out in **Table 2.2** below, together with the relevant references from Schedule 4 of the Regulations.

Table 2.2: Assessment Topics

Topic	Schedule 4 Ref
Cultural Heritage	Architectural and Archaeological heritage
Ecology	Fauna, Flora
Flood Risk and Drainage	Water, Population
Geo-Environment	Soils, Water
Landscape and Views	Landscape
Socio-Economics	Population
Transport	Population

Reporting

Topics

2.14 Each of the assessment topics is covered by a separate chapter in this report, supported as necessary by the material in the Technical Annexes.

Schedule 4 Information

2.15 The approach to reporting of the Part II information is set out in **Table 2.3** below.

Table 2.3: Reporting of Part II Information

Requirement	Where Reported in this ES
1. A description of the development comprising information on the site, design and size of the development.	The site is described in Chapter 3 and the proposals are described in Chapter 5.
2. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.	Mitigation relating to each topic is described in the relevant technical chapter and technical annex.
3. The data required to identify and assess the main effects which the development is likely to have on the environment.	This is found in the technical chapters and supporting technical annexes.
4. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.	The main alternatives are considered in Chapter 5.
5. A non-technical summary of the information provided under paragraphs 1-4 of this Part.	This is provided as a separate document.

2.16 The approach to reporting of the Part I information is set out in **Table 2.4** below.

Table 2.4: Reporting of Part I Information

Requirement	Where Reported in this ES
1. Development description	This is addressed in Chapter 5, with specific aspects relating to each topic covered in the technical chapters and annexes. The level of detail is proportionate to the relevance of each topic.
3. Environmental aspects	An overview is provided in Chapter 3, with more detail provided in the technical chapters and annexes.
The specific aspects referred to in Schedule 4 are addressed as follows:	
Population	Chapters 11: Socio-Economics (but most other chapters also relate to effects on human receptors).
Fauna	Chapter 7: Ecology
Soil	Chapter 9: Geo-Environment
Water	Chapter 8: Flood Risk and Drainage
Air	This has been scoped out of the assessment.
Climatic Factors	Microclimate and Climate Change have been scoped out of the EIA.
Architectural and Archaeological Heritage	Architectural heritage is addressed in Chapter 5: Cultural Heritage. Archaeology has been scoped out of the assessment, apart from any buried features associated with the Royal Military Canal.
Landscape	Chapter 10: Landscape and Views
Inter-relationships between Factors	Chapter 13: Summary of Mitigation and Effects
4. Likely Significant Effects and Forecasting Methods	These are reported primarily in the technical chapters and annexes. The categories of effects identified in Schedule 4 are considered where relevant. Cumulative effects are addressed in each topic chapter and in Chapter 13.
7. Difficulties	These are identified in the technical chapters and annexes where necessary.

Methodology for Topic Assessments

2.17 The approach adopted for the assessment of each topic is summarised below. Full details are provided in the technical chapters and annexes.

Cultural Heritage

2.18 The scope and methodology has been agreed with the LPA and Historic England, and has comprised:

- Identification of relevant assets and evaluation of their significance, with particular focus on the Royal Military Canal (RMC).
- Assessment of the setting of the RMC and its contribution to the significance of the asset on the basis of Historic Environment Good Practice Note 3: The Setting of Heritage Assets (2015).
- Input to the masterplanning/design process to minimise potential harm to this significance and to maximise opportunities for enhancement (e.g. through improved access and interpretation).
- Assessment of changes to the visual relationship between the RMC and its setting (using the visualizations prepared as part of the LVIA).
- Assessment of residual effects on significance in terms of substantial/less than substantial harm.

Ecology

2.19 An ecological impact assessment (EcIA) has been carried out in accordance with current best practice, specifically CIEEM (2016): Guidelines for Ecological Impact Assessment. Potential impacts on habitats and species have been identified, their significance assessed and appropriate mitigation agreed, to be implemented by design or through a management plan.

2.20 A desktop review has been undertaken of biological data from sources such as the MAGIC, Kent and Medway Biological Records Centre and Kent Wildlife Trust databases, to obtain details of any protected species, habitats and species of principal importance and local wildlife sites in the vicinity.

2.21 A preliminary ecological appraisal (PEA) was undertaken, on the basis of which studies were carried out of the following:

- Site flora (National Vegetation Classification);
- Reptiles;
- Mammals;
- Invertebrates;
- Amphibians;
- Breeding birds; and
- Bats.

Flood Risk and Drainage

2.22 A Flood Risk Assessment (FRA) compliant with the NPPF has been carried out. The scope of the assessment has been agreed with the Council, the Lead Local Flood Authority and the Environment Agency (EA), and has included:

- Review of the Strategic Flood Risk Assessment and published EA flood data;
- Site walkover and confirmation of its flood risk zoning using flood maps and topographic data;
- Identification and characterisation of potential flooding sources and receptors (on- and off-site);
- Calculation of changes to runoff and assessment of potential flood risk on- and off-site, including allowance for climate change, for sea defence breach/wave overtopping and canal surcharging scenarios; and
- Development of a sustainable drainage (SUDs) strategy to demonstrate nil impact on the site and canal.

Geo-Environment

2.23 The geo-environmental assessment has been based on the updating of previous work, particularly that undertaken in 2015, which included site investigations (SIs). It has included a Phase 1 desktop study based on published information sources (including BGS borehole logs, historic mapping, Envirocheck report etc, as appropriate).

2.24 The four monitoring wells installed in 2015 have been used to carry out ground gas and groundwater monitoring. Groundwater samples have been submitted to a UKAS-accredited laboratory for analysis for a standard suite of contaminants.

2.25 The desktop, SIs and monitoring have been used to identify and characterise the level of contamination risk and the vulnerability of groundwater, surfacewater and soils, on the basis of the source/pathway/receptor model. Potential effects on groundwater, site workers, future users and surrounding receptors (such as the canal) have been assessed, and the need for/scope of any remediation or mitigation established, to be implemented through design, monitoring and/or construction management.

Landscape and Views

2.26 A landscape and visual impact assessment (LVIA) has been carried out in accordance with the Guidelines for Landscape and Visual Impact Assessment produced by the Landscape Institute/IEMA (GLVIA, Third Edition, 2013) and has comprised the following tasks:

- Desktop review of published landscape character assessments and policy;
- Fieldwork to describe local landscape character, key views and receptors, and to identify representative viewpoints for the assessment;
- Definition of the development's zone of theoretical visibility (ZTV) and agreement of the location/number of assessment views with council officers;

- Photographing and preparation of viewpoint assessment sheets;
- Preparation of accurate visual representations (AVRs) from selected viewpoints in accordance with LI practice;
- Assessment of effects on landscape character and visual amenity, on the basis of accepted criteria; and
- Identification of mitigation measures as part of a landscape strategy for the site.

Socio-Economics

2.27 The assessment has comprised:

- Baseline study of relevant socio-economic indicators at district and local ward levels, including housing demand, employment, social infrastructure capacity;
- Assessment of (potentially beneficial) effects relating to housing provision, employment (temporary/permanent) and recreation/amenity; and
- Assessment of (potentially adverse) effects on social infrastructure (healthcare, education etc), and identification of appropriate mitigation where necessary.

Transport

2.28 A Transport Assessment (TA) has been carried out in accordance with the NPPF and current best practice. Consultation has been conducted with the LPA and Kent Highways to determine will determine the number/extent of traffic surveys and junction modelling, any developments to be considered in relation to cumulative impact, and any need for the "growthing" of traffic data.

2.29 Trip generation has been derived from the TRICS database and actual operational data. Options for a revised alignment of Princes Parade have been considered as part of the masterplanning process. Junction configurations for the development access, the layout of internal access roads, levels of parking provision and the incorporation/diversion of PROWs have been developed in accordance with relevant standards.

2.30 Development traffic impacts on relevant junctions have been assessed using the appropriate software; these have comprised the Princes Parade/A259, Twiss Road/South Road, Twiss Road/A259 and A259/High Street/Station Road roundabout.

2.31 The TA has included an assessment of accessibility by sustainable (non-car), including the provision of convenient and safe cycle and pedestrian routes to link the site with the surrounding network. The assessment has taken account of the criteria set out in the IEMA Guidelines for Environmental Impact Assessment, including severance, pedestrian delay and amenity, driver delay and safety.

Identification and Evaluation of Effects

2.32 Schedule 4 of the Regulations requires an ES to describe the "*likely significant effects*" of a development, namely "*direct…and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects*…"

Significance

2.33 The definition of significance used for each topic is explained in the technical chapters and appendices, and reflects the specific methodological and regulatory requirements for each topic. Significance has generally taken account of:

- the interaction between the magnitude of change (or impact) and the sensitivity, value or number of the resources and receptors;
- any specific thresholds or standards cited in guidance or regulations relating to particular topics; and
- professional judgement.

2.34 A distinction is made between effects occurring during the construction phase and those related to the permanent features or operation of the development. Where relevant, potential effects are distinguished from residual effects (i.e. those remaining after mitigation has been applied). The additional terminology adopted in the Regulations is used where this is helpful in characterising the nature or duration of an effect.

Assessment Scenarios

2.35 The predicted effects of the development have been assessed against a future baseline scenario which assumes, in the event permission is granted, that construction would commence in 2018 and would be completed in 2022. Future baseline conditions have been derived from current conditions modified by any known or foreseeable changes.

2.36 The assessment has considered cumulative effects, i.e. those resulting from interaction between the proposal and other future committed (or reasonably anticipated) developments. Relevant schemes are described in **Chapter 4**.

Consultation

2.37 Consultation has taken place both within the EIA and as part of the overall planning process. This has included a formal pre-application process involving the LPA, a public exhibition and presentation to the South-East England Design Review Panel (November 2016). Consultation has also taken place with agencies such as Historic England and the Environment Agency. Relevant environmental consultees are identified in the technical chapters.

3. Environmental Policy Context

Background

3.1 This chapter provides an overview of the environmental policies relevant to the assessment topics. It does not attempt to address the development's degree of compliance or conflict with planning policy, which is addressed in the Planning, Design and Access Statement. Specific policies are discussed in more detail in the technical chapters and annexes as necessary.

3.2 Relevant policies are set out in the following:

- the National Planning Policy Framework (NPPF, 2012); and
- the Shepway Core Strategy (2013) and saved policy from the Shepway Local Plan (2006).

3.3 Specific legislation, regulations and guidance relevant to each of the assessment topics are set out in the technical chapters.

National Planning Policy Framework

3.4 The National Planning Policy Framework (NPPF), published in March 2012, provides the policy framework for plan preparation and implementation. Guidance in the NPPF relating to each of the assessment topics (with paragraph references) is set out below.

Cultural Heritage

3.5 In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance, and no more than is sufficient to understand the potential impact of the proposal on their significance (NPPF 128).

Ecology

3.6 When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (NPPF 118):

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted;
- where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged; and
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

Flood Risk and Drainage

3.7 When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment (FRA) following the Sequential Test, and if required the Exception Test, it can be demonstrated that (NPPF 103):

- within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and
- development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.

3.8 The NPPF requires a site-specific FRA to be carried out for development on sites greater than 1 hectare in area within Flood Zone 1, and for any development within Flood Zones 2 and 3 (Footnote 20, P. 24). The requirements for site-specific FRAs and for the application of sustainable drainage principles to manage residual flood risk are set out in the Technical Guidance to the NPPF.

Geo-Environment

3.9 Planning policies and decisions should ensure that (NPPF 121):

- the site is suitable for its new use taking account of ground conditions…pollution arising from previous uses and any proposals for mitigation including land remediation;
- after remediation, as a minimum, land should not be capable of being determined as contaminated land; and
- adequate site investigation information…is presented.

Landscape and Views

3.10 The Core Planning Principles of the NPPF state (5th bullet on Page 5) that planning should take account of the different roles and character of different areas. The planning system should contribute to and enhance the natural and local environment by: [inter alia] Protecting and enhancing valued landscapes (NPPF 109). Local planning authorities to take account of the desirability of new development making a positive contribution to local character and distinctiveness (NPPF 131).

3.11 Planning decisions should aim to ensure that new developments (NPPF 58):

- add to the overall quality of the area;
- establish a strong sense of place;
- optimise the potential of the site to accommodate development;
- create and sustain an appropriate mix of uses;
- respond to local character and history;
- reflect the identity of local surroundings and materials; and
- are visually attractive.

Socio-Economics

3.12 A presumption in favour of sustainable development lies at the heart of the NPPF (NPPF 14). Its core planning principles (NPPF 17) includes the need for decision-taking to "proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs," and to "promote mixed use developments." Planning should operate to encourage…sustainable growth (NPPF 19), and LPAs should "normally approve planning applications for change to residential use…from commercial buildings…where there is an identified need for additional housing…"(NPPF 51).

Transport

3.13 All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Decisions should take account of whether (NPPF 32):

- opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- safe and suitable access to the site can be achieved for all people; and
- improvements can be undertaken within the transport network that cost-effectively limit the significant impacts of the development.

3.14 Decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised (NPPF 34). Developments should be located and designed where practical to (NPPF 35):

- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- create safe and secure layouts which minimise conflicts between traffic, cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- consider the needs of people with disabilities by all modes of transport.

3.15 A key tool to facilitate this will be a Travel Plan. All developments that generate significant amounts of movement should be required to provide a Travel Plan (NPPF 36).

Planning Practice Guidance

3.16 The Planning Practice Guidance (PPG) provides online advice on a range of topics, of which the following are of potential relevance to this EIA:

- ID:4 – EIA;
- ID:18a – Conserving and Enhancing the Historic Environment; and
- ID:31 – Light Pollution.

Shepway Core Strategy

3.17 Policies from the Shepway Core Strategy that are relevant to the assessment topics are set out in **Table 3.2** below.

Table 3.2: Relevant Policies from the Shepway Core Strategy

Topic	Policy/Summary of Relevance
Cultural Heritage	SS3: Development principles include the need to respect and enhance key historic features.
Ecology	CSD4: required development to avoid any net loss of biodiversity and to protect designated wildlife sites.
Flood Risk and Drainage	SS3: Requires flood risk assessments for developments on sites at risk from flooding or wave-overtopping. CSD5: Requires developments to protect and enhance the quality of surface and coastal waters.
Geo-Environment	None specific.
Landscape and Views	CSD4: Requires developments to respect the green infrastructure of natural networks and open space, and to expand the function of open space.
Socio-Economics	SS2: Sets out the housing and economic growth strategy for the district., and directs growth towards sustainable urban locations. SS5: requires developments to respect and contribute towards the district's infrastructure. CSd1+2: Require developments to adopt a mixed-tenure approach and provide for a range of household sizes/types.
Transport	SS3: Requires developments to promote sustainable access and travel choice in favour of non-car modes.

Saved Policy from the Shepway Local Plan

3.18 Policies from the Shepway Local Plan that are relevant to the assessment topics are set out in **Table 3.3** below.

Table 3.3: Saved Policies from the Shepway Local Plan

Topic	Policy
Cultural Heritage	SD1: Requires development to protect and enhance cultural heritage assets.
Ecology	SD1: Requires development to respect designated wildlife sites and protected species. CO10+11: Specific requirements relating to nature conservation and protected species.
Flood Risk and Drainage	SD1: Requires development to avoid adverse impacts on coastal protection, flooding and groundwater. U2 + U4: Specific provisions relating to wastewater disposal and ground/surfacewater quality.
Geo-Environment	U10a: Specific provisions relating to contaminated land.
Landscape and Views	BE16: Specific provisions relating to landscape and amenity.
Socio-Economics	BE11: Specific provisions relating to housing density.
Transport	SD1: Requires development to reduce travel need and promote non-car modes. TR2, 5, 6, 11, 12 + 13: Specific provisions relating to transport and access.

4. Baseline Conditions

4.1 This chapter provides an overview of the site and surrounding area. Baseline conditions relating to each assessment topic are described in the technical chapters.

Application Site

4.2 The application site is shown on **Figure 4.1**. It is 7.2 hectares in area, comprising a triangle of land bounded to the north by the Royal Military Canal, to the south by Princes Parade and to the west by the Hythe Imperial golf course.

4.3 The site lies at an elevation of about 6-7m AOD, which is broadly the same as that of Princes Parade. It slopes down to the canal and to the western boundary, representing a level change of c4-5m. The eastern end of the site is occupied by a public car park, with an adjoining playground and picnic area, together with temporary storage facilities used by the canoe club. The remainder of the site is occupied by tall ruderal vegetation, together with areas of scrub (blackthorn, bramble, willow etc) and ephemeral vegetation/bare ground.

4.4 The site is publicly accessible, via a path from close to the car park/play area, although access to much of it is precluded by the dense vegetation. A public right-of-way (PROW) adjoins the western boundary, linking a footbridge over the canal (Seabrook Lodge Bridge) with Princes Parade. A second footpath runs across the centre of the site, linking Sea Road with Princes Parade via another footbridge (Seaview Bridge). Princes Parade is a secondary road linking Hythe and Sandgate, providing an alternative to the main A259/Seabrook Road.

Site History

4.5 The site originally formed part of a shingle ridge and by the end of the 19thc had been excavated for gravel, with the western part laid out as a recreation ground. Gravel extraction appears to have continued up to the mid-20thC, after which most of the site was used as a landfill for wastes such as demolition rubble, scrap metal and household refuse. From the 1980s, the western part was occupied by a highways maintenance depot, whilst canal dredgings were tipped on the eastern part and were then spread across the site, which was allowed to re-vegetate.

Land-Use Context

4.6 The land-use context of the site is shown in **Figure 4.2**. The residential area of Seabrook lies to the north of the site, beyond the canal. The terrain rises conspicuously beyond the Seabrook Road, forming an escarpment that is partly wooded and partly built-up, with most properties having seaward views across the general area of the site.

4.7 Development extends northwards up the valley of the Seabrook Stream, a minor watercourse that flows into the canal, and westwards towards Hythe, the centre of which is located about 1.5km from the site. Development also extends eastwards along the escarpment to Sandgate, about 1.5km from the site. The crest of the escarpment is occupied by military uses associated with Shorncliffe Camp, with the built-up area of Coolinge and Folkestone to the east.

4.8 The area has a high level of recreational use. Much of this is focussed on the beach, which is accessed from Princes Parade, where on-street and some off-street parking is

available. The canoe club has permission to erect a purpose-built clubhouse on land immediately to the north of the canal opposite the car park (Ref Y14/1428/SH). A designated walking/cycling route, the Royal Military Canal Path, runs along the northern side of the canal. To the west, beyond the golf course, lies the Hythe Imperial Hotel, and then a mix of residential and recreational uses such as a recreation ground and the Hythe municipal swimming pool.

Planning Context

4.9 Planning policy for Shepway is set out in the Shepway Core Strategy, adopted in September 2013. This includes a range of policies supporting the delivery of sustainable development that improves the economic, social and environmental conditions of the area, a target to deliver at least 400 homes per annum by 2026, the provision of 30% affordable housing within major residential schemes, and the expanding and upgrading of visitor and leisure attractions in Hythe.

4.10 The Core Strategy Policy map is reproduced in **Figure 4.3**. The Princes Parade site is covered by saved policy LR9 of the Shepway District Local Plan Review 2006, which seeks to provide an adequate level of public open space for leisure, recreational and amenity purposes by protecting existing and potential areas of open space and by facilitating new provision.

4.11 In addition, the eastern part of the site is covered by saved policy TM8, which supports the granting of planning permission for small-scale, low-rise recreational/community facilities. The policy specifies that any such facility should be of high-quality design, should take advantage of and enhance the appearance of the canal and the coastline, should ensure that the majority of the site remains open and should not adversely affect the character of the canal.

4.12 The Shepway Places and Policies Local Plan Preferred Options document was issued for public consultation in October 2016. The options include Policy UA25, which allocates the site at Princes Parade for "mixed-use redevelopment to include public open space, leisure, small-scale commercial uses and up to 150 residential dwellings."

Key Environmental Influences

4.13 The baseline conditions applicable to each assessment topic are described in the technical chapters, and the key influences are summarised below.

4.14 Cultural Heritage

- The site adjoins the Royal Military Canal (RMC), a Scheduled Monument, and forms part of its immediate setting.
- The visual relationship between the canal and the foreshore (which originally provided a clear field of fire) has been altered by land-raising within the site.
- Buried remains associated with the canal may survive within the site.
- The site also forms part of the setting of associated defensive works, notably the Shorncliffe/drawbridge redoubt, Shorncliffe Battery and two Martello towers (as shown on **Figure 4.4**).

- Princes Parade is itself an undesignated heritage asset, having been constructed in the late 19thC as a road, tramway and sea defence.

4.15 Ecology

- The RMC is a Local Wildlife Site and habitat of principal importance, and could be affected by the proximity of construction work, together with operational impacts such as lighting.

- Whilst the site is of limited habitat value, it is known, or has the potential, to support protected species such as reptiles, nesting birds, amphibians and foraging bats.

4.16 Flood Risk and Drainage

- The site lies within Flood Zone 3a, which denotes a high probability of flooding.

- The nearest potential source of fluvial flooding is the RMC. However, the ground-level of the site has been raised sufficiently above the canal for the degree of risk from this source to be low.

- The main potential risk relates to wave-overtopping of the sea defences under storm surge conditions (taking account of sea-level rise associated with climate change).

- Due to the contaminated condition of the site, surfacewater runoff cannot be managed by infiltration, and will need to be discharged off-site with suitable attenuation.

4.17 Geo-Environment

- The former use of the site for waste disposal has left a legacy of contaminated soils and perched groundwater.

- Whilst there is currently no evidence that this has given rise to wider environmental harm or health risks, there is a potential for such impacts to occur if the site is disturbed in an uncontrolled manner and in the absence of remedial works.

4.18 Landscape and Views

- The site is currently open and in a perceptibly greenfield condition, and as such influences a range of local views, notably from Princes Parade, PROWs that cross and adjoin the site, the built-up area of Seabrook and higher ground to the north-east (Hospital Hill).

- Despite its designation as open space, most of the site is effectively unmanaged, in poor condition and not readily accessible; development could therefore provide an opportunity for enhancement.

4.19 Socio-Economics

- The site currently provides little economic benefit to the community, since most of it is of limited accessibility and amenity value. The Seapoint play area,

however, is a well-used local facility, whilst the associated parking supports the recreational use of the seafront.

- Hythe Swimming Pool has reached the end of its design life and the need for a replacement (and improved) facility is urgent.

- The wider policy context emphasises the need for high-quality mixed-use development to meet the district's housing targets.

- There are some capacity constraints on social infrastructure within the local catchment, notably in relation to primary education.

4.20 Transport

- The site is well-located in relation to highway access, public transport and pedestrian/cycle routes.

- However, Princes Parade is subject to design limitations (mainly due to on-street parking) and its current alignment creates severance between the site and the seafront.

- The existing Seapoint car park and on-street parking contribute to the recreational use of the seafront, and should be re-provided.

- The development provides an opportunity to resolve existing constraints and to improve connectivity and sustainable travel choice.

Future Change

4.21 The local area is unlikely to undergo fundamental change during the lifetime of the proposed development. However, three committed and/or completed developments, which are sufficiently close to the site to give rise to a potential for cumulative impacts, have been identified. These are described below.

Seapoint Canoe Centre

4.22 The Seapoint Canoe Club currently operates from temporary facilities on the south side of the canal adjoining the car park. The club has planning permission (Ref: Y14/1248/SH) for the construction of permanent facilities, comprising a single-storey building set into the bank between the canal and the car park.

Shorncliffe Garrison

4.23 Shorncliffe Garrison is a large military camp situated on and around Hospital Hill, about 1.8km north-east of the site. It was originally established in 1794 and includes Martello Tower No 9, the Shorncliffe Redoubt and Shorncliffe Military Cemetery. A hybrid planning application (Ref Y14/0300/SH) was submitted for the redevelopment of surplus land released by the MoD, and was granted permission in March 2015.

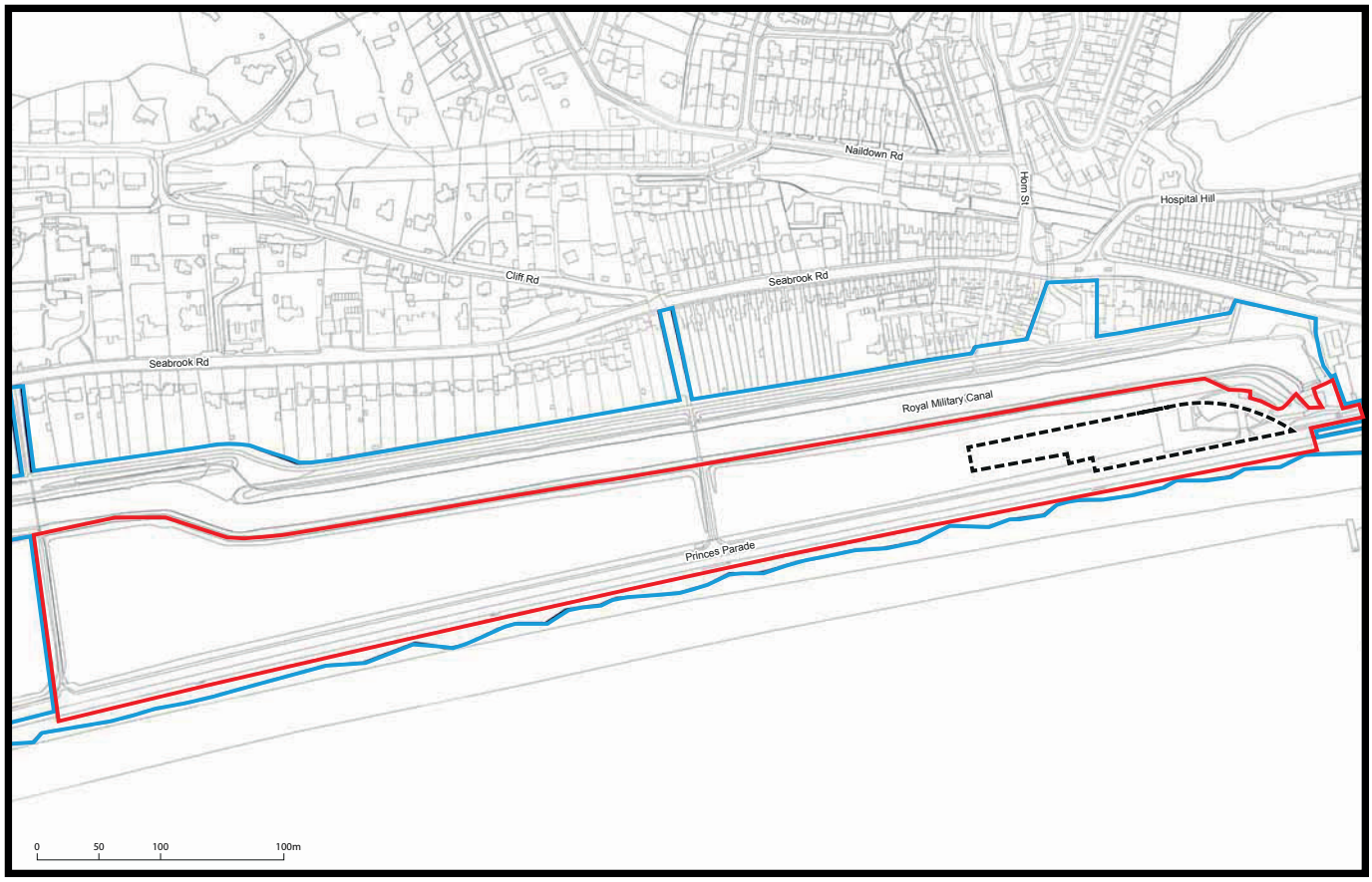
4.24 The outline planning permission (with all matters reserved) sought permission for the "demolition of existing buildings (with the exception of the listed buildings, officers' mess within Risborough Barracks and water tower) and erection of up to 906 dwellings including affordable housing, community services and facilities (use Classes A1/A3/B1a/D1 and D2 uses up to 1,998 sqm), new Primary school and nursery (up to

3,500 sqm), combined new pavilion/cadet hut facility (up to 710 sqm) at The Stadium, retained cricket pitches including mini football pitches, equipped play, associated public open space and toilets, together with, associated accesses/roads, parking, associated services, infrastructure, landscaping, attenuation features and earthworks.

4.25 A full application sought the "demolition of existing buildings and erection of 294 dwellings including affordable housing, open space, improvements to 'The Stadium' sports facilities and new car park, equipped play improvements/works to The Backdoor Training Area, associated accesses/roads, parking, associated services, infrastructure, landscaping, attenuation features and earthworks." The scheme was granted planning permission in March 2015.

Imperial Green

4.26 This development is located about 1.4km west of the application site, within the grounds of the Imperial Hotel. Planning permission (Ref: Y08/1036/SH) was granted in October 2009 for the construction of 75 dwellings, alterations/improvements to the hotel, a new golf clubhouse and associated access, parking, open space and landscaping. The residential element of this scheme is now complete and forms part of the baseline for assessment purposes.



Application Site

Other Land in Ownership of Applicant

Boundary of Detailed and Outline Areas

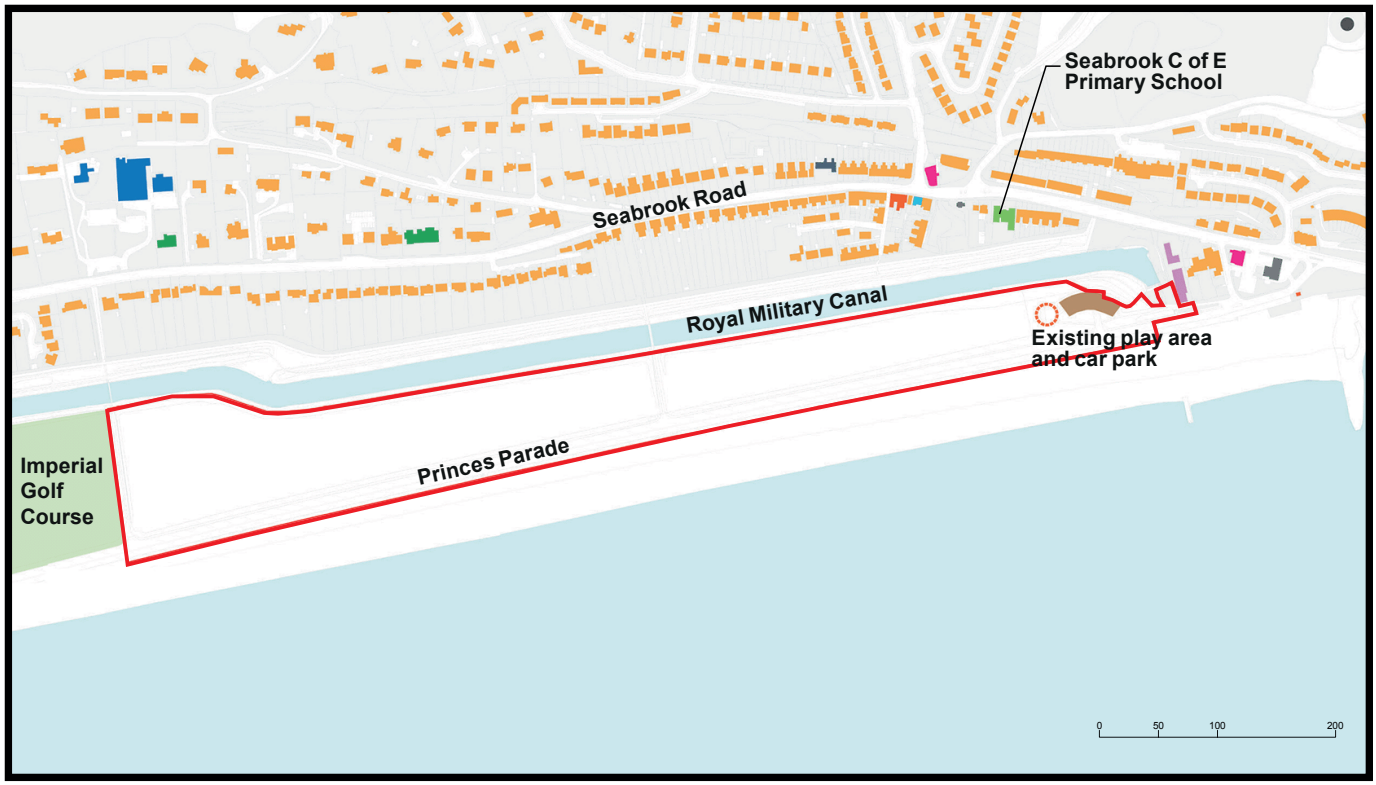
N

FIGURE 4.1

Application Site

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



- Application Site
- Residential
- Medical
- Hotels
- Food and Drink
- Education
- Petrol Station
- Retail
- Commercial
- Servicing
- Car Park
- Golf Course
- Playground

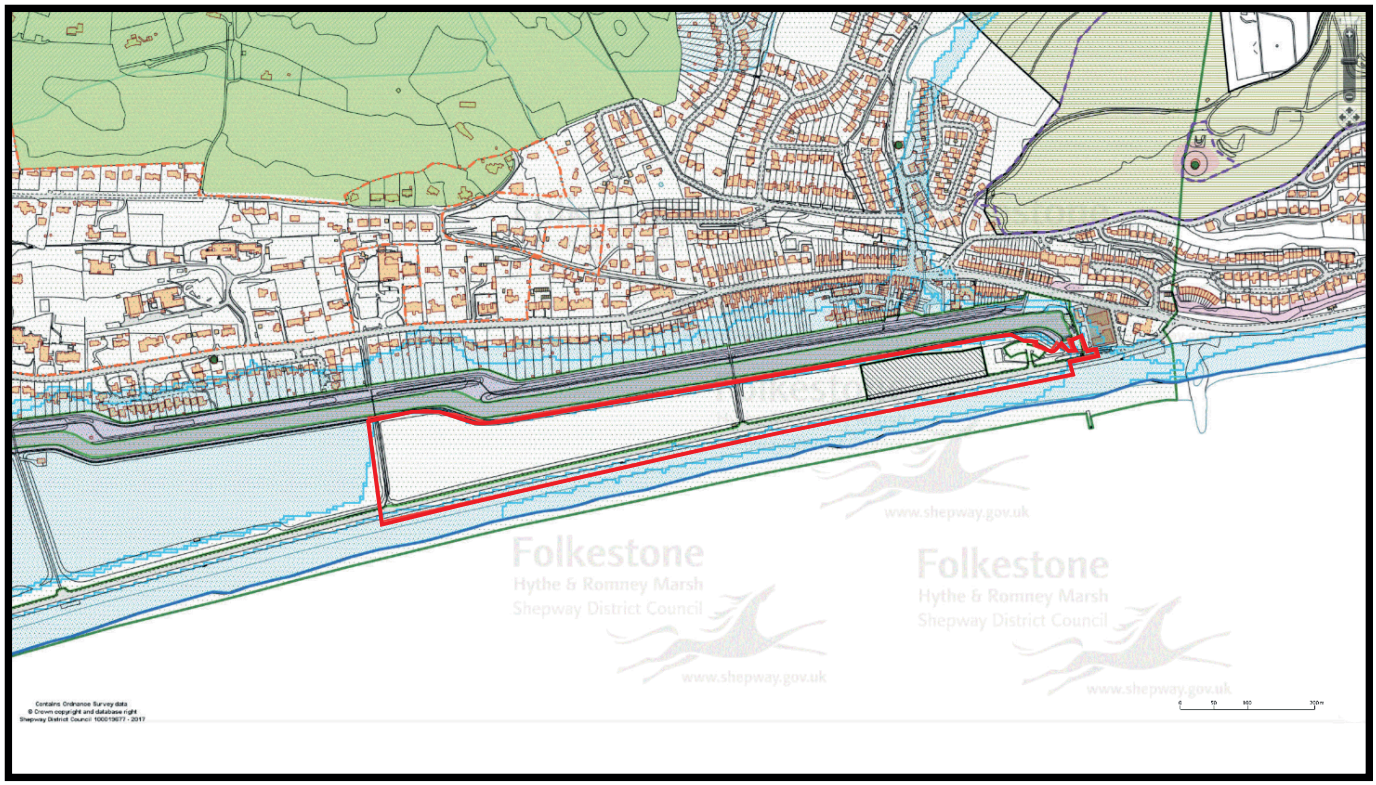
Peter Radmall Associates

N

FIGURE 4.2

Landuse Context

Job No. 2539 - Not to scale - July 2017



Application Site

Core Strategy Proposals on the Policies Map:

- District Character Areas - (SS1)
- Shorncliffe Garrison (SS7)

Tourism:

- Princes Parade, Seabrook - TM8

Leisure and Recreation:

- Open Space Value or Potential - LR9

Built environment:

- Areas of Special Character - BE12

Utilities:

- Groundwater Source Protection Zone - U4

Social & Community Facilities:

- Land Safeguarded for New Social and Community Facilities (SC7 and HO2[f])

Supplementary Information:

- Area at Risk of Fluvial/Tidal Flooding
- Area of Outstanding Natural Beauty
- Listed Buildings
- Neighbourhood Plan Boundary
- Scheduled Ancient Monuments
- Sites of Natural Conservation Interest

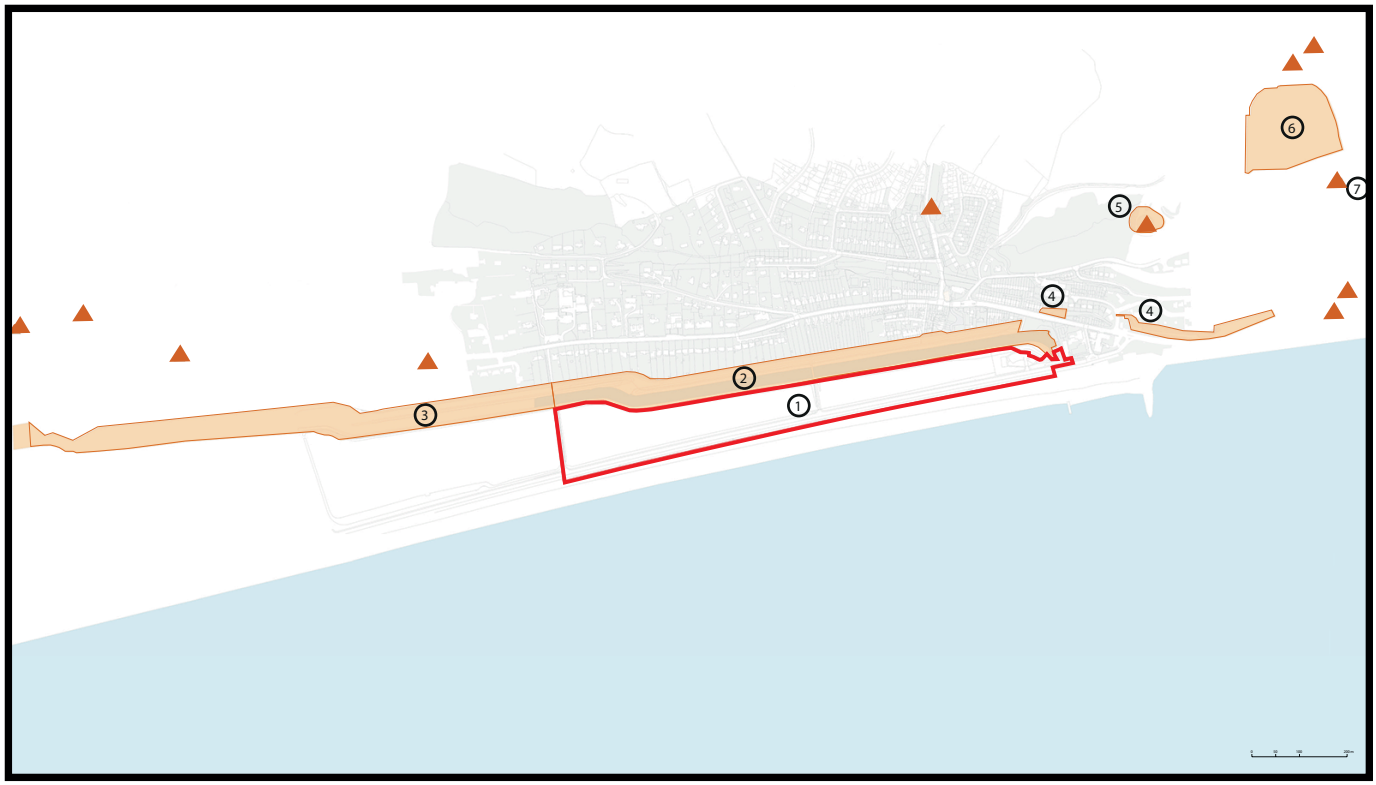
Peter Radmall Associates

N

FIGURE 4.3

Core Strategy Policy

Job No. 2539 - Not to scale - July 2017



Application Site

① The site

② Scheduled Ancient Monument: Royal Military Canal - Seabrook Lodge to Seabrook Sluice

③ Scheduled Ancient Monument: Royal Military Canal - Twiss Bridge to Seabrook Lodge

④ Scheduled Ancient Monument: Shorncliffe Battery Wall

⑤ Scheduled Ancient Monument: Martello Tower No.

⑥ Scheduled Ancient Monument: Shorncliffe Redoubt

⑦ Listed Building: Martello Tower No. 8

▲ Location of listed buildings

FIGURE 4.4

Cultural Heritage Assets

N

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017

5. Proposed Development

Background

5.1 The core objective of the development is to provide a new Leisure Centre to replace Hythe Swimming Pool, which was opened in 1975 and has reached the end of its operational life. A feasibility study carried out in 2012 concluded that the Princes Parade site offered the most appropriate, available and developable location for a viable leisure facility.

5.2 The leisure centre would need to occupy only part of the site, with the remainder providing opportunities for a mixed-use development of housing and small-scale commercial space, together with areas of enhanced public realm and green space. These uses would not only complement the leisure centre in functional terms, but would also provide essential funding, whilst representing a step-change in the amenity of what is currently an under-utilized and only partially accessible site.

5.3 The key concepts around which the development have evolved include:

- A state-of-the-art leisure centre that not only replaces Hythe Swimming Pool, but provides an overall increase in the quantum and quality of facilities;
- Innovative and aesthetically distinctive housing that reflects the unique location of the site and recent contemporary developments in the area;
- Re-inventing Princes Parade as a promenade by doubling its width and re-routing traffic through the site to give priority to pedestrians, cyclists and beach users;
- Maintaining and enhancing existing public access, through a network of designed green space, public realm and play areas; and
- Respecting the proximity of the Royal Military Canal by adopting generous offsets for development, landscaping its immediate setting, and funding restoration and maintenance works.

Layout

5.4 The illustrative masterplan is shown in **Figure 5.1**. Its main components are as follows:

- Re-alignment of Princes Parade along the northern edge of the site. This not only frees-up the seaward frontage to be re-designed as a promenade, but removes severance between the site and the beach, and helps to maintain a sense of openness along the canal.
- Location of the leisure centre at the eastern end of the site. This location responds to the existing focus of recreational uses such as the Seapoint Canoe Centre and play area, and allows for an appropriate design relationship to be developed with the larger-scale properties in Sandgate.
- Clusters of residential development extending along the central part of the site, exploiting its seaward aspect, with opportunities for commercial uses such as shops and cafes fronting onto the promenade;

- A network of public realm and green space, including open space at the western end of the site to complement the adjoining golf course, a landscaped buffer along the canal, more formal spaces associated with the housing and leisure centre, and enhanced permeability between the canal and the beach; and

- A parking strategy that includes designated spaces for residents, parking for leisure centre users, and replacement public parking for the informal parking that currently occurs along Princes Parade.

Development Parameters

5.5 The mixed-use part of the development is the subject of an outline application. Details such as architectural appearance will therefore be the subject of reserved matters, within the framework of a Design Code, as set out in the Planning Design and Access Statement. The proposals have therefore been assessed on the basis of a series of parameters, together with supporting plans. These are described below.

Extent of Development

5.6 Built development will be defined by a series of development zones, as shown on **Figure 5.2**. These will comprise: the footprint of the leisure centre, together with two zones (east and west) within the mixed-use development. These zones fix the offsets for built development from the site boundary. The key principles are as follows:

- All development to be set back from the seawall by a minimum of 12m, as agreed with the Environment Agency, to minimise the risks of wave overtopping and flooding;

- The eastern development zone adjoins the Leisure Centre, to provide continuity in urban design terms; and

- The eastern and western development zones are set back by a minimum of 25m and 39m respectively from the northern boundary, so as to provide a spatial buffer to the canal and to accommodate the realigned road.

Quantum and Mix of Uses

5.7 The Landuse Parameter Plan is shown in **Figure 5.3**, and the main elements are described below.

5.8 The leisure centre will provide 2,961sqm of floorspace across two storeys, accommodating competition and teaching pools, a fitness suite, studio space and ancillary facilities. Since this is being applied for in detail, it is described more fully below.

5.9 The residential element will comprise up to 150 dwellings, of which 30% (up to 45) would be affordable. The net residential density would be 71 units per hectare, which is more than double the minimum (30 units per hectare) recommended in the Local Plan, and is considered to be appropriate to optimize the environmental potential and sustainability of the site.

5.10 The dwellings would comprise a mix of apartments (mainly within the eastern development zone) and terraced/semi-detached housing (mainly in the western zone). The commercial uses would be accommodated within a single building overlooking a

central open space, comprising ground-floor restaurant/café/shops and a small boutique hotel on upper floors.

5.11 Approximately half (4.92ha) of the site is to be retained as public realm/green space. The main spaces will comprise:

- A western space adjoining the golf course, existing pedestrian route and replacement public parking (see below), which would include a play area and be of informal design;
- A central space that provides a focus for the residential and commercial uses, and incorporates the existing pedestrian route between the central footbridge and the beach;
- A linear space along the northern boundary that provides a buffer to the canal and enhanced connectivity within the site;
- A more urban space to the east of the Leisure Centre, incorporating the re-located play area; and
- A kilometre-long promenade that accommodates walking, cycling, running and sitting, and links the development with the beach.

5.12 The existing Seapoint play area (275sqm) would be re-provided at the eastern end of the site, whilst a new play facility of 1,020sqm would be incorporated within the western open space.

5.13 Parking would be provided as follows:

- Resident, visitor and disabled parking serving the residential accommodation, to meet adopted standards and based on the unit mix at reserved matters stage;
- A minimum of 100 public spaces, partially replacing the parking currently available along Princes Parade; and
- 108 spaces serving the leisure centre (further details are provided below).

Building Heights and Massing

5.14 The Storey Heights Parameter Plan is shown in **Figure 5.4**. The approach to massing has taken account of the urban context of the site, which is characterized by openness and relatively low-rise development. However, taller buildings are found in Sandgate, to the east, and have influenced the siting of the leisure centre, and elsewhere (e.g. the Imperial Hotel, to the west).

5.15 The key massing principles are as follows:

- All built development to be set at a minimum ground-floor level of +7.8mAOD, as advised by the Environment Agency to minimize flood risk;
- Buildings on the south-eastern part of the site, adjoining the leisure centre, would be of up to 4 storeys;

- Buildings facing the canal within the eastern development zone would be up to 3 storeys;

- The commercial building fronting onto the central open space would be up to 4 storeys; and

- Buildings within the western development zone would generally be 2.5 storeys, with some of 3 storeys facing the central open space and promenade.

Access and Circulation

5.16 The parameter plan relating to access is shown in **Figure 5.5**. The key principles are as follows:

- Relocation of Princes Parade through the site, to form the northern edge of the built development. This will discourage the use of this route as an alternative to the A259/Seabrook Road, and opens up the seaward frontage of the site.

- Re-provision of the public car parking currently provided along Princes Parade in the form of parking along the realigned road and a new car park at the western end of the development.

- Widening and re-modelling of the promenade to become a pedestrian-priority zone of high-quality design.

- Vehicular access to the residential courts and commercial uses via a series of secondary streets from the realigned road.

- Access to the leisure centre and associated parking also gained from the realigned road.

- Retention of the pedestrian route across the site from the central footbridge, supplemented by an east/west link along the canal corridor. Public access through the residential zones would be confined to residents and service vehicles.

Urban Design Framework

5.17 The proposed urban design framework is shown in **Figure 5.6**. In combination with the Design Code, this provides the template for the detailed design stage. The framework aims to:

- Create a legible new quarter that is reinforced by locally appropriate building characteristics and landscaping;

- Define the “gateways” at the western and eastern ends of the site;

- Prioritize open space and a landscape setting for the buildings;

- Arrange the residential development around a recognisable hierarchy of streets, with overlooking of the main routes and spaces;

- Create a clear transition in character across the site;

- Reflect local precedents in built form and materiality; and

- Create distinctive and high-quality public realm and green space.

Leisure Centre

5.18 The leisure centre will comprise:

- a 25m x 6 lane competition-equipped swimming pool;
- seating for approx. 100 spectators;
- a 12m x 4 lane teaching pool;
- a 100-station fitness suite;
- dance and exercise studios;
- wet and dry changing facilities;
- a café, reception, kitchen and staff facilities; and
- ancillary plant, storage etc areas.

5.19 The site layout is shown in **Figure 5.7** and visualizations in **Figure 5.8**. The design concept aims to express the function of the building as three recognisable volumes:

- A pool hall, located at ground-level on the northern façade;

- An adjoining "lower box", containing the main entrance, reception, café, wet change and plant room; and

- A lightweight "upper box", at first-floor level, containing the fitness suite, studios and dry change facilities.

5.20 The relationship between these volumes would be reinforced by their materiality. The finishes for the pool hall would combine transparent, translucent and opaque surfaces to allow light in views out. The adjoining ground floor would be expressed as a solid box with horizontal bands of gabion walls. The second floor would comprise a cantilevered solid timber structure, with wrap-around glazing providing seaward views.

5.21 The main entrance would be located on the eastern façade, giving onto an area of public realm with a re-provided play area. This would be adjoined to the east by parking for 62 cars, occupying the area between the promenade and the realigned road. Parking for a further 69 cars, together with access for servicing, would be located to the west, behind the eastern extension of the residential development.

5.22 Power and heating would be provided by a gas-fired combined-heat-and-power (CHP) plant, together with conventional high-efficiency gas boilers.

Design Development and Main Alternatives

5.23 In 2012, the Council commissioned a study by Strategic Leisure to assess the need for a new leisure centre and explore potential sites (Shepway District Council – New Swimming Pool Facility Feasibility Stage 1, August 2012). A further study into potential sites for the new facility was undertaken by Lee Evans in 2015 (Options Appraisal and Site Analysis: A Leisure Centre for Hythe, October 2015). These studies pre-dated the EIA, and therefore alternative sites have not been considered as part of this assessment.

5.24 Various design solutions have also been considered for the leisure centre, in response to changes in the functional brief and cost model. Since these do not amount to fundamentally different options, they are not regarded as main alternatives for EIA

purposes. This discussion is therefore confined to alternatives to the overall layout and mix of uses.

5.25 The linear form of the site, and its long frontages to the beach and canal, impose particular constraints on the development layout. The topography and historic use of the site as a landfill have also been influential, since the preferred approach has been to minimize ground disturbance and excavation (except where this has been unavoidable, e.g. to create the voids for the swimming pools).

5.26 The relationship of the site to the Royal Military Canal has been an important consideration. Although land-raising within the site has altered the original field of view from the canal to the sea, the development has aimed to respect the degree of inter-visibility where possible. Other influences include the need to retain (and enhance) the pedestrian route across the centre of the site, to re-provide the children's play area and to retain access to the canoe club.

5.27 The organizing principles for the development were initially tested against different locations for the leisure centre, since this was its core purpose. Options locating the leisure centre at the eastern or western ends, or in the centre of the site, were explored, with the residential uses and open space arranged accordingly. These options are shown in **Figure 5.9**.

5.28 The current location for the leisure centre was chosen because it:

- related best to the existing larger-scale buildings in Sandgate;
- was closest to the existing canoe club, car park and play area;
- was least visible from elevated viewpoints (Hospital Hill); and
- allowed the openness of the western part of the site (opposite the "kink" in the canal) to be retained.

5.29 The second important consideration was the alignment of Princes Parade. This currently severs the site from the beach and has design limitations (restricted width due to parallel parking). Three options were considered: retention of the current alignment, realignment of the road through the centre of the site, and realignment along the northern edge of the site, as shown on Figure 5.9.

5.30 The benefits of realigning Princes Parade soon became apparent, in terms of opening up the seaward frontage of the site, removing the amenity and safety impacts of vehicles, deterring through traffic, and providing a route that better meets current highway standards. Of the two realignment options, the route passing through the centre of the site was least preferred, because it essentially transfers the problems associated with severance, amenity and safety into the middle of the residential development. The current alignment, which also allows the road to provide part of a spatial buffer between the built development and the canal, was therefore strongly preferred.

Phasing and Construction

5.31 The development is anticipated to be brought forward in four phases as follows (with approximate duration):

- Phase 1: Remediation of leisure centre site and canal banks (11 months);

- Phase 2: Construction of leisure centre, western car park and new promenade, realignment of Princes Parade and realignment of associated rising main (17 months).

- Phase 3: Construction of eastern residential area and central open space (18 months); and

- Phase 3: Construction of western residential area, western open space and linear park (18 months).

5.32 The overall construction period is therefore anticipated to extend over approximately four years. Assuming a timely grant of planning permission, construction could begin in June 2018 and be completed by July 2022. The precise sequence and timing of each phase will, however, depend on factors such as funding, contractor preference and market conditions, and the programme should be regarded as no more than indicative at this stage.

5.33 The work would require a typical inventory of plant, including mobile cranes, compressors and power tools, piling rigs and vehicles such as tipper trucks, low-loaders, dump trucks and JCBs. Working hours would be agreed with the LPA, but would typically be 0800-18.00 Monday to Friday and 0800-1300 on Saturdays. Any work outside these hours would be subject to specific agreement and prior notification.

Environmental Management during Construction

5.34 The works will be carried out in accordance with a Construction Environmental Management Plan (CEMP) or Code of Construction Practice (COCP), which would consolidate the various mitigation measures identified in this ES and would be agreed with the Council and relevant statutory bodies. The site would fall within the provisions of the Considerate Constructors Scheme.

5.35 The CEMP would be a contractual obligation and would apply to sub-contractors. It is envisaged to include the following:

- the overall construction strategy and phasing;

- a schedule of agreed environmental parameters (e.g. noise levels);

- a schedule of relevant policies, standards and guidance;

- management and monitoring protocols, including designated responsibilities and reporting requirements;

- provisions for public liaison, prior notification and handling complaints;

- general housekeeping requirements;

- details of prohibited or restricted operations, including timing and no-go areas;

- a Traffic Management Plan, including agreed HGV routes;

- a Construction Waste Management Plan; and

- method statements for environmentally sensitive activities;

5.36 The Method Statements would incorporate the mitigation measures applicable to each of the assessment topics, as described in the technical chapters and annexes. These may be summarized as follows:

Cultural Heritage

- Pre-construction archaeological investigation to confirm the presence of any features associated with the RMC within the site.

Ecology

- Pre-construction surveys and remedial action for protected species as necessary (e.g. reptiles and breeding birds);
- Delineation and temporary fencing of no-go areas; and
- Control of activities with the potential to have ecological impacts, e.g. uncontrolled discharges or waste disposal, temporary runoff management (e.g. close to the canal), lighting, dust emissions, noise and vibration (e.g. percussive piling).

Flood Risk and Drainage

- Implementation of temporary runoff management measures and controls relating to dewatering and waste disposal.

Geo-Environment

- Further site investigations and/or monitoring to verify the precise extent and nature of contamination and ground-gas risks;
- Remediation of areas known or likely to be contaminated;
- Removal of contaminated material from site and disposal in accordance with duty-of-care obligations; and
- Adherence to health and safety protocols to protect site workers.

Landscape and Views

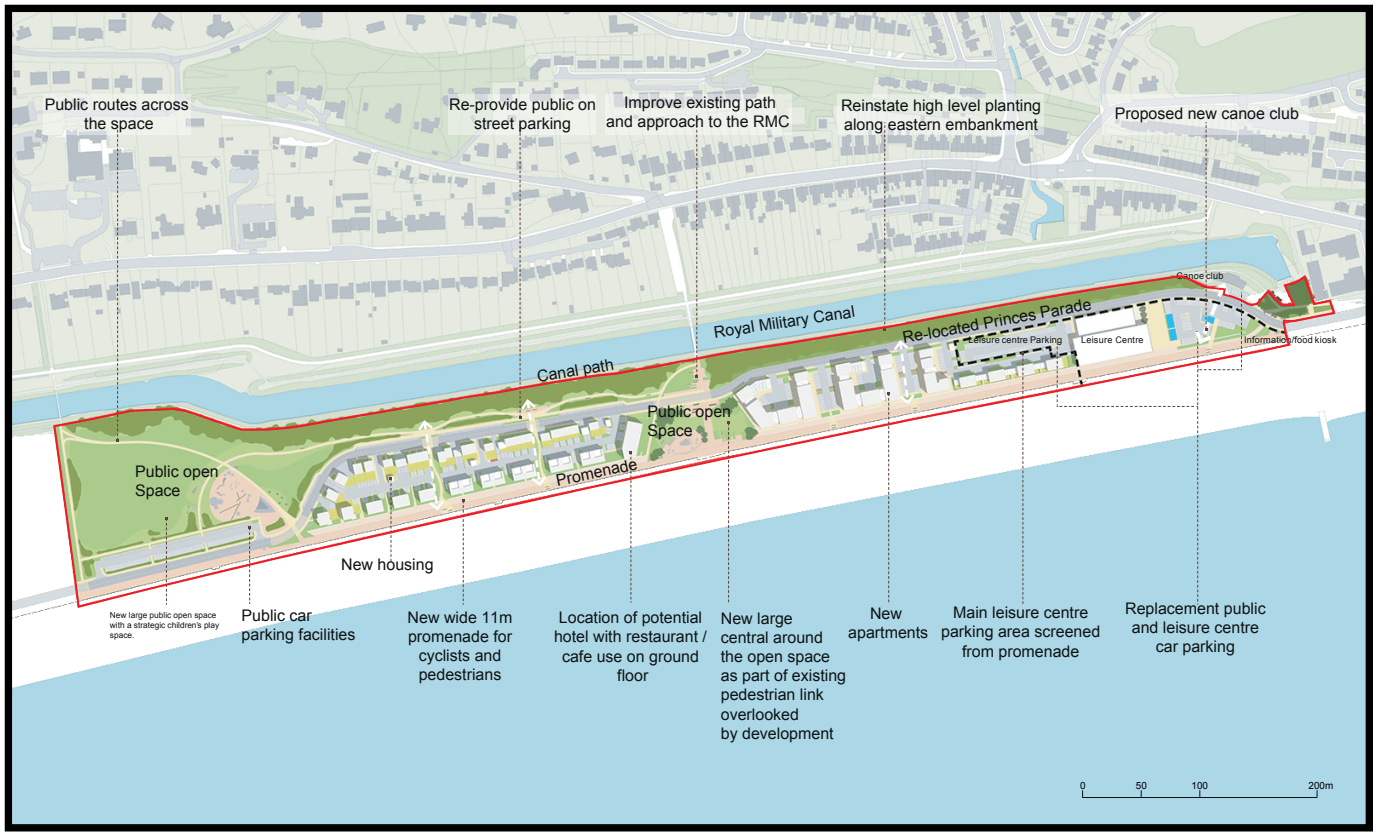
- Control of activities likely to give rise to visual impacts (e.g. temporary lighting, stockpiles and site facilities).

Socio-Economics

- Training and procurement initiatives to provide opportunities for local tradesmen and suppliers where possible.

Transport

- A traffic management plan that aims to minimize disruption and delay to existing road users, including measures coverings HGV routeing, pedestrian and cycle safety, and temporary road closures/diversions.



Application Site

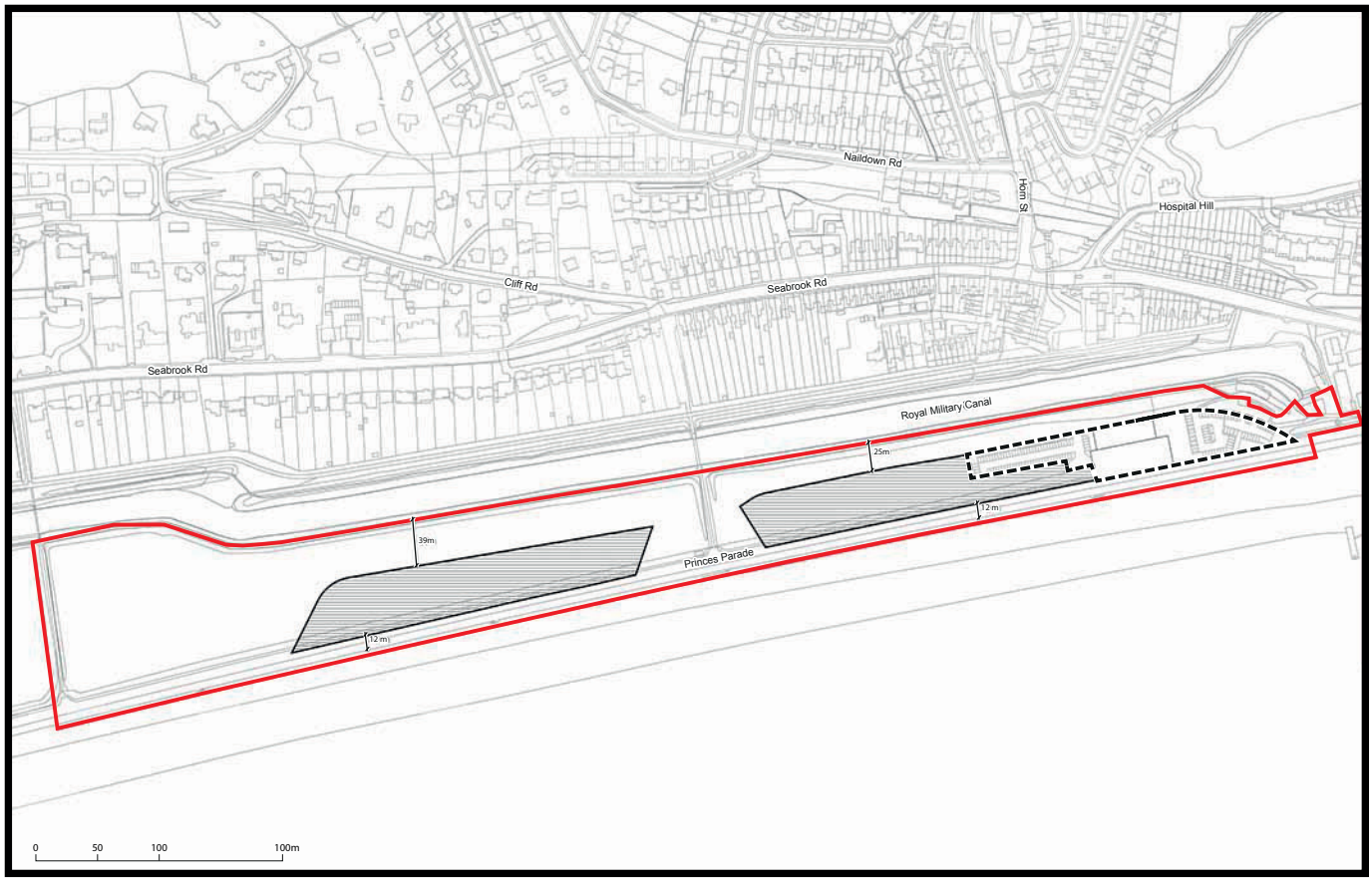
FIGURE 5.1

Illustrative Masterplan

N

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



Application Site

Boundary of Detailed and Outline Areas

Maximum Extent of Built Development

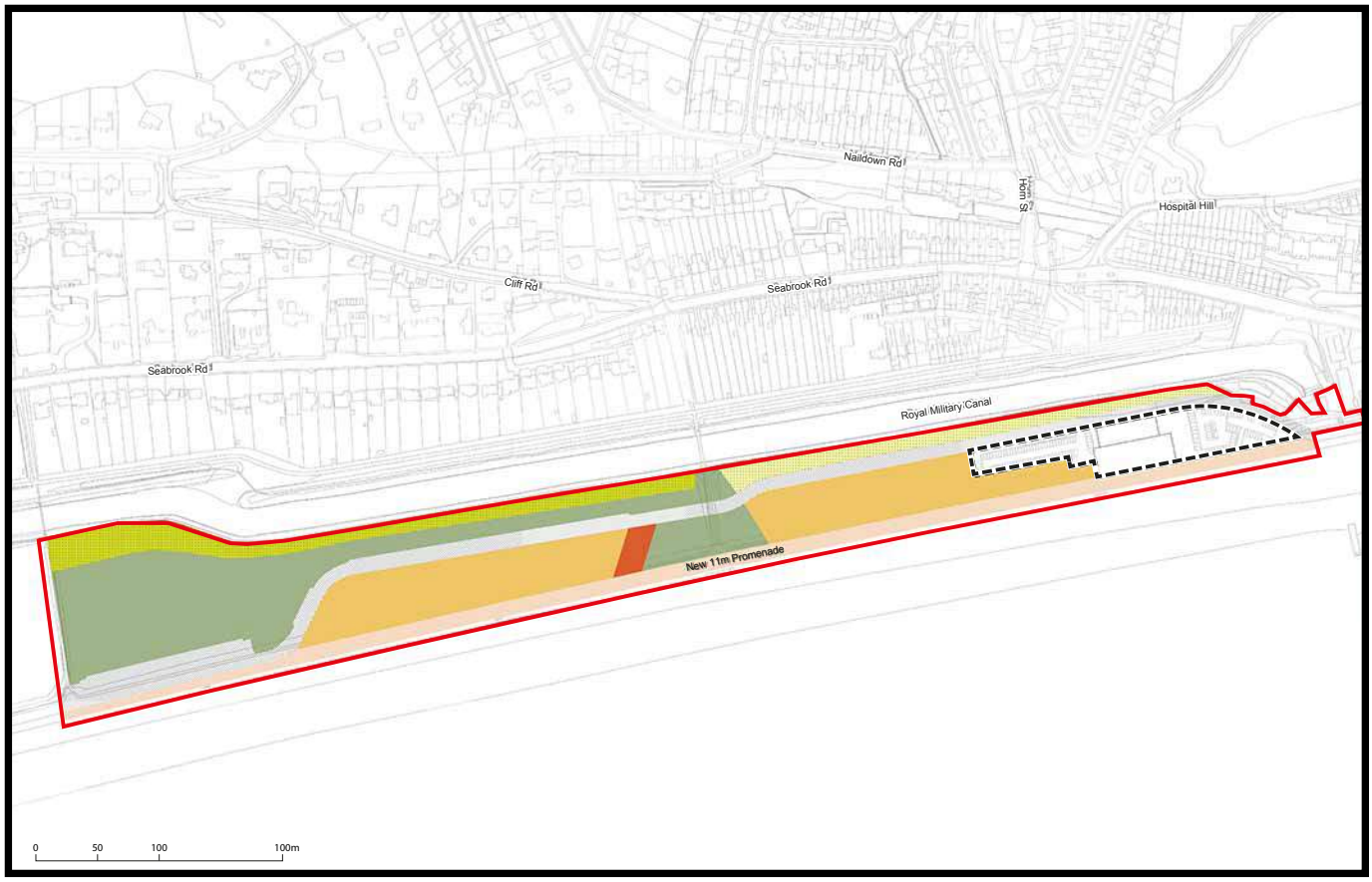
FIGURE 5.2

Development Zones

N

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



- Application Site
- Boundary of Detailed and Outline Areas
- High Planting on Embankment
- Low Planting on Embankment
- Open Space
- Mixed Use Zone (Residential/Retail/ Food Retail)
- Promenade
- Residential Zone
- Main Street with Public Parking

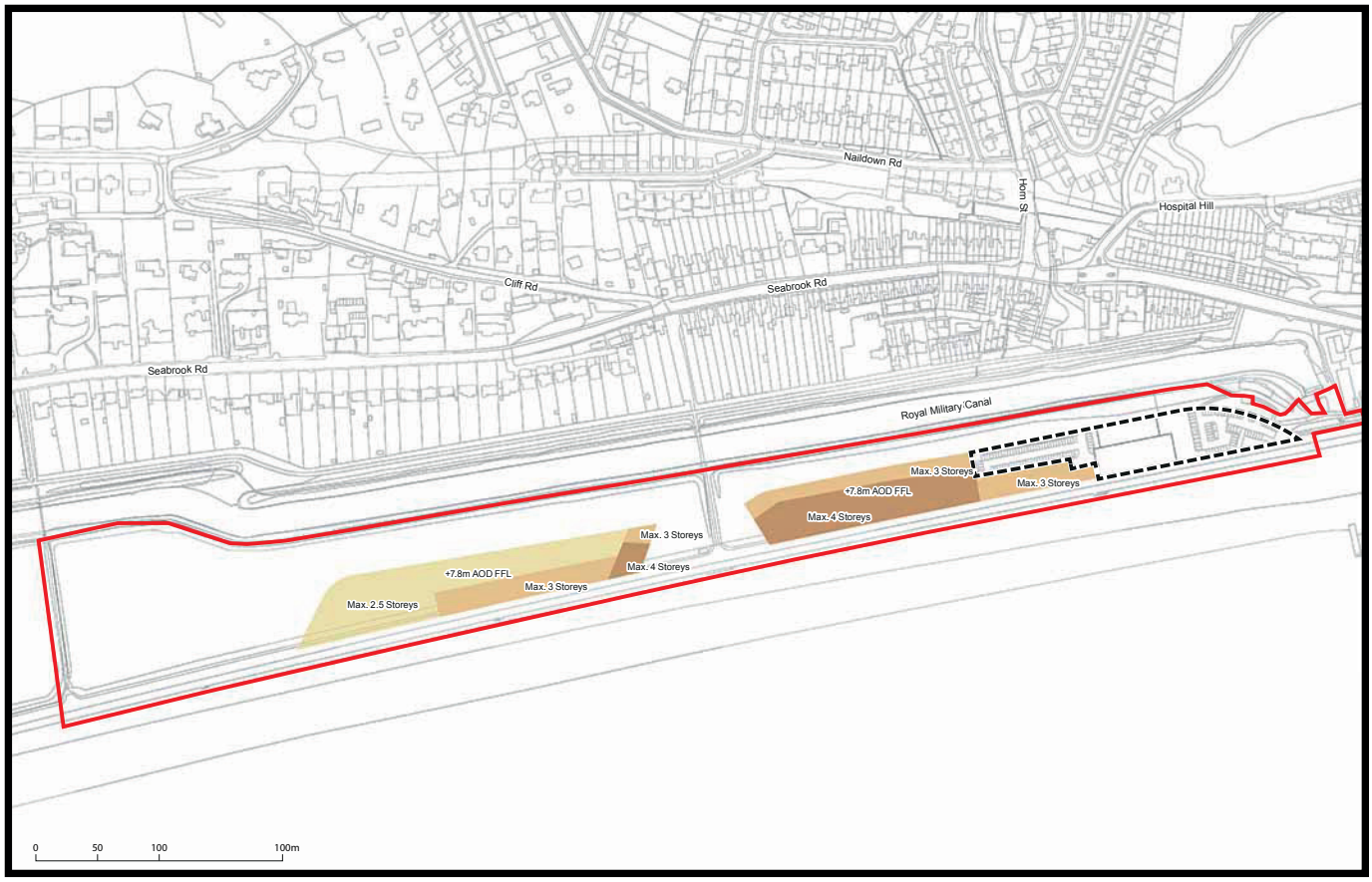
N

FIGURE 5.3

Land Use

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



Application Site

Boundary of Detailed and Outline Areas

Maximum 4 Storeys

Maximum 3 Storeys

Maximum 2.5 Storeys

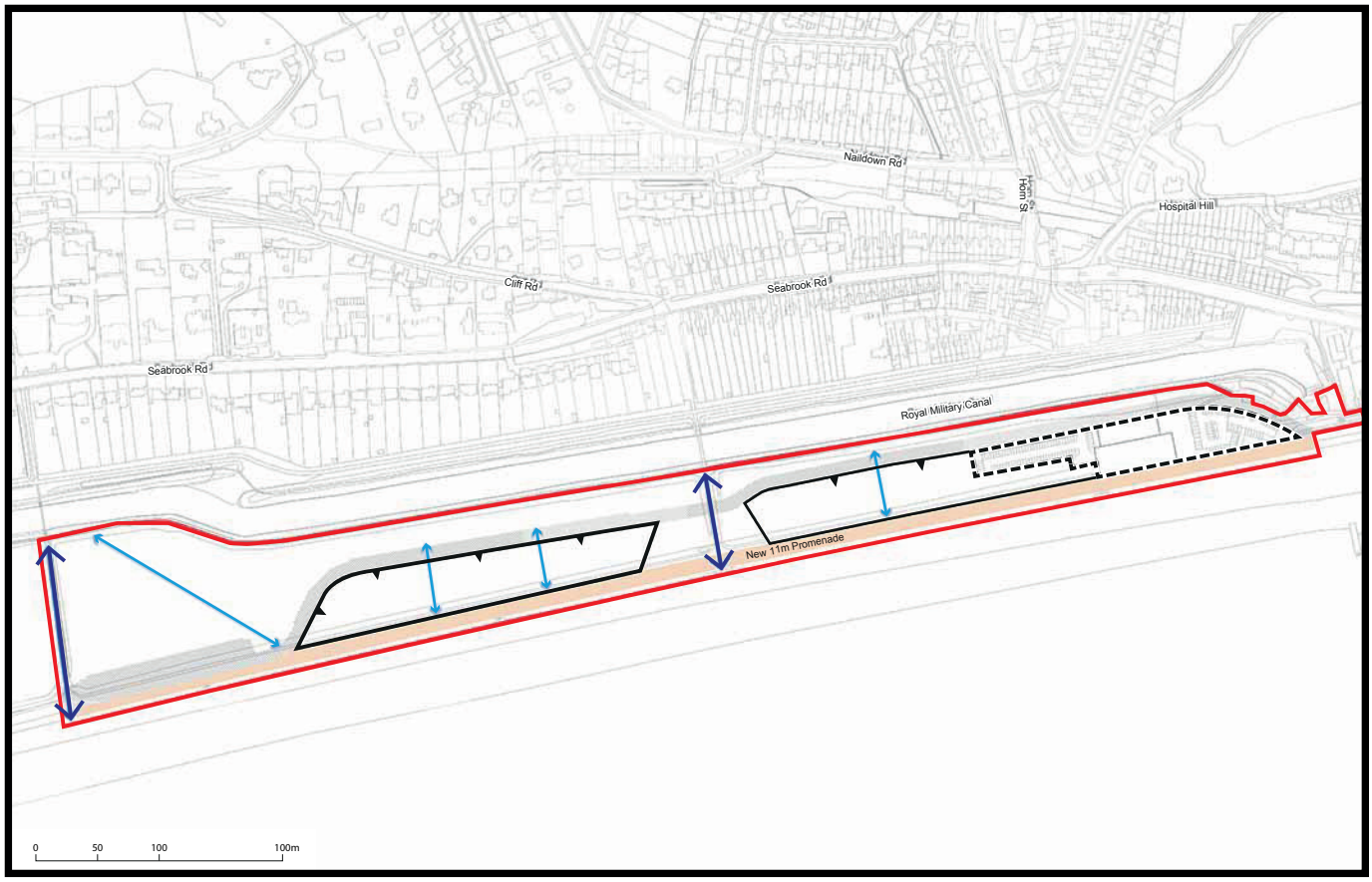
N

FIGURE 5.4

Building Heights

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



Application Site

Boundary of Detailed and Outline Areas

Promenade

Main Street with Public Parking

Maximum Extent of Built Development

Indicative Location of Pedestrian Links

Indicative Vehicular Access into Development

Existing Pedestrian Link Retained

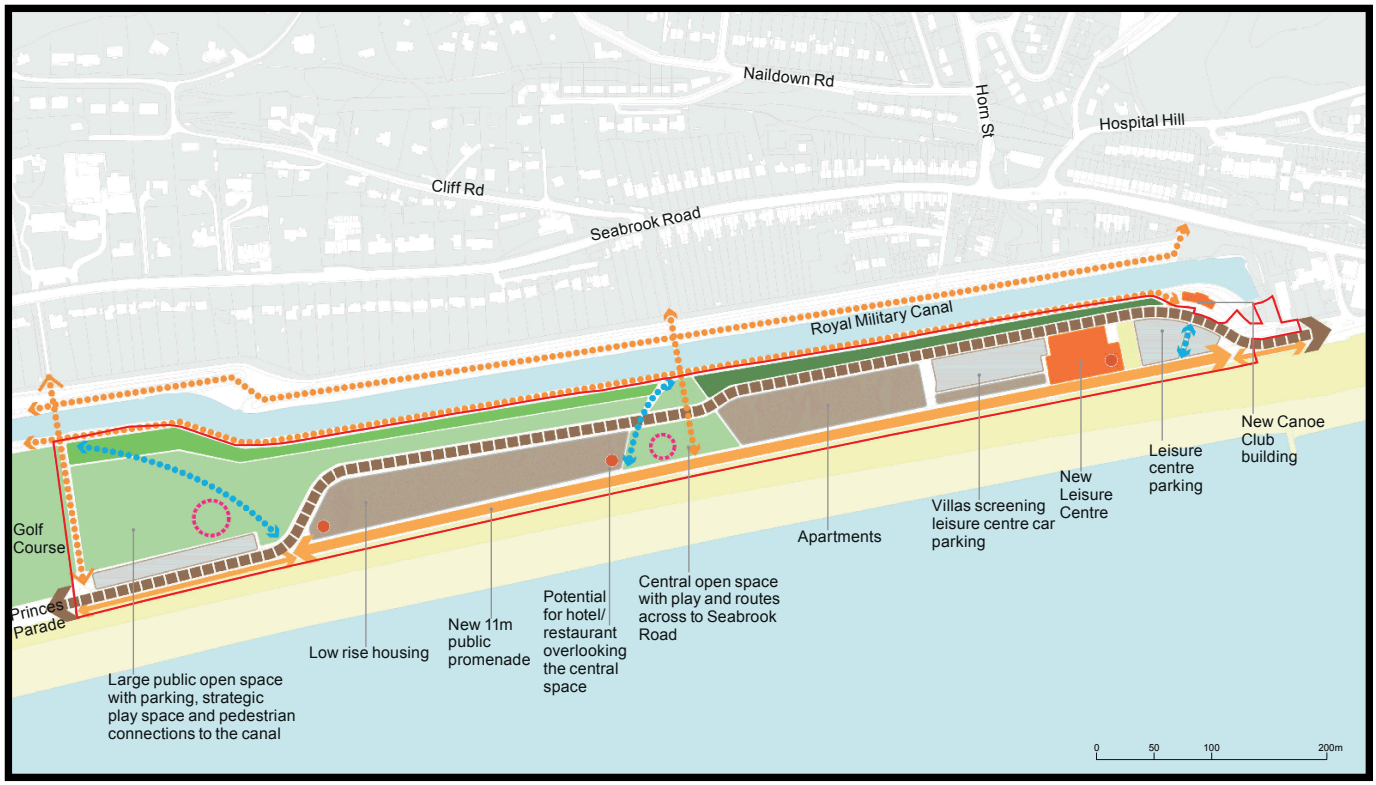
N

FIGURE 5.5

Access

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



Application Site

Existing Footpaths

Proposed Footpaths

Potential for Play Area

Promenade

New Street Alignment

Peter Radmall Associates

N

FIGURE 5.6

Design Framework

Job No. 2539 - Not to scale - July 2017

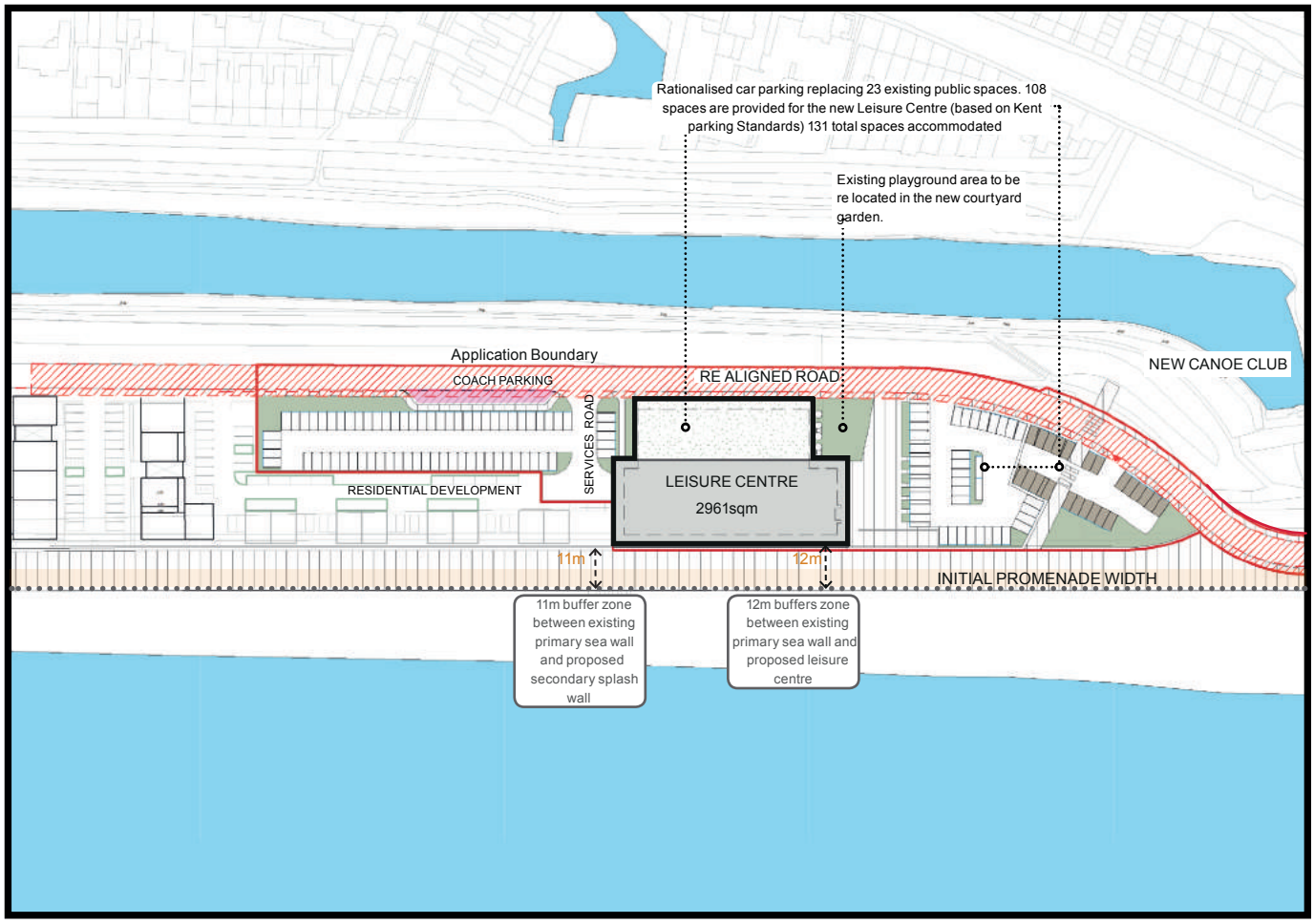
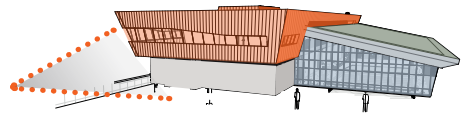


FIGURE 5.7

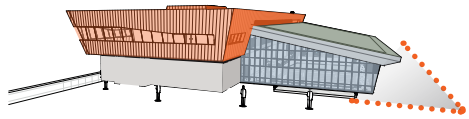
Leisure Centre Layout

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017



View A South East corner from new promenade onto main entrance square



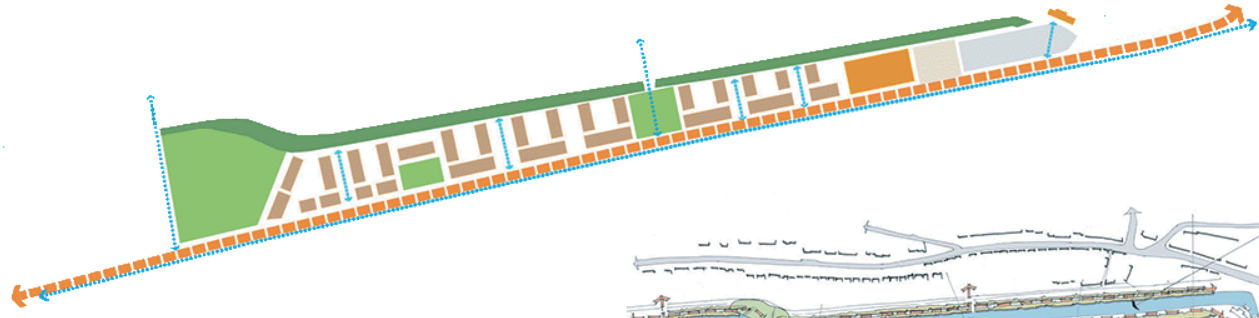
View B North East corner from pedestrian path of the re aligned road onto main entrance square

Peter Radmall Associates

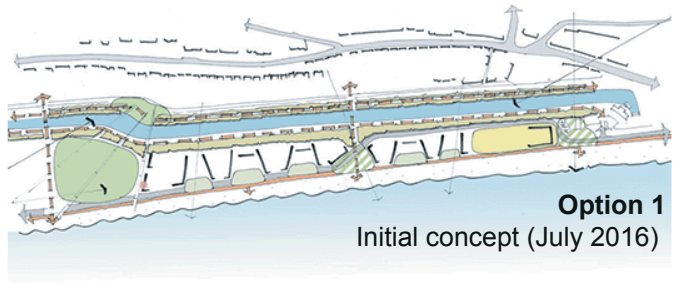
FIGURE 5.8

Leisure Centre Visualizations

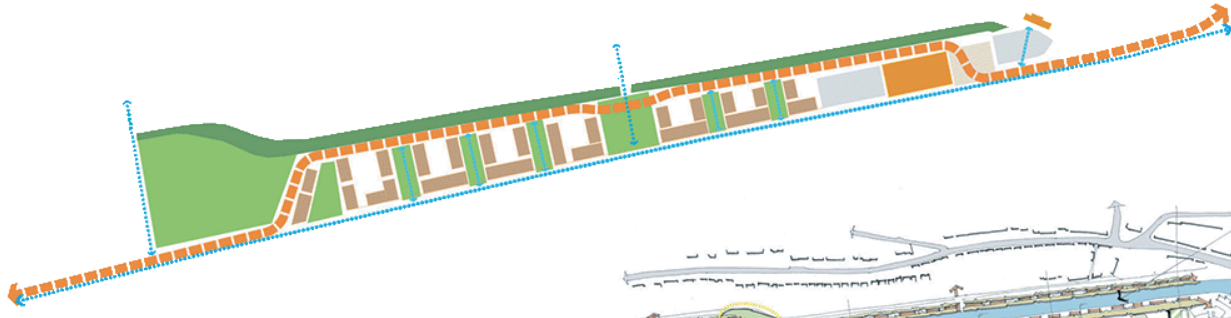
Job No. 2539 - Not to scale - July 2017
Drawing above is illustrative only and not scale.
Images areprecedents and indicate look and feel only.



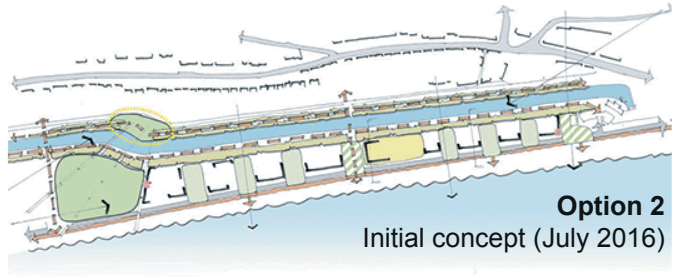
Option 1
Organising Principles (October 2016)



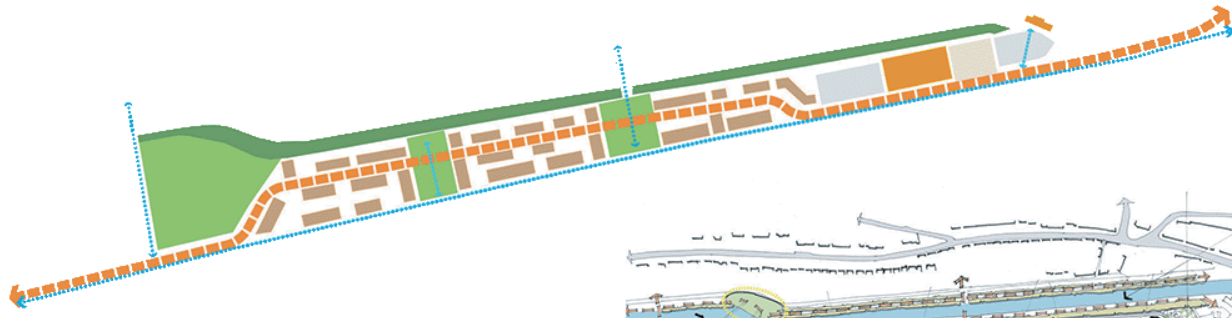
Option 1
Initial concept (July 2016)



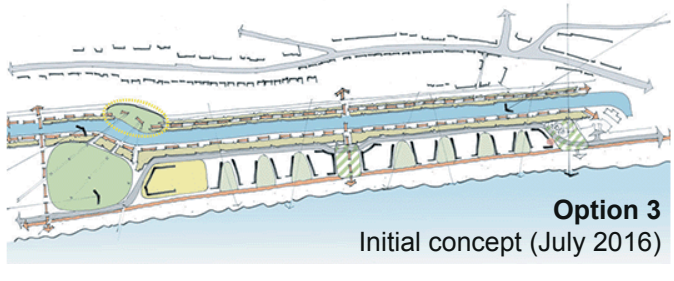
Option 2
Organising Principles (October 2016)



Option 2
Initial concept (July 2016)



Option 3
Organising Principles (October 2016)



Option 3
Initial concept (July 2016)

FIGURE 5.9

Design Development

N

Peter Radmall Associates

Job No. 2539 - Not to scale - July 2017

6. Cultural Heritage

Introduction

6.1 This chapter assesses the potential effects relating to cultural heritage, and has been prepared by Martin McKay. It should be read in conjunction with the figures and photos presented in **Technical Annex 2**.

Scope and Methodology

6.2 The site is not a heritage asset in itself. However, its northern boundary abuts the early 19thC defensive line of the Royal Military Canal (RMC) - a Scheduled Ancient Monument. It is also close to a number of heritage assets associated with the area's military history.

6.3 The development will not directly affect the scheduled area of the RMC. However, it will affect the setting of it and other heritage assets. In line with the Historic England publication '*Good Practice Note 3: The setting of Heritage Assets*', this section takes the following steps:

1) identifying the heritage assets affected and their settings;

2) assessing the degree to which the identified setting contributes to the significance of the heritage asset(s);

3) the effect of the proposed development on that significance;

4) via the scheme or via off-site contributions and projects funded via the scheme, maximise enhancement of the heritage assets and minimise harm to the heritage assets;

5) The final step will be to document decisions taken and monitor outcomes. This will await outline and detailed planning permissions for the scheme and its subsequent implementation.

6.4 The section begins with identifying the heritage assets affected and assessing their significance, followed by surveys of the site and its surroundings, including key views of the site within the setting of the RMC. These inform the subsequent analysis of the effect of the scheme proposals on the significance of the RMC and other heritage assets.

6.5 The scheme may also have archaeological impact. This is addressed under a separate heading. Historic England have contributed their knowledge of the application site and the RMC to assist the study. Significant effects are defined in accordance with '*Planning Practice Guidance'* published alongside the *National Planning Policy Framework* (NPPF) by the Government.

Policy Context

National Policy

NPPF Section 12: Conserving and enhancing the historic environment

- *Paragraph 128* requires applicants to describe the significance of any heritage assets affected by a development proposal. This includes any contribution made by their setting. This chapter fulfils this requirement.

- *Paragraph 132* requires great weight to be given a heritage asset's preservation when making a planning decision. Substantial harm or loss should be wholly exceptional
- *Paragraph 133* states, amongst other criteria, that where development would lead to substantial harm to the significance of a designated heritage asset, consent should be refused unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh the harm
- *Paragraph 134* states that where a development proposal would lead to less than substantial harm to the significance of a heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.
- *Paragraph 137* requires local planning authorities to look for opportunities for new development within the setting of heritage assets to enhance or better reveal their significance.
- *Paragraph 139* states that non-designated heritage assets of archaeological interest are demonstrably of equivalent to scheduled monuments.

Local Policy

Shepway Core Strategy 2013

6.6 Policy SS3: Place Shaping and Sustainable Settlements states, amongst other matters, that all development should be designed to contribute to local place shaping and sustainable development by respecting and enhancing key historic features of conservation interest.

Shepway District Local Plan review (2006) (saved policies)

6.7 Policy BE7 covered the setting of scheduled ancient monuments. However, this has been withdrawn and is replaced by the relevant NPPF policies.

Scoping Opinion

6.8 A Scoping Opinion was requested from the LPA on the basis of a Scoping Report, both of which are presented in **Technical Annex 1**. The Scoping Report predicted that there would be:

- *no physical impact* on designated assets
- a *high* impact on the setting on designated heritage assets
- a *medium* impact on landscape character
- a *medium to high* impact on views and visual amenity
- a *low impact* on loss of significant vegetation.

6.9 The Council and Historic England were broadly happy with the scope outlined by the scoping report. However, in his written response the Council's heritage consultant stated that the impact on heritage and visual amenity would be '*high*' and challenged the assumption that there would be no archaeological impact.

6.10 The impact on setting, landscape character, views and visual amenity are considered under the general heading of setting in this chapter. Archaeology is dealt with under a separate heading. Vegetation is not a heritage issue and is not specifically addressed by this chapter.

Heritage Assets and their Significance

The Site and its Surroundings

6.11 The application site is a narrow strip of land just over 1 kilometre long between the RMC and the road and sea defence of Princes Parade. Historically, the site would have been low -lying and kept clear of vegetation to allow for a clear field of fire from the defensive banks of the RMC. However, from the 1930's gravel was extracted from the site and in the 60's and 70's it was used as a refuse tip. This has resulted in it being raised by some 4m above the RMC, in marked contrast to the low-lying golf course that abuts the site at its western end and which remains at its original level. The site is now covered in dense scrub. The site is bounded on the east by the RMC itself where it turns towards the sea, and by modern development beyond.

Historic England Step 1: Heritage Assets Affected and their Settings

6.12 The following heritage assets are located within 1km of the site:

- *The Royal Military Canal (RMC):* As a Scheduled Ancient Monument (Scheduled Ancient Monument 1003260), the 19th C defence of the Royal Military Canal (RMC) is a designated heritage asset of the highest importance.
- *Other Defences*: The site is close by other 19th C defences – the scheduled ancient monuments of the walls of Shorncliffe Redoubt (1401815), Shorncliffe Battery (1005177), and Martello Towers 8 (1344156- also a listed building) and 9 (10172226). In addition, the Kent Historic Environment Record records that there were a number of WW2 pillboxes along the RMC and beach defences, also including pillboxes, along the seafront. These are however no longer obvious.

6.13 Although not designated as heritage assets, the following are also considered

- *Princes Parade* and its associated sea defences and tramway are of some heritage interest as a Victorian sea defence, which was conceived partly as a leisure attraction.
- The remains of the *Sandgate Extension* railway line
- Ditches associated with the RMC may still exist under the current landfill of the site and outside the scheduled area of the RMC.

6.14 No Palaeolithic, Mesolithic, Neolithic, Bronze Age, iron Age, or Roman remains or finds are recorded within 1km of the site. With the exception of a medieval penny found on the seafront car park at Princes Parade, no medieval finds have been recorded with 1km of the site. Maps and aerial photos showing the relationship of the site to the relevant assets are presented in **Technical Annex 2**.

Royal Military Canal

6.15 The Royal Military Canal runs as a defensive barrier for 28 miles across Romney Marsh from Cliffs End in the west to its eastern terminus immediately adjacent to the council development site at Princes Parade Seabrook. The construction of the RMC started in a great hurry in 1804 in response to the threat of French invasion and a judgement that Romney Marsh would be an obvious landing place.

6.16 The engineer John Rennie, whose previous projects included the construction of London and Waterloo bridges, was appointed as consultant engineer. However, progress was

slow and it was still incomplete when the threat of invasion dissipated with the Battle of Trafalgar in 1805. Rennie was sacked and the project transferred to the Army's Quartermaster General's department under the command of Lt Col. Brown. The RMC was finally completed in 1809 and was maintained after this date as a defence, although it is not known if it was ever fortified with guns.

6.17 It was part of an integrated system of defences along the southern coast of England which included forts, towers, batteries and redoubts. The use of a canal as a defence was a novel one which relied upon new technology and skills developed in the Georgian era. It constituted a physical barrier to invading troops, but was also designed such that it, and the seaward ground in front, could be covered by cannon and rifle fire from raised banks on its landward side.

6.18 The RMC was originally designed to be 19m (60ft) wide and 3m (10ft) deep. Due to pressures of time and spiralling costs, most of it was dug to only half its intended width and depth in most places, although the RMC at Seabrook is to its originally intended dimensions. Earth ramparts were formed from the excavations on its landward side to provide a defensive position commanding lower ground on the seaward side (including across the site which is the subject of this planning application). Behind the ramparts is a military road from where defending soldiers could move without being seen.

6.19 The RMC has kinks at 500-yard intervals to allow enfilading fire from cannons along its length if the enemy attempted to cross it. Its eastern terminus turned southwards to connect with the sea (only about 50m away in this location) via a very short arm ending with a sluice and sluice houses to control water levels within the RMC. This seaward arm forms the eastern boundary of the application site.

6.20 The precise sequence of the development of the various parts of the defences of the terminus is uncertain, but it seems that in 1812 a further very short arm (7m or 22ft in length) of canal was dug to connect with gun platform of the Shorncliffe battery immediately to the north. This was to enable the main road to Folkestone in front of the battery to be cut in the event of an invasion. A drawbridge carrying the road was constructed and a stone redoubt was built immediately to west to provide a location from which the drawbridge could be protected by covering fire and to provide a further position from which the seaward sluices could be defended from sabotage or attack.

6.21 The Government attempted to recover some of the expense of building the RMC by opening it up to navigation and the transportation of goods. A small wharf was therefore built at the Seabrook terminus in 1807. Regular barge services ran for a brief time between Hythe and Rye but the RMC was never well-used. Commercial usage declined still further with the coming of the railways to East Kent. By the late 19thC the RMC was used for pleasure boating only.

6.22 Evident on the 1874 historic map is a raised sea wall and ditches on the seaward side of the RMC running most of the length of the site, before turning seawards in the vicinity of the car park at Princes Parade. It is possible that this is still extant under the raised landfill of the site. In 1874 the environs of the RMC and the application site itself were clear of development with a large amount of shingle extending into the site.

6.23 The Ordnance Survey map of 1897 shows a number of boat houses clustered around the eastern terminus of the RMC (including on the application site) which are likely to be associated with pleasure boating. No trace of them remains today. Other than this and a large police house immediately to the north of the RMC, the application site and environs of the eastern part of the RMC were still largely clear of development. A major change

compared to 1874 was the construction of the sea wall and road of Princes Parade across the seaward front of the application site (see below).

6.24 In addition to its defensive and transport functions, the RMC was designed to improve the drainage of some parts of the marsh. This intention was used as to justify the construction of the RMC to landowners along its length. The defensive function of the RMC was reinforced during WW2 by the construction of a series of pillboxes along its length. These have now disappeared.

6.25 Today, the canal watercourse itself remains intact. It is important in controlling water levels across Romney Marsh and is also an important recreational resource. People enjoy walking along its banks, and rowing or canoeing along its surface. From many viewpoints and places, the RMC is experienced as an impressive linear feature stretching across the landscape. More specific features at the eastern end, adjacent to the development site, are in a more variable state of completeness:

- The ramparts are still extant but are eroded and rather overgrown;
- There is still a track behind the ramparts although it is not evident whether this is on the exact line as the original military road;
- The arm of the eastern terminus connecting to the Shorncliffe Battery has been partially infilled and the drawbridge removed. There is now a sloping grass bank leading to a busy modern road with the wall of the battery beyond;
- The terminus retains the stone wharf but historic sluices and sluice houses have been replaced;
- The redoubt that overlooks the former drawbridge and termination of the canal is intact although its stonework is in poor condition and its associated earthworks are largely missing;
- The watercourse itself has silted up in some places such that it is less than 1m deep.

6.26 Although there has been damage to the integrity of specific parts of the RMC as outlined above, and parts of it are in poor condition, overall it remains intact and readily understandable as a unique defence from an important part of Britain's history.

6.27 In line with the Historic England document *Conservation Principles, Polices and Guidance* the RMC's heritage significance can be divided into four main headings: Evidential, Historic (illustrative or associative), Aesthetic, and Communal as follows:

- Its historic illustrative values demonstrate a major period in British history and the response made then to the fear of invasion. It illustrates a unique approach to the design of a fortification as a long linear water filled obstacle but also contemporary military theory for batteries and gun towers.
- It has historic associations with pre-eminent military and civil engineers of the period e.g. Sir John Rennie and William Twiss RE.
- The Canal has a strong design quality that provides it with an aesthetic value derived from its sense of a deliberate barrier separating areas of land.
- The Canal has communal value for many residents and visitors who use it, some of whom appreciate its historic purpose whilst others enjoy it as public open space for leisure purposes.

6.28 Overall, the significance of the RMC can be described as exceptional. It is undoubtedly of national significance.

Setting of the Canal

6.29 The NPPF defines the setting of a heritage asset as:

'*The surroundings in which a heritage asset 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 significance or may be neutral'.*

6.30 The eastern end of the RMC, adjacent the application site, would once have been prominent in the landscape, but has become less so due to:

- to the building of a Victorian railway and viaduct (the Sandgate branch) against high ground to the north;
- late 19th and 20th C housing development immediately to the north of the canal;
- modern development to the east- adjacent to the basin of the canal;
- the construction of the sea wall and the associated Princes Parade in late Victorian times; and
- extensive tree growth adjacent to the Canal and on nearby high points.

6.31 The setting is now confined to the following broad areas:

- Princes Parade along the shore and the golf course immediately adjacent to the site to the west. The golf course itself is an important part of the setting of the RMC. Together with the application site it forms an extensive area of open ground in front of the RMC which can be experienced as one moves along Princes Parade from the west or across the golf course. Unlike the application site. the golf course remains at its original ground level;
- Along the Canal, including the earthwork of the Canal, the nearby gardens of houses and, further to the east, Shorncliffe Battery Wall;
- The high ground of Hospital Hill to the east, including Martello Towers 8 and 9.

6.32 Approach experiences are also important. The Canal is approached along the coast road from Sandgate to the east and Hythe Imperial Hotel to the west. These are assessed within the context of the general areas outlined above. The application site stands out as a prominent part of the setting of the Canal within these areas.

6.33 It is evident that the Canal can be experienced (viewed) from various dwellings, especially immediately to the north. However, these are private views mainly available from upper floors. In addition, the locations of these viewpoints are not former defences or points that had a functional relationship with the Canal as a defence. These viewpoints are not therefore considered as an important part of the setting of the Canal and are not considered further in this report.

Other Defences

6.34 Just to the east and north of the site are two sections of the scheduled ancient monument of Shorncliffe Battery. This was a raised gun platform constructed between 1793 and

1804 (prior to the RMC) to command the beach and sea and defend the base of the high ground of Hospital Hill. It would also have had an important role in defending the eastern terminus of the RMC.

6.35 The middle section has been lost to modern road layouts but the stone walls of the surviving parts of the battery are in fair condition. The firing platform is largely inaccessible due to thick undergrowth, and the setting of the battery is much compromised by modern housing development in very close proximity. It is evident however that the eastern part of the battery, close to the RMC basin, would still command views over the basin, the RMC and the application site if it were to be accessible.

6.36 Martello Towers were chains of gun towers constructed to defend the south-eastern coast of England against the threat of ship-borne invasion by Napoleonic forces. Martello Tower No.9 is the most westerly of a cliff top series of six moated towers, constructed in 1805-6 to defend the coastline between Hythe and Folkestone. The slightly elliptical brick built tower measures up to 13m in diameter externally and stands complete at its original height of about 10m. The tower stands on the high ground of Hospital Hill to the east of the site and with its cannons would have covered the eastern end of the RMC and the Council development site. Today, however, it stands within dense woodland.

6.37 Martello Tower No.8 lies 400m to the east of No.9 within a modern housing estate. It is largely complete but has been converted to a private residence.

6.38 The Shorncliffe Redoubt is a defensive outwork at the top of the high ground of Hospital Hill to the west of the site. It was constructed circa 1794 and covers a rectangular area of ground of approximately 130 square metres. The northern part of redoubt has been flattened but the southern part contains a number of earthworks. It is entirely within the army base of Shorncliffe camp.

6.39 With the exception of the much-altered Shorncliffe battery, these other defences are some distance from the site compared to the RMC, which is in immediate proximity. For this reason, the development of application site will not affect the immediate settings of these defences. However, the development could affect an understanding of the linkages between the RMC and the defences, in particular an understanding of the RMC as a part of a series of interlinked defences. The other defences are therefore considered as elements of the setting of the RMC that make a positive contribution to its significance.

6.40 The pill boxes and other WW2 defences are no longer apparent and so are not considered further. The fact that it was considered worth reinforcing the defensive feature of the RMC during WW2 does show, however, that its military function was still clear at this time.

Sandgate Branch.

6.41 The Sandgate Branch was a three mile long railway branch line that ran from Sandling railway station on the South Eastern Main Line to Hythe and Sandgate. It opened in 1874 and closed in 1951. The line was planned to provide a new route to the continent with a proposed extension through to Folkestone Harbour, although the section of the line between Sandgate (close to the eastern end of the RMC) to Folkestone was never completed.

6.42 The construction of the line did however encourage the construction of the Seabrook Hotel (now the Hythe Imperial Hotel) as the first (and only part) of an ambitious plan to make the area a prestigious holiday destination. The land hemmed in between the railway

line and the RMC was subsequently developed with late 19th C and early 20thC housing. In heritage terms, the branch is of limited significance. Its bridges and embankments serve mainly to provide the northern boundary to the 'zone of visual influence' of the setting of the RMC.

Princes Parade

6.43 Princes Parade was constructed as a sea defence and road in 1881 between Sandgate and Hythe. A horse-drawn tram ran along it as a substitute for the stations of the Sandgate Branch railway line, which were inconveniently suited for access to the seafront. The tram enjoyed a certain amount of popularity in the summer months as a tourist attraction associated with the Hythe Imperial Hotel, but closed in1911. A single tram shelter remains adjacent to the site. Today the Parade remains as an impressively linear road with views over the sea.

6.44 Princes Parade is of local rather than national interest. Nevertheless, it has some interest, along with the seafront, the hotel and probably the RMC as part of the development of tourism and leisure in the area in a time when these were relatively new activities. The building of the Parade at a higher level than surrounding land created a visual barrier between the RMC and the sea, and thus harmed an understanding of the historic functional relationship between the RMC, low ground to the seaward of it, and the sea- as judged by modern standards.

Archaeology

6.45 The RMC and its constituent features are mostly extant. However, there are some features which are partially intact or which are hidden, the investigation of which may reveal more about the RMC from its construction through to the present day.

6.46 The sea wall and ditches evident on the 1874 map may still exist under the current landfill of the site and outside the scheduled area of the RMC. Similarly, the foundations of the late 19th C boathouses may be evident. Given that gravel was previously extracted from the site and that the boat houses are likely to have been flimsy structures, this is unlikely.

6.47 Further investigation may reveal more about the earthworks and associated drawbridge redoubt, and former drawbridge and the arm of the RMC that connected to it.

Historic England Step 2: Assessing the Degree to which the Identified Setting contributes to the Significance of the Heritage Asset(s)

6.48 The NPPF states that the setting of a heritage asset is the surroundings in which a heritage asset is experienced. Given the functional relationship between the Canal and its field of fire, and other components of the wider defences, it is the area from which an understanding of the overall function of the defences can be perceived and understood.

6.49 The Historic England note 'The setting of Heritage Assets' states that: *'The contribution of setting to the significance of a heritage asset is often expressed by reference to views*.' It notes that views which contribute to an understanding of the significance of a heritage asset include:

1) *those where relationships between the asset and other historic assets or places or natural features are relevant;*

2) *those with historical associations, including viewing points and the topography of battlefields;*

3) those where composition within the view was a fundamental aspect of the design and function of the heritage asset; and

4) those between heritage assets and natural or topographic features....'

6.50 This section considers views to, over and from the RMC which fall into the categories above. Photos of the views are presented in Figure 5 of **Technical Annex 2**. Reference should also be made to Views HE1, 2, 3, 4, 5, 6, 7 and LVIA 3 in **Technical Annex 6**. The views are divided as follows:

1. Princes Parade along the shore and the golf course immediately adjacent to the site to the west;
2. Along the Canal, including the earthwork of the Canal, the nearby gardens of houses and, further to the east, Shorncliffe Battery Wall; and
3. The high ground of Hospital Hill to the east, including Martello Towers 8 and 9.

Table 6.1: Views from Princes Parade and the West

View	Heritage Relevance/ Significance	Analysis of Existing View
1.From public footpath at golf course to the west of the site towards the site and the RMC. Similar serial views can be experienced at other points along this road	Representative of the setting of the RMC with defended ground to the north (left) and seaward ground to be covered by fire from the RMC to the south (right)	The application site, raised 3-4m above its original level, together with trees along the ramparts of the canal, predominate in views from the west along Princes Parade and across the golf course. The key aspect of openness of the RMC and its ramparts towards the sea and the attackers' side has been lost.
2.Just to the west of the public footpath at golf course to the west of the site looking towards the site and the RMC.	Princes Parade, along with the development site, stands to the seaward of the RMC and once would have constituted the 'field of fire' from defensive positions along the canal. Similarly views in this direction encompass Hospital Hill and its defences built to command the ground over and in front of the RMC at its eastern end.	Princes Parade and the application site as existing therefore impinge upon the historic setting of the RMC and harm the RMC's historic functional relationship with the low lying seaward ground in front of it. The significance of the RMC in this location has been harmed as a result.
3.To the east along Princes Parade at the boundary of the site with the golf course. Site immediately to the left of the road. RMC between the site and the line of houses. Ref the photos in Technical Annex 2 and LVIA Appendices 2 and 3 (LVIA views 1 and 2, and View HE5)	Category 1 views where relationships between the asset and other historic assets or places or natural features are relevant; Category 4: views between heritage assets and natural or topographic features....'	Nevertheless, and although the RMC itself cannot be seen due to the land raising of the site as one moves along the coast road, there is a division between undeveloped land (the site) to the south of the canal, and developed land behind the canal to the north. This permits some understanding of a barrier separating the two character areas. This is reinforced by the continuation of open land across the golf course immediately to

		the west of the site.

Table 6.2: Views along the RMC

View	Heritage Relevance/ Significance	Analysis of Existing View
1.From the Canal terminus looking west	The extent of views along the RMC towards its key features and key features of its setting has the potential to illustrate key aspects of its function and its functional relationship with its surroundings.	In many views, the RMC stands out as an impressive linear feature. However, the views within the immediate environs of the RMC to the north and south are enclosed by the raised land level of the site, and by trees and vegetation on the defensive ramparts to the north (landward) side. The key aspect of openness towards the sea and the attackers' side has been lost. Similarly, an understanding of the drawbridge redoubt as a defensive position commanding a field of fire has also been lost.
2.Looking east along the RMC towards the terminus of the RMC. Ref LVIA Appendices 2 and 3 (LVIA View 5 and views HE1, HE5 and HE6).	*Category 1 views where relationships between the asset and other historic assets or places or natural features are relevant;* *Category 4: views between heritage assets and natural or topographic features....*	

Table 6.3: Views from Hospital Hill

View	Heritage Relevance/ Significance	Analysis of Existing View
1.From Hospital Hill looking west over the site, golf course and Hythe in the distance	The high point of Hospital Hill provides a vantage point from where the RMC can be seen in context of the wide sweep of land and seascape. In addition, it is the location of Martello Towers 8 and 9 which have a functional relationship with the RMC.	Tree cover and the topography of Hospital Hill obscures views and removes a readily interpretable understanding of the integration of the various defences. Only from a short stretch of Hospital Hill Road is there a view over the Canal, the site and the sweep of the bay. This view is however worthwhile in that allows an understanding of the landscape and seascape setting of the Canal and its field of fire. The extreme eastern end of the Canal is hidden from this view by modern houses and the curve of the hill.
2.From the vicinity of Martello Tower No. 8 Ref LVIA Appendices 2 and 3 (LVIA View 7 and views HE 3 and HE4).	*Category 1 (paragraph 6.49 above) views where relationships between the asset and other historic assets or places or natural features are relevant;* *Category 4: views between heritage assets and natural or topographic features....*	The eastern terminus of the RMC can be seen from the vicinity of Martello Tower No. 9. The view is dominated by large building immediately to the east of the terminus.

6.51 In addition to the views investigated above, Historic England have requested that the effect of the proposed development on the setting of the RMC be investigated by reference to specific views. The views, including photographs as they exist at present, and CGI's of the development within them, are presented in the LVIA at **Technical Annex 5** and are set out in **Table 6.4** below.

Table 6.4: Historic England Views

View	Heritage Relevance/ Significance	Analysis of Existing View
HE1: Looking south (seawards) from the top of the stone wall of the drawbridge redoubt	The location from where fire could be directed eastwards along the coast road, but also over the RMC towards the sea. There is thus a functional relationship between the defensive positions.	The viewpoint is somewhat overgrown. However, and as might be expected, the raised application site is prominent. Due to the lack of development on the application site there is a sense of openness. Due to the slightly raised position of the redoubt there is also a sense of the sea beyond (unlike the views experienced from majority of the ramparts on this side of the RMC). Although this is quite different from the commanding view that the redoubt would have had over an open beach (due the raised level of the site) it is still possible to understand the redoubt's defensive function and its relationship to the ground in front of it. The top of the redoubt is not easily accessible but it could be made so as part of the scheme proposals.
HE2: From the top of the eastern part of the Shorncliffe battery looking west towards the RMC	As well as constituting a key defensive position from seawards attacks in itself, this part of Shorncliffe battery would have been able to cover the part of the eastern end of the RMC (or at least would have had a line of vison towards it to allow defensive actions to be coordinated. (and vice versa). There is thus a functional visual relationship between the two defences.	Access to the top of the Shorncliffe battery is difficult due to undergrowth. It is not in any case publicly accessible. Views to the sea are obvious. However, the topography of the land and the undergrowth is such that there is now no visual connection between the battery and the RMC.
HE3: From the top of Martello Tower No. 8 looking towards the site	The Martello Tower was part of a chain of defences which would have operated in combination with the RMC. A line of sight from the tower to the RMC was important. There is thus a	The top of the tower is a private home. It is not publicly accessible. The majority of the RMC itself is hidden by the topography of the slope on which it stands. The

	functional relationship between the two defences.	majority of the site is hidden by tree growth and by modern housing development although glimpses of the western part of the site and the golf course beyond are evident. The RMC basin probably would originally have been visible and capable of being covered by fire from the Tower. However, this eastern part of the site is completely obscured by modern housing development. The functional relationship between the tower and the RMC is now not obvious. Nor will this situation change.
HE4: From the vicinity of Martello Tower No.9 looking down towards the site	The Martello Tower was part of a chain of defences which would have worked along with those along the RMC. A line of site from the Tower to the RMC was an important part of the functioning of the overall defences.	The tower is an inaccessible ruin which stands in dense woodland on Hospital Hill. By searching through the undergrowth, it is possible to find one single view towards the application site in reasonable proximity to the tower. A new woodland management regime for the woodland is due to be implemented, so views from around the tower towards the site may be more available in the future. From viewpoint HE4, the western part of the RMC and the application site is not visible due to the topography of Hospital Hill. The eastern part of the site, including the RMC terminus, is just visible but distant and largely obscured by modern suburban development to just to the north of the RMC and by modern bulky development just to the east of the terminus. It is not easy to perceive any functional relationship between the tower and the RMC.
HE5: View eastwards from the towpath part of the RMC.	Representative of the setting of the RMC with defended ground to the north (left) and seaward ground to be covered by fire from the RMC to the south (right)	The RMC is an obvious linear feature. At this point, there is some distance from the RMC to the sea across the adjacent golf course. Tree growth on the north bank of the RMC hides modern development. The application site is extremely obvious as a raised bank well above the original ground level. The whole view is one without

		development. Vegetation along the banks of the RMC hide its ramparts and therefore obscure its original purpose to an extent. Without interpretation, it is easy to understand the RMC as a barrier, but more difficult to understand its role as an active defence that commanded the ground in front.
HE6: View due west along the length of the RMC from the stone wharf.	Again, representative of the setting of the RMC with, this time, the seaward ground of the application site to the south (left) ground to be covered by fire from the RMC to the south (left) and defended ground to the north (right)	The RMC is a highly impressive linear feature as viewed from the wharf. However, it is a view that is enclosed by modern development to the north and the raised levels of the application site to the south. The key aspect of openness towards the sea and the attackers' side has been lost.
LVIA 3: From Sandgate Esplanade, adjacent to the Shorncliffe battery to the east of the application site and the RMC.	Represents the experience of approaching the site from the east from where the various components of the defences would have come into view.	The Shorncliffe Battery forms an impressive stone retaining wall at this point, but with the incongruous feature of modern houses on top. The sea shore is in close proximity and it is easy to see how the battery would have commanded the ground in front. However, views towards the RMC and the application site are completely hidden by modern bulky development.

Summary of Setting

6.52 There has already been extensive harm caused to the *illustrative historic significance* of the RMC to the extent that it is now difficult to link the constituent parts of the defences with the function of the RMC itself. However, there should not be an over-reliance on views as the sole method of measuring heritage impact. The ability to move around the Canal to explore the various relationships between it and its surroundings is important.

6.53 This aspect is rather compromised by the land-raising of the site, which serves to isolate the Canal from its surroundings as it traverses adjacent to the site and as experienced in views from all directions. Nevertheless, the site is crossed at its western end and through the middle by public footpaths, whilst land around its eastern terminus constitutes a small public park.

6.54 As importantly, although direct visual links between the canal and low ground, including the shore, have been lost or damaged by land raising and vegetation cover, the general lack of built development in the areas between the canal and the shore (including the site) is such that a sense of openness remains. This sustains a landscape character which is somewhat changed from that that existed prior to land raising, but one that can still be explained by the history and presence of the canal.

6.55 Similarly the *aesthetic significance* of the Canal as a linear barrier between open areas of land has been compromised, most particularly by land-raising of the Princes Parade site which has placed the Canal within a trench. The Canal itself remains an impressive linear feature, but the aesthetic relationship whereby it commands an area of open land has been very largely lost.

6.56 There is still an obvious division between developed land to the north of the RMC and the undeveloped land to the south including the application site and the adjacent golf course. This is an impressive open sweep which is well experienced as one moves along Princes Parade from both the east and the west. It therefore has a strong aesthetic value. This value has nevertheless been compromised by land raising of the application site which gives it a quite different relationship to its surroundings as compared to the golf course at a lower level. A further differentiation is the scrub covered nature of the application site which forms a strong contrast with the manicured character of the golf course.

6.57 The RMC retains its *Communal Value for* residents and visitors. It remains heavily used for leisure purposes. In addition, interpretation boards explain the history and construction of the RMC, although not the relationship of the RMC to the wider area and to other defences. This aspect could be improved upon as a part of an environmental improvement and interpretation programme of works.

Predicted Effects

Historic England Step 3: The Effect of the Development on the Significance of (the) Heritage Asset(s)

6.58 The development will change the setting of the canal from an expansive open area to one that is substantially built-up. The assessment in **Table 6.5** below takes the three identified sets of views that contribute to its setting and assesses the changes that will be brought about by the development. It also includes a commentary on specific viewpoints that have been chosen in consultation with Historic England. Photos and CGIs for views HE1, 2, 3, 4, 5, 6 and LVIA 1, 2, 3, 4, 5 and 7 are presented in **Technical Annex 5**.

6.59 The illustrative significance of the overall defences has been altered by the previous land-raising of the site and Princes Parade to the extent that it is difficult to link the characteristic of openness to the function of the RMC itself. This aspect will remain largely unchanged by the development.

Table 6.5: Effects on Views and Setting

Viewpoint	Key Features of Existing View	Predicted Effect
1: Princes Parade and Golf course	Relationship of RMC commanding a field of fire towards the sea has been harmed by enclosed by the raised land level of the application site, by raised level of Princes parade road and see defences and by trees and vegetation on the defensive ramparts to the north (landward) side. Aspect of openness of the RMC and its ramparts towards the	The leisure centre building will stand out as prominent in most views. However, the smaller-scale housing development is also significant in that the site will change from an open to a developed character. LVIA Viewpoint 1: The view towards the site from the Hythe Imperial Hotel is distant. The sense of openness maintained by the golf course will predominate.

	sea and the attackers' side has been lost. Nevertheless, there is still a division in landscape characters at the RMC- open and undeveloped towards the sea and developed to the landward of the RMC	LVIA Viewpoint 2: The development will be prominent and will reduce the sense of openness, although it will obscure existing suburban development as well as open land. This impact will be mitigated by the open space to be retained at the western end of the site. Viewpoint HE5: The proposed open space to be retained at the western end of the site will help to ensure that the development will appear relatively distant, although it will intrude into what is currently an open view.
2: Along the Canal and the defences	Raised application site is prominent and from many viewpoints along the RMC creates a sense of enclose. Sense of the sea beyond at HE1 (but less so elsewhere along the defences) Although different from the commanding view that the redoubt would have had over an open beach, it is still possible (due the slightly higher level of the redoubt relative to its surroundings) to understand the redoubt's defensive function and its relationship to the ground in front of it.	Whilst the sense of enclosure remains along most of the length of the RMC, the character of its immediate environs will change from that of an enclosed green corridor to one where buildings are present. LVIA Historic England Viewpoint HE1 (from the top of drawbridge redoubt looking south): There will still be some openness and direct view from this point seawards (across the proposed car park of the Leisure Centre) such that it will still be possible. The leisure centre building will nevertheless be prominent and the sense of openness reduced. LVIA Historic England Viewpoint HE2 (from the top of the Shorncliffe Battery): The former visual relationship between the battery and the canal is not evident. The addition of buildings will have very little effect on this aspect. LVIA Historic England Viewpoint HE5 (east from golf course): Due to distance and the open space to be retained at the western end of the site, the development will be a relatively small feature. It will nevertheless impinge in the middle-distance on what is currently an open view. LVIA Historic England Viewpoint HE6 (west along the RMC from its eastern terminus): The character of the view will be changed from a green corridor to one that is partially built-up. However, the

		sense of enclosure and absence of connection between the RMC and its field of fire will remain. LVIA View 5(south from the RMC close to Seaview footbridge); As above.
3: Hospital Hill	Tree cover and the topography of Hospital Hill obscures views and removes a readily interpretable understanding of the integration of the various defences. Only from one point is there a view over the Canal, the site and the sweep of the bay. The extreme eastern end of the Canal is hidden from this view by modern houses and the curve of the hill. The eastern terminus of the RMC can be seen from the vicinity of Martello Tower No. 9. The view is dominated by large buildings immediately to the east of the terminus.	LVIA View 7 (south-west from Hospital Hill): The leisure centre building will be hidden by the topography of Hospital Hill, modern development and mature woodland. The housing element of the development will be obvious, and there will now no longer be a large sweep of undeveloped landscape between the RMC and the sea. Historic England Viewpoints HE3 and HE4: Views to/from the defences on Hospital Hill could be opened up by future woodland management. However, Martello Tower No. 8 will remain largely hidden from the RMC by suburban development. Woodland around Martello Tower No. 9 will not be removed in its entirety, and views will remain largely obscured. The eastern terminus of the RMC will remain obscured in views from the Martello towers by existing development. The development would therefore cause little additional harm to the visual relationship between the RMC and the towers.
Overview of Setting	The openness of the application site such that it constitutes a field of fire from the RMC is a key part of the setting of the RMC. This aspect is diminished in that the application site is raised some 4m above its original level such that the RMC is now in a trench. However, the RMC forms the division between two character areas- one developed and built up, and the other comprising open space (the application site).	The landscape character of the site will change from one of openness to one that is partially built up. Large areas of open space will remain on the site and form of development will be different from the surrounding suburbs. The contrast between the currently open site and existing development to the north will thus be maintained to a degree. Nevertheless, the change will be obvious. The heritage harm is less given the previous harm to the relationship between the RMC and the open site caused by land raising.

6.60 Similarly, the aesthetic significance of the RMC as a linear barrier between open areas of land has already been compromised, most particularly by land raising of the Princes Parade site which has placed the Canal within a trench. The RMC remains as an impressive linear feature, but the aesthetic relationship whereby it commands an area of open land has been very largely lost. This aspect will remain largely unchanged by the development.

6.61 The public accessibility of the RMC and its surroundings will be improved by the development. The canal will therefore largely retain its communal value *for* residents and visitors.

6.62 The RMC as the boundary between two character areas - open on its seaward side, and built up on its landward side - is still readily perceivable at present. The sense of openness that characterised this cleared defensible area is still obvious, albeit, given land raising, in a different form. It is this understanding and this sense of openness will be harmed by the proposed development. It is this that has the potential to harm the *aesthetic, illustrative and communal significance* of the RMC.

Archaeology

6.63 The sea wall and ditches that may still exist within the application site are in the vicinity of the proposed northern realignment of the Princes Parade Road. Similarly, the remains of the boathouses that once existed at the terminus of the RMC may still remain under the present car park. Both are relatively minor features (if they still exist) and, given the present 4m fill on the development site, plus additional land-raising to be carried out as part of the development, are unlikely to be affected by the proposals.

6.64 More scope exists to investigate other features associated with the terminus of the RMC such as earthworks of drawbridge redoubt and the connection of the RMC with the Shorncliffe battery. These can be investigated as part of public realm improvements associated with the scheme (see mitigation below).

Proposed Mitigation

Historic England Step 4: Maximising Enhancement and Minimising Harm

6.65 It may be argued that the harm caused by previous development makes the preservation of what is left of the relationship between openness of setting and function of the Canal all the more important. However, the design of the scheme allows for some of this understanding to be maintained through the following:

- The eastern terminus of the Canal is already compromised by bulky buildings in close proximity to the site. The leisure centre building is therefore placed in this location rather than the less compromised western parts of the site. An additional advantage is that the leisure centre will be hidden from viewpoints on Hospital Hill.
- The leisure centre is nevertheless separated from adjacent buildings by a car park to the east. This allows for views to and from the redoubt and to and from parts of the Shorncliffe Battery (where accessible) over the site and out to sea to be maintained

- Key routes across the site are to be maintained. This includes the small 'pocket park' at the terminus of the Canal and the public footpaths and spaces across the middle and at the western end of the site.
- Houses are laid out in discrete 'clumps' separated by open space and footpaths so that they appear as housing within an open landscape.
- Residential buildings are low rise - no more than 9-12m in height to permit some views across the site.
- Buildings (ARC and houses) are to be constructed in natural and muted materials to blend more easily with the landscape.
- The new open spaces within the site allow for greater exploration of the site and its relationship with the RMC.
- The landscaping strategy seeks to create a naturalistic character which draws upon and reflects the coastal environment within which the site lies.
- Princes Parade itself is to be realigned from the seafront to the north of the site so as to allow for a public promenade along the sea front and to ensure a separation between the buildings on the site and the banks of the RMC.

6.66 The development of the site offers opportunities to enhance the understanding of the role of the site as a part of the defences associated with the RMC. To achieve this the Council in its role as landowner, and using capital receipts from the scheme, will secure the following heritage benefits:

Restoration/Repair

- Clearance of vegetation from ramparts, from the firing position at the ‘kink’ in the canal located to the west of the application site, and along the Military Road;
- Consolidation of ramparts and banks of the RMC to return the RMC to a more military appearance;
- Consolidation of Drawbridge Redoubt- removal of vegetation, repair of stonework.

Securing the Monument’s Future

- Undertake a review of the Shepway District Council Royal Military Canal Management Plan 2016-2020 and prepare a revised and costed management and maintenance plan.

Public Access and Interpretation

- Landscaping design concept for the development site to emphasise connections between the canal and the sea, to delineate lines of fire and to maintain a feeling of openness;
- Increase public access through the green infrastructure to be retained within the development, between the canal banks and Princes Parade
- Archaeological investigation to reveal more about the history and development of this part of the canal to inform an interpretation and restoration strategy and to add to the knowledge of the development of the RMC;
- Extensive interpretation strategy including a) heritage trail between the Canal, Shorncliffe Battery and Martello Towers b) interpretation boards and c) art work/ installation on the kinks of the canal- building on the findings of the archaeological study;

- Environmental improvement scheme that marks out the site of drawbridge and the former canal arm leading to it.

6.67 The above works will be secured by a S106 agreement or a unilateral undertaking as part of the planning consent for the development of the site. Overall, the design concept allows for some of the sense of openness of the site to be retained or at least understood. It will maintain a clear difference in character between presently developed land behind (to the landward) of the RMC and the scheme on the site itself. This will enable some understanding of the RMC as a barrier separating different character areas to be maintained.

6.68 Development on the site will be interspersed by accessible open space which improve connections between the site, the sea and the RMC. It will allow people to move around and explore the RMC's seaward setting to a greater extent than was possible.

6.69 The condition of the RMC will be improved and new interpretation provided in order to provide a greater understanding of the RMC within its setting. Cumulatively, these will improve an understanding of the RMC and its associated features as an integrated defence.

Residual and Cumulative effects

Y14/1248/SH: Seapoint Canoe Centre

6.70 There is an extant permission for the construction of small single-storey building as a base for a canoe club (Y14/1248/SH- Seapoint Canoe Centre) on the site. It is to be built into the modern raised bank to the south of the RMC adjacent to the RMC terminus. The roof is to be covered with sedum and will be broadly level to the existing level of the site, and hence slightly below the level of the site as proposed.

6.71 The main elevation looking over the RMC to the north will be visible as a timber and glazed screen set into the bank. There is an associated fenced-in canoe storage area which will be rather more prominent.

6.72 The effect of the building on the significance of the RMC and its setting was assessed at the time as 'minor' due to the small size of the complex and the way its design was integrated into the features of the site to reduce its prominence. The harm to the setting was judged to be outweighed by the public benefits of the proposal.

6.73 Given the changes proposed for this part of the site under the current application, including the larger leisure centre building, the cumulative effect on the setting of the RMC of the canoe centre added to the current scheme proposals is insignificant compared to the effect of the current proposals.

Y14/0300/SH: Shorncliffe Garrison

6.74 Shorncliffe is a large military camp situated on and around Hospital Hill to the east of the site. It was originally established in 1794 and includes within its grounds Martello Tower No 9, the Shorncliffe Redoubt and Shorncliffe Military cemetery[1]. Planning permission was given in 2014 for the erection of up to 906 dwellings community services and facilities, a new primary school and nursery (up to 3,500 sqm), and sports facilities.

[1] The cemetery has views over a wide stretch of coastline, including the western part of the site. However, this view was not a part of the military function of the RMC and other defences and so is not considered here.

6.75 The open space and woodland at the top of Hospital Hill is to be retained and managed as a part of the scheme. This woodland and the topography of Hospital Hill will screen the parts of the Garrison to be developed from the RMC and the site. There will therefore be no cumulative effect on the setting of the RMC.

Y08/1036/SH: Imperial Green

6.76 Permission was granted in 2010 for 75 houses between the Imperial Hotel and the RMC across the golf course to the west of the site. The scheme is now substantially complete. The large and bulky 5/6 storey Imperial Hotel has removed a sense of openness between the RMC and the sea at this point. The development site therefore has a limited further effect on the historic landscape. In addition, it is well removed from the development site. When considered along with the current proposal, there will be only a very limited cumulative effect on the setting of the RMC.

Residual Effects

6.77 This assessment has established that:

- the RMC is of national significance;
- the setting of the RMC (of which the site is a prominent part) is a key part of its significance;
- harm has already been caused to the setting of the RMC by the construction of sea defences and Princes Parade and subsequently by the land raising of the development site;
- the development will cause some further harm to the significance of the RMC;
- offsite restoration and interpretation works to the RMC will enhance some aspects of its significance and help to mitigate the harm caused by the development;
- the provision of accessible open space on site will also help to enhance and understanding of the RMC within its setting; and
- the cumulative effects of the current proposal along with other development proposals on the setting of the RMC are greater by only a very limited degree as compared to the effect of the current proposal.

6.78 The overall character of the site will have changed from one which is open and undeveloped to one which is developed. There is no doubt that the extent of this change will be large. However, the NPPF stresses that: '*It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed'.*

6.79 The NPPF divides heritage harm into two categories '*substantial*' and less than *substantial*'. Further advice is given in the accompanying NPPF practice note that states: '*In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest'.*

6.80 A recent test case *Bedford BC V SSCLG* (2013 EWHC 2847) upheld an inspector's decision which was based on a finding that: '…. *for harm to be substantial, the impact on significance was required to be serious such that much, if not all, of the significance was*

drained away…' **Table 6.6** below assesses the residual harm to the RMC and adjacent defences within the context of the paragraphs above.

Table 6.6: Residual Effects

Significance	Effect on Significance	Mitigation	Residual Harm
Illustrative	The analysis of views shows that it is difficult to link the characteristic of openness of the site to the precise functions of the RMC and its surrounding defensive components (including the site as the former field of fire and the Shorncliffe battery). The loss of some openness as a result of the scheme will therefore have a limited effect on an understanding of this aspect. The RMC as the boundary of between two character areas- open on its seaward side, and built up on its landward side is still perceivable and helps to demonstrate the function of the canal with an attacking area in front (the site) and a defended area. This perception will be harmed by the development.	Opening up of parts of the site as public open space, and further interpretation (including interpretation panels, heritage trials, art work and installations) of the site and the RMC. Site specific design, including bespoke buildings and large areas of open space will still distinguish the site from its suburban surroundings. Restoration and repair of the drawbridge redoubt, wharf, and the canal banks. Improved management regime	The mitigation works will assist in enabling the historic function of the site and its relationship to its setting still to be to be understood. People will be able will explore the relationships between the RMC and its setting to a greater degree than they can at present. The characteristic of underdeveloped land on one side of the canal and development on the other will be diluted by the development proposals. There will be some additional harm to an understanding of the canal as a barrier. However, given previous harm, this will be limited. The architectural and landscape design will still allow an understanding and perception of the RMC as a boundary between two areas. The contrast will however be diminished and there will thus be some harm to the illustrative significance of the RMC within its setting. Within its immediate environs, the military function of the canal will be more obvious and the long term understanding and future of the RMC as a defensive feature will be more secure than it is at present. Overall Assessment: Less than substantial
Aesthetic	The RMC is at present an impressive linear feature, but the aesthetic relationship	Restoration and repair of the drawbridge	Restoration will allow key features to be better appreciated than they are at present.

	whereby it commands an area of open land has been very largely lost. This will remain the case with the development. The characteristic of the canal marking a division between two landscapes (undeveloped and developed) will be lost- especially as perceived on approaches from the east and west to the site and this part of the canal This will cause harm to the aesthetic value of the RMC.	redoubt, wharf, and the canal banks.	The military feel of the canal including its impressive geometry will be enhanced. The setting of the vast majority of the RMC remains intact along its 28 miles. However, the aesthetic harm to this part of the RMC will remain after mitigation. This is reduced due to previous land raising, and to an extent by the mitigation works proposed as a part of this application, but nevertheless there will still be harm to the aesthetic heritage significance of the RMC within its setting. Overall Assessment: *Less than substantial*
Communal	The public accessibility of the RMC and its surroundings will be improved by the development. More people will be attracted by the improved leisure facilities available. The Canal will therefore largely retain its *Communal Value for* residents and visitors.	Interpretation and site specific design of open spaces.	Public understanding and appreciation of the RMC and it surroundings may increase. Overall Assessment: *Less than substantial*

6.81 The conclusion of less than substantial harm above concurs, with provisos, with previous advice given by Historic England[2] on the principle of the development of the site. The advice specifically acknowledges that the overall RMC monument is a large and that the proposal only affects one small part of it. The advice states that: *'It is arguable whether harm arising a change of setting can ever be judged as substantial harm, but this has to remain a possibility. For such a large overall monument as the RMC and taking note of the changes that have already occurred at Seabrook, our current view is that more development here is not likely to be substantial harm...'*

6.82 Recent case law (University of Bath v North East Somerset Council) has established that 'less than substantial harm' can '*range from limited harm towards the lower end of the spectrum to considerable harm at the upper end'*. In this case, the proposed change to a landscape character which is derived from the historic function of a heritage asset of the highest significance clearly causes more than '*limited harm'*.

6.83 However, it is worth noting the Historic England discussion on whether a change of setting '*can ever be judged as substantial'* and Historic England's general reference to '*more development'* on the site causing less than substantial harm. In this case, the 'more development':

[2] Email 10/08/16 from Peter Kendall of Historic England to Martin Mckay, Heritage Consultant for the applicant.

- is a bespoke design which specifically retains and enhances large areas of open space on the site;
- is designed to the specific principle of 'buildings in landscape, rather than buildings which remove a landscape;
- incorporates mitigation measures
- will result restoration or consolidation of some parts of the monument which are currently in poor condition.

6.84 Given the above, the harm to the significance of the RMC caused by the development does not lie on the 'considerable' end of the 'less than substantial harm' spectrum. The assessment of harm is a judgement rather than a precise measurement, and it is therefore difficult to break it down into ever smaller increments. However, it would seem appropriate to describe the harm as moderate at most.

References

Documents

- Planning (Listed Buildings and Conservation Areas) Act 1990
- The Department of Communities and Local Government, 2012, *The National Planning Policy Framework*
- English Heritage, 2015, *Planning Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets*
- English Heritage, 2008, *Conservation Principles, Polices and Guidance*
- Kent County Council, Historic Environment Records.
- Ordnance Survey historic maps 1907, 1897 and 1874 (KCC)
- Lee Evans Partnership, September 2014, *Heritage Impact Assessment: Land adjoining Princes Parade, Seabrook,* Lee Evans Partnership
- Cyma Architects, January 2015, *Seapoint Canoe Centre Clubhouse: Heritage Significance Report,* Cyma Architects.
- Shepway District Council, October 2016, *Places and Options Local Plan, Preferred Options.*
- Shepway District Council, October 2016, *Cabinet Report: Hythe Swimming Pool and Princes Parade site.*
- Shepway District Council, 2006, *Local Plan Saved Policies.*
- Aerial Maps (Google).

Websites

- The Department of Communities and Local Government, *Planning Practice Guidance website* http://planningguidance.communities.gov.uk/blog/guidance/
- The Royal Military Canal website (www.royalmilitarycanal.com)

- The Shorncliffe Trust website www.shornecliffe-trust.org.uk
- Romney Marsh website www.theromneymarsh.net
- Disused Stations website (http://www.disused-stations.org.uk/features/hythe_and_sandgate_tramway/index10.shtml)
- Historic England, National Heritage List https://www.historicengland.org.uk/listing/the-list

Appeal Decisions

- Barnwell Manor Wind Energy Limited versus East Northamptonshire District Council, English Heritage and National Trust (2014) EWHC 18945 (admin)
- Forge Field Society and others versus Sevenoaks District Council and others (2014) EWCA Civ 137
- Stewart versus Newark and Sherwood District Council (2016)
- University of Bath versus Bath and East Somerset Council (2017)
- Bedford BC V SSCLG (2013)

Glossary

Military Terms

Battery: Any place where guns or mortars were mounted. Very often on top of revetments or within a redoubt (see below)

Field of fire: Area in front of defences that could be raked by gun fire from the defences

Line of fire: The line between a firing position and the area/ point to be fired at

Rampart: Mass of excavated earth on which troops and guns are placed to form a defence.

Revetment: Masonry wall on the side of ditches or ramparts.

Redoubt: Small enclosed defensive position surrounded by defensive walls or revetments.

Martello Tower: A circular, tower-like fort with guns on the top- named after Cape Mortella, Corsica, where a tower of this kind was taken by British forces in 1794.

Conservation Terms

Evidential value: the potential of a place to yield evidence about past human activity.

Historical value: the ways in which past people, events and aspects of life can be connected through a place to the present - it tends to be illustrative or associative.

Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place.

Communal value: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory.

Significance: The sum of the evidential, historical, aesthetic and communal values (amongst others) of a place.

Integrity: (wholeness, honesty). The extent to which a building or complex is complete or intact.

Authenticity: The characteristics that truthfully represent the values that make the building or complex significant. An understanding of this can be damaged by alterations that fail to distinguish between new and old work

Scheduled Ancient Monument: A historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Culture, Media and Sport Consent is required from the Secretary of State to repair or alter the monument.

Archaeological Interest: There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

7. Ecology

Introduction

7.1 This chapter considers the potential effects on habitats, protected species and biodiversity, and has been prepared by Lloyd Bore Ltd. It describes the assessment methodology, baseline conditions at the site and surroundings, ecological avoidance measures, the likely significant ecological effects of the proposed development, the mitigation measures required to prevent, reduce or offset any potential significant adverse effects, and the likely residual effects after these measures have been employed.

7.2 The ecology scoping work, survey work and the assessment of ecological effects have been conducted in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM)'s guidance on ecological impact assessment (EcIA) (Ref. 7.1). This guidance does not prescribe a specific method for undertaking an EcIA. Instead, this guidance places emphasis on the process of EcIA.

7.3 The chapter considers construction and operational effects on important ecological features located within the potential Zone of Influence (ZoI) of the proposed development. It should be read in conjunction with the following appendices, which are presented in Technical Annex 3:

- 7.1: Botany Report (Lloydbore Ltd)
- 7.2: Invertebrate Survey (Jonty Denton)
- 7.3: Amphibian Report (Lloydbore Ltd)
- 7.4: Reptile Report (Lloydbore Ltd)
- 7.5: Breeding Bird Report (Lloydbore Ltd)
- 7.6: Mammal Report (Lloydbore Ltd)
- 7.7: Bat Report (Lloydbore Ltd)
- 7.8: Ecological Mitigation and Enhancement Plan (Lloydbore Ltd)

Legislative Framework

The Conservation of Habitats and Species Regulations 2010 (as amended)

7.4 The Conservation of Habitats and Species Regulations 2010 (as amended) affords protection to certain species or species groups, commonly known as European Protected Species (EPS). In general, any person and/or activity that damages or destroys a breeding site or resting place of an EPS, captures, injures or kills an EPS or disturbs an EPS, may be guilty of an offence. Further detail of the legal protection afforded to EPS is provided in the relevant appendices.

7.5 EPS are also afforded protection by the Wildlife and Countryside Act 1981 (as amended). Bats are an EPS and are afforded protection by The Conservation of Habitats and Species Regulations and the Wildlife and Countryside Act. For most bat species, this legal protection relates primarily to roost sites. Foraging bats have been recorded within the ZoI of the proposed development.

7.6 Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are also afforded protection under the Conservation of Habitats and Species Regulations 2010 (as amended). Ramsar sites are afforded the same level of protection via the NPPF. Collectively, these sites are afforded protection at an international level. In this chapter, these are referred to as international sites. One international site falls within the potential ZoI of the proposed development: Folkestone to Etchinghill SAC.

The Wildlife and Countryside Act 1981 (as amended)

7.7 The Wildlife and Countryside Act (1981) (as amended) confers legal protection for sites of national nature conservation importance in England and Wales (such as Sites of Special Scientific Interest (SSSI)), as well as varying degrees of protection for species in need of conservation action or other protection. More information in relation to the Wildlife and Countryside Act is provided in the relevant appendices.

7.8 All breeding birds are afforded legal protection by the Wildlife and Countryside Act. Birds listed on Schedule 1, such as Cetti's warbler (Cettia cetti) and kingfisher (Alcedo atthis), are afforded additional protection from intentional and reckless disturbance while they are breeding.

7.9 All four widespread UK reptile species are afforded protection from intentional or reckless killing or injury by the Wildlife and Countryside Act. Grass snake (Natrix natrix), common lizard (Zootoca vivipara) and slow worm (Anguis fragilis) have been recorded on-site.

7.10 Schedule 9 of the Wildlife and Countryside Act also lists plant species for which it is an offence for a person to plant or otherwise cause to grow in the wild. Giant hogweed (Heracleum mantegazzianum), which is listed under Schedule 9, is present on-site.

The Protection of Badgers Act 1992 (as amended)

7.11 The Protection of Badgers Act 1992 (as amended) makes it an offence to wilfully kill, injure, take or ill-treat a badger (Meles meles), interfere with - including damage or destroy - a badger sett, disturb a badger whilst it is occupying a sett, or obstruct a badger's access to a sett. The site supports at least one historic badger sett that is not in current use by badger.

The Wild Mammals (Protection) Act 1996

7.12 The Wild Mammals (Protection) Act 1996 provides protection for all wild mammals against acts with the intention of causing unnecessary suffering, including crushing and asphyxiation. The site supports rabbit (Oryctolagus cuniculus) and fox (Vulpes vulpes) burrows.

The Natural Environment and Rural Communities Act 2006

7.13 Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers, including local and regional authorities, in implementing their duty under Section 40 (S40) of the Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions. S41 lists 56 Habitats and 943 Species of Principal Importance, the following of which have been recorded on the site or within its zone of influence:

- Common toad (Bufo bufo);
- Slow worm, common lizard and grass snake:
- Noctule (Nyctalus noctula), soprano pipistrelle (Pipistrellus pygmaeus) and brown long-eared (Plecotus auritus) bats;
- Linnet (Carduelis cannabina), reed bunting (Emberiza schoeniclus), house sparrow (Passer domesticus), starling (Sturnus vulgaris), song thrush (Turdus philomelos) and dunnock (Prunella modularis) were all recorded using on-site habitats.

7.14 In addition, the RMC qualifies as Eutrophic Standing Water, which is a Habitat of Principal Importance.

Relevant Policy

National Planning Policy Framework (NPPF)

7.15 The NPPF (Ref. 7.2), and in particular Section 11, sets out national policy on conserving and enhancing the natural environment through the planning process. This includes the policy objectives of "minimising impacts on biodiversity and providing net gains in biodiversity where possible" (paragraph 109) and the principles for conserving and enhancing biodiversity when determining planning applications as set out in para 118.

Planning Practice Guidance

7.16 The Government's Planning Practice Guidance contains detailed advice for applicants and local planning authorities in promoting the objectives and applying the principles set out in the NPPF, including at paragraphs 8-016-20140612 and 8-018-20140306. The former paragraph refers to the Government's Circular 06/05 (Ref. 7.3) - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact Within the Planning System, which contains guidance relating to statutorily designated sites and legally protected species.

Local Planning Policy

7.17 The Development Plan for the Site comprises the Shepway Core Strategy (2013) and the saved policies of the Shepway District Local Plan Review (2006). SDC is also currently in the process of preparing a Places and Policies Local Plan that will replace the saved policies of the Shepway District Local Plan Review, allocating land for future development and setting out development management policies.

7.18 While it is not yet formally part of the Development Plan, the draft Places and Policies Local Plan: Preferred Options Draft (October 2016) is referred to in this ecology chapter. This is because it represents the intended 'direction of travel' for detailed planning policy within the District to meet the objectives of the Core Strategy and reflects changes in national planning guidance since the adoption of the current Local Plan in 2006.

7.19 Local planning policies relevant to ecology are:

- Policy CO10;
- Policy CO11;
- Policy CSD4 of the Core Strategy;

- Policy SD1; and
- Policy BE16.

Habitat Regulations Assessment of Shepway Core Strategy

7.20 In addition to the above policies, the Habitat Regulations Assessment (HRA) of the current Shepway Core Strategy (Ref. 7.4) provides an assessment of the likely significant effects of the 2013 Local Plan and Policies upon international sites. The 2013 Local Plan includes the delivery of approximately 8,000 (minimum 7,000) additional dwellings in the period 2006/7 to 2025/26, including approximately 4,000 dwellings that could be delivered outside of the Local Plan strategic sites, at Hawkinge, Folkestone and Hythe.

7.21 The Core Strategy HRA lists strategic sites, which may require project-based HRAs. Prince's Parade is not listed as a strategic site. The Shepway Places and Policies Local Plan (Preferred Options) was published in 2016 and provides detail of the 2016 Core Strategy Review. This 2016 document retains the overall target for delivery of 8,000 (minimum 7,000) additional dwellings in the period 2006/7 to 2025/26. Under Policy UA25: Prince's Parade, Hythe, the Prince's Parade Site is allocated for 'mixed use redevelopment' and is not listed as a strategic site.

Methodology

Overview

7.22 The methodology for EcIA has been based on CIEEM (Ref. 7.1) guidelines. BS42020:2013 Biodiversity – Code of practice for planning and development (Ref. 7.5) has also informed the EcIA methodology. This EcIA includes an assessment of the direct and indirect ecological effects of the proposed development at both the construction and operational phases. A step-by-step approach to the EcIA has been followed, as per the following stages:

- Scope the requirements of the assessment;
- Identify the Zone of Influence of the proposed development;
- Identify and evaluate the ecological resources and features likely to be affected;
- Identify the biophysical changes likely to affect important ecological resources and features;
- Assess the likely significant ecological impact(s) and resultant effects;
- Identify the ecological mitigation measures required to address negative impact(s) and resultant effects;
- Evaluate residual impact(s) and resultant effects following mitigation (including compensation); and
- Provide advice to decision makers on the consequences in respect to significant ecological impact(s) and resultant effects.

Study Area

7.23 The potential impact of a development is not always limited to the boundaries of the site concerned. The development may also have the potential to impact on ecologically

important sites, habitats or species beyond the site boundaries. The area over which a development may impact ecologically important features is known as the ZoI. In the case of the proposed development, the ZoI in relation to international sites has been determined based on work conducted to support strategic delivery of Green Infrastructure and Recreation within East Kent (Ref. 7.6).

7.24 Transport connectivity between the proposed development and international sites, and the proximity of the development to access points into the international site(s) have also been considered when determining this ZoI. Consequently, international sites within 6km of the Site have been considered within this assessment. A 2km ZoI surrounding the Site has been used in relation to designated sites of national importance, such as SSSIs. A 1km ZoI has been used for designated sites of local importance, such as Local Nature Reserves (LNR) and LWS.

7.25 The ZoI can vary considerably depending on the species affected by a proposed development. For example, some species may be confined to a specific location, while others, such as birds and bats, are more mobile and can occupy larger territories or home ranges. The ZoI is also likely to be influenced by the presence of dispersal barriers, such as roads, rivers and hardstanding. These will either stop or reduce the likelihood of animals crossing to habitats on the other side of the dispersal barrier. For the proposed development, the ZoI is generally considered to be the site and immediately adjacent areas. However, the ZoI associated with each species or species group has been determined by research and the professional judgement of the ecologist.

7.26 Published data regarding the Core Sustenance Zones (CSZs) (Ref. 7.7) of those bat species recorded during the survey was used to inform the ZoI for bats. The bat species most frequently recorded within the survey area - and likely to be most dependent on habitats within the canal corridor, were common pipistrelle (Pipistrellus pipistrellus), soprano pipistrelle and Daubenton's bat (Myotis daubentonii). High levels of Nathusius' pipistrelle (P. nathusii) activity were also recorded during static monitoring.

7.27 Bat survey guidance (Ref. 7.7) gives CSZs for these species of 2km, 3km, 2km and 3km respectively. Based on these CSZs (and the survey data), the ZoI of the proposed development for foraging and/or commuting bats is likely to extend to c.3km west of the Site (along the canal corridor), and 2km north and east of the Site. Additional detail regarding the ZoI for bats is provided within Appendix 7.7.

Quantifying Baseline Conditions

Desk Study/Data Sources

7.28 The baseline assessment has made use of the following information sources (with further details provided in the appendices):

- The Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref. 7.8);
- Shepway Core Strategy Habitat Regulations Assessment (Sites other than the Dungeness complex). Final report following Publication Core Strategy consultation January 2012 (Ref. 7.4);
- An East Kent Approach to Green Infrastructure and Recreation (with particular reference to 'Natura 2000' sites): Phase 1 Report – Evidence Base. Final Report - April 2014 (Ref. 7.6);

- The Natura 2000 data forms and Natural England Conservation Objectives associated with international sites within 6km of the Site; and
- Biological data provided by the Kent and Medway Biological Records Centre (KMBRC) and Kent Reptile and Amphibian Group (KRAG).

7.29 References that have been used to inform the scope of survey work, the interpretation of data, the evaluation and assessment of data and the determination of the relevant ZoI are not included in the list above. However, the references section of this chapter and the associated appendices detail these information sources.

7.30 Biological records data was obtained from KMBRC and KRAG in September 2015. The 2015 records search used a 1km search radius from the indicative boundary of the Site. As a precaution, at the start of the assessment work, the search radius was extended to 5km in relation to bat records.

7.31 The MAGIC website was used to identify international sites within 6km of the site, as well as designated sites of national importance within 2km of the Site. A combination of the MAGIC website and the biological records search was used to identify designated sites of local value within 1km of the site.

Surveys

Preliminary Ecological Appraisal

7.32 A Preliminary Ecological Appraisal (PEA) of the Site was undertaken by Dr David Smith BSc (Hons), PhD, MCIEEM in September 2015, based on CIEEM methodology (Ref. 7.9). The PEA was undertaken to inform the project team of ecological risks and opportunities, and to identify requirements for additional ecological survey work and, where possible, avoidance, mitigation and, if necessary, compensation measures. The survey comprised a site walkover and an assessment of habitats. Vegetation was classified based on standardised habitat descriptions (Ref. 7.10). Habitat descriptions were adapted where appropriate, to better describe the habitats present on-site.

7.33 A desk study was undertaken to inform the PEA. Statutory and non-statutory designated sites within the potential ZoI of the proposed development were identified and potential impacts upon designated sites were scoped. The PEA included an assessment of the Site's suitability for legally protected species. Relevant good practice guidelines were used to assess site suitability for individual species/species groups. For instance, ARG UK Advice note 5: Great crested newt habitat suitability index (Ref. 7.11) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Ref. 7.7) were used to assess site suitability for great crested newt (Triturus cristatus) and bats respectively.

7.34 Any evidence or known occurrence of invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was noted. The PEA report also identified potential enhancement measures that could improve the ecological importance of the Site for priority habitats and species. The PEA report was a preliminary document produced for the project team. The ecological survey work recommended in the PEA has now been undertaken, and is reported below. Full detail of the PEA findings and methods is therefore not repeated in this chapter.

Invertebrates

7.35 An invertebrate survey and habitat assessment of the Site and adjacent canal section was undertaken by Dr Jonty Denton FRES, FLS, CEcol, MCIEEM in May and July 2016. The survey work targeted specific invertebrate groups because it is impractical to survey all

the potential invertebrates within any given site. The main emphasis of the survey was to find as many rare and notable species within the invertebrate groups identified. Standard field techniques were used to sample the invertebrate fauna across the Site and adjacent canal section. Additional detail of the habitat suitability assessment, survey methods and associated survey limitations is provided within **Appendix 7.2**.

Great Crested Newt

7.36 The risk of great crested newt presence on the site was assessed as negligible. Detail of the scoping process for this species is included in **Appendix 7.3**. This detail is not repeated within this chapter.

Common Toad

7.37 Using multiple reference texts as a guide, the suitability of on-site habitats for common toad, and the likelihood of this species being present, were assessed. The texts used to inform the scoping process for common toad are referenced within **Appendix 7.3**. This assessment confirmed that the site supports terrestrial habitats suitable for common toad, and the adjacent section of canal provides a suitable breeding site for this species. A common toad survey was therefore conducted. Once common toad presence was confirmed, survey visits were continued to inform a population estimate. The survey methodology was based on good practice guidelines (Ref. 7.12) (Ref. 7.13). Further detail of the habitat suitability assessment, survey methods and associated survey limitations is provided within Appendix 7.3.

Reptiles

7.38 Using the criteria detailed in Appendix 7.4 as a guide, the suitability of on-site habitats for reptiles, and the likelihood of reptiles being present, was assessed. This assessment confirmed that the site supports habitat suitable for reptiles. A reptile presence / likely absence survey was therefore conducted. The survey was undertaken by John Young, Kathryn Tennant BSc (Hons), MSc, Grad CIEEM and Samuel Durham BSc (Hons), ACIEEM in May and June 2016.

7.39 Artificial Cover Objects (ACOs) were distributed within suitable on-site habitats and were then left to 'bed-down'. The ACOs and other suitable basking areas were subsequently checked for reptiles on seven separate survey visits, during suitable weather conditions. The survey followed good practice guidelines (Ref. 7.14). Further detail of the habitat suitability assessment, survey methods and associated survey limitations is provided within **Appendix 7.4**.

Breeding Birds

7.40 A breeding bird survey of the site and adjacent canal section was conducted by David Smith. Five survey visits were conducted within the period April to June 2016 (inclusive). All bird species seen during the surveys were recorded. However, most effort was focussed on recording those bird species that have either been listed as Species of Principal Importance or those that are red status species (see Eaton et al., 2015), and/or those species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

7.41 During the survey, all species either seen or heard were recorded and any signs of breeding activity were noted. Based on the survey results, each species recorded was assigned to one of four breeding categories: confirmed; probable; possible; or non-breeding. These categories are based on standard British Trust for Ornithology (BTO)

criteria. Further detail of the survey methods, the criteria used to categorise breeding evidence, and the associated survey limitations is provided within **Appendix 7.5**.

Wintering Birds

7.42 The preliminary bird scoping exercise determined that the Site is unlikely to be of importance for wintering birds. Detail of the scoping process for wintering birds is included in **Appendix 7.5**. This detail is not repeated within this chapter.

Hazel Dormouse

7.43 The risk of hazel dormouse (Muscardinus avellanarius) presence on the Site was assessed as negligible. Detail of the scoping process for this species is included in **Appendix 7.6**. This detail is not repeated within this chapter.

Water Vole

7.44 Using the Water Vole Conservation Handbook (3rd edition) (Ref. 7.15) and the Water Vole Mitigation Handbook (Ref. 7.16) as a guide, the suitability of the Site and the adjacent section of the RMC for water vole (Arvicola amphibius), and the likelihood of this species being present, were assessed. This assessment confirmed that the site supports suitable terrestrial foraging habitat for water vole, and the adjacent canal section is suitable for this species. A water vole presence / likely absence survey was therefore conducted. This survey was undertaken by Samuel Durham, David Smith and John Young.

7.45 The survey comprised two visits; one in July 2016 and one in September 2016. Each visit comprised a search of the southern canal embankment for diagnostic water vole field signs. The survey also included a search for any evidence of otter (Lutra lutra) or American mink (Neovison vison). The survey methodology was based on good practice guidelines, and the judgement of experienced water vole surveyors. Further detail of the habitat suitability assessment, survey methods and associated survey limitations is provided within **Appendix 7.6**.

Badger

7.46 A site walkover was undertaken in March 2015 to search for evidence of badger. Confirmed and potential badger setts were 'soft blocked' with sturdy sticks, and pads of builder's sand were laid in front of burrow entrances. These setts / burrows were then checked monthly between March and September 2016 (inclusive), to check for evidence of current use by badger. A site walkover was also conducted during each of these visits, to check for any new mammal burrows or badger setts. Further detail of survey methods and associated survey limitations is provided within **Appendix 7.6**.

Bats

7.47 Using Bat Surveys: Good Practice Guidelines (2nd edition) (Ref. 7.17) as a guide, the suitability of on-site habitats, and the adjacent canal section for roosting, foraging and commuting bats was assessed in September 2015. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition) (Ref. 7.7) were published in January 2016. The suitability of on-site habitats, and the adjacent canal section for roosting, foraging and commuting bats was re-assessed in accordance with these updated guidelines in March 2016.

7.48 No features suitable for roosting bats were identified. It was determined that the site and adjacent canal section are suitable for foraging bats, and that the canal provides a

suitable linear commuting feature for bats. A bat activity survey was therefore conducted on the Site and adjacent RMC section. Further detail of the habitat suitability assessment, survey methods and associated survey limitations, and sound analysis methods is provided within **Appendix 7.7**.

Identifying and Assessing the Importance of Ecological Features

7.49 The approach for identifying, and assessing the importance of, ecological features is based on CIEEM guidelines (Ref. 7.1). Primarily, this chapter considers the ecological importance of the site and the adjacent section of the RMC, and whether the proposed development is likely to affect sites, habitats or species protected by UK legislation or of national or local conservation importance. The importance of ecological features has been determined within a geographic context using the following frame of reference:

- International and European;
- National;
- Regional;
- County;
- Local; and
- ZoI.

Predicting and Characterising Ecological Effects

7.50 Within the ZoI, effects are assessed in the context of the baseline conditions that are expected to occur if the proposed development were not to take place (see the Projected Future Baseline section of this chapter). When examining the likelihood of significant ecological effects, both the construction and operational stages of the proposed development are considered. When describing changes and effects on ecosystem structure and function, the following parameters are considered:

- Type (positive or negative);
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and
- Reversibility.

7.51 The degree of confidence in the assessment of the effect on ecological features is stated using the categories below:

- Certain/near certain: probability estimated at 95% chance or higher
- Probable: probability estimated above 50% but below 95%
- Unlikely: probability estimated above 5% but less than 50%
- Extremely unlikely: probability estimated at less than 5%.

Significance Criteria

7.52 To determine the significance of specific environmental effects, the magnitude of the effect is examined in combination with the importance or sensitivity of the ecological feature. For the purposes of this chapter, the significance criteria used are described in Tables 7.1 to 7.3 below.

Table 7.1: Magnitude of Impacts

	Large	Moderate	Small	Negligible
Designated sites	The proposed development may adversely impact the integrity of a site in terms of its ability to sustain the habitat and/or species population for which the site was designated.	The site integrity is not substantially impacted, but the on-site impact is likely to be significant in terms of its ecological objectives.	Neither a large nor a moderate impact, but some negative / beneficial impact is evident.	There is neither an adverse nor a beneficial impact.
Habitats	The proposed development may adversely impact the habitat to a point where the coherence of ecological structure and function across its whole area is disrupted and/or there is a total loss of the habitat.	Habitat integrity is not substantially impacted, but the impact is likely to be significant in terms of its "favourable condition."	Neither a large nor a moderate impact, but some negative / beneficial impact is evident.	There is neither an adverse nor a beneficial impact.
Species	The proposed development may adversely impact the population to a point where it is not able to sustain itself and/or is likely to become locally extinct.	The population can sustain itself, but the impact is likely to be significant in terms of maintaining the favourable conservation status of the population.	Neither a large or moderate impact, but some negative / beneficial impact is evident.	There is neither an adverse nor a beneficial impact.

Table 7.2: Sensitivity (or Importance) of Features

	High	Medium	Low	Negligible
Designated sites	Designated sites of importance at an International / European or National level.	Designated sites of importance at a Regional or County level.	Designated sites of importance at a Local (District) level.	Designated sites of importance at a Local (ZoI) level. Non-designated areas.
Habitats	Habitats that are of importance at an International / European or National level.	Habitats that are of importance at a Regional or County level.	Habitats that are of importance at a Local (District) level.	Habitats that are of importance at a Local (ZoI) level, or of negligible ecological importance.
Species	Species (or populations) that are of importance at an International / European or	Species (or populations) that are of importance at a Regional or County	Species (or populations) that are of importance at a Local (District) level.	Species (or populations) that are of importance at a Local (ZoI) level, or those that are common and widespread (even though they might be

	National level.	level.		legally protected - e.g. badger).

Table 7.3: Significance of Effects

MAGNITUDE	SENSITIVITY			
	High	Medium	Low	Negligible
Large	Major	Major	Moderate	Minor
Moderate	Major	Moderate	Minor	Negligible
Small	Moderate	Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Relevant Guidance

Local Biodiversity Action Plans

7.53 Local Biodiversity Action Plans (LBAP) set conservation priorities and targets for species and habitats at a more local level. Therefore, they can include species and habitats of local (e.g. District) or even site-specific importance, which are not necessarily a UK-wide priority. The site falls within the geographic area of Kent. The Kent BAP was originally produced in 1997 by the BAP partnership's Steering Group (Ref. 7.18). The Kent BAP identified priority species and habitats that are under threat in Kent.

7.54 The Kent BAP was updated following the Kent Habitat Survey (Ref. 7.18). A three-year partnership project, led by Kent County Council, produced an audit of all UK BAP broad and priority habitats in Kent. The location and area of all habitats was mapped and classified using aerial photographs and field survey. Subsequently, the 1997 Kent BAP was updated and a set of 28 Habitat Action Plans was produced (Ref. 7.18).

7.55 In addition to the above, Kent has also identified Biodiversity Opportunity Areas (BOAs). BOAs indicate where the delivery of Kent BAP targets should be focused to secure maximum biodiversity benefits. BOA maps show where the greatest gains can be made from habitat enhancement, restoration and recreation, as these areas offer the best opportunities for establishing large habitat areas and/or networks or wildlife habitats.

7.56 This assessment considers the presence and extent of Kent priority habitats within the ZoI. It also uses the Kent list of priority species to assess the importance of the Site at a county and/or local level. Finally, the assessment also examines whether the site falls within or near any Kent BOAs.

Non-Statutory Sites

7.57 Local Wildlife Sites (LWS) have been chosen by the Kent Nature Partnership based on their importance for wildlife (and people) within Kent. While they are not normally afforded legal protection, LWS are recognised in the planning system and are afforded some protection through planning policy. The criteria for Kent LWS (Ref. 7.19) have been used to assess whether ecological features are likely, or not likely, to be of ecological importance at a County level.

Birds

7.58 Although it does not offer any legal protection, The Birds of Conservation Concern 4 (Ref. 7.20) provides guidance on the conservation status of UK bird species and thus can be used to inform judgements on the ecological importance of bird populations and the

habitats that they rely on, particularly at a local level. Red status species are those species of highest conservation concern and green status species are those of low or no conservation concern. Amber status species are those species of some conservation concern.

Consultation

7.59 The following have been consulted during this assessment (including at the Environmental Impact Assessment (EIA) Scoping Stage):

- Kent Wildlife Trust (letter dated 23/07/2013 and 17th August 2016) (Ref. 7.21; Ref 7.28);
- Kent County Council Ecological Advice Service (26th August 2016) (Ref. 7.29) and
- Shepway District Council (through meetings and the EIA Scoping Opinion dated 30th August 2016) (Ref 7.30).

7.60 This assessment and the associated technical appendices provide the requested information relating to the additional ecological survey work, the RMC LWS and the 'Dungeness' and 'Sandwich Bay' SPAs.

Uncertainties and Limitations

7.61 The detailed design of most of the proposed development is not available at the present stage of the planning process. Therefore, the assessment of potential effects reflects this. For instance, the assessment of potential effects upon bats has been based upon a conceptual lighting model generated by the project's lighting consultant (Ref. 7.22). This lighting model used all available design information. With regards to the residential zones, the lighting model used the 'massing' models for the project. Due to uncertainties regarding the specific design of the residential zones, the lighting model assumed a 'worst case' scenario for light spill from these zones. For this reason, the assessment of potential effects upon bats has considered this 'worst case' scenario and proposed mitigation accordingly. Therefore, the mitigation measures proposed for bats account for any uncertainty regarding the detailed design of the residential zones.

7.62 No design information for the two new drainage outfalls to the adjacent beach is available at present. For this reason, at this stage of planning, the mitigation proposed to address potential effects upon the beach comprises a mitigation protocol designed to guide the sensitive location of these outfalls. This mitigation protocol is set out in Appendix 7.8. The mitigation protocol set out in Appendix 7.8, in combination with the mitigation measures that will be detailed in the Ecological Mitigation Strategy (EMS) and Construction Environmental Management Plan (CEMP) (which will be delivered at the Reserved Matters stage), will address this uncertainty regarding impacts upon shingle, foreshore and marine habitats, flora and fauna. Potential impacts and effects upon the beach and marine environment are therefore not considered further within this ES.

7.63 This assessment provides mechanisms to address the level of uncertainty associated with the lack of detailed design. The role of the site in regulating water resources, as well as the visual amenity of the site are examined in Chapters 8 and 10 respectively. No other ecosystem services are examined in this ES because this was outside the agreed scope of the assessment. Given that the site is dominated by tall ruderal vegetation of limited ecological importance, this is not considered to be a significant limitation.

7.64 The assessment of effects has been based on the proposals and parameter plans provided – which indicate total loss of on-site habitats because of capping works. This assessment assumes that there will be no significant deviations from these, which might materially change the assessment of likely effects. While the EcIA guidance (Ref 7.1) discourages the use of the 'matrix approach,' it recognises that ecologists can work to this assessment process. The matrix approach is considered appropriate for the purposes of this ES.

7.65 Limited ecological information is available for the Hythe Imperial development. It is therefore acknowledged that this materially limits the assessment of cumulative effects. Any limitations associated with survey work and the baseline assessment for individual ecological features are provided in the associated technical appendices.

Baseline Conditions

Statutorily Designated Sites

7.66 There is one international site within 6km of the application site. This is Folkestone to Etchinghill Escarpment SAC. Based on the Natura 2000 Standard Data Form for this SAC (Ref. 7.23), the qualifying feature for which this site was designated is: Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites). This site is located c.3.1km north of the site at its closest point. The SAC is of ecological importance at the International level. For the purposes of this Environmental Statement (ES), this site is therefore considered to be of High sensitivity or importance.

7.67 There is one statutory designated site of national importance within 2km of the Site. This is Seabrook Stream SSSI. This site is located c.1.4km north of the Site at its closest point. Based on the notification sheet for this SSSI, this site supports:

- Alder carr and fen communities that support an 'exceptional' number of cranefly species (67 species recorded);
- A diverse range of habitats including wetland, woodland and scrub plant communities; and
- Breeding bird assemblage that includes sand martin (Riparia riparia).

7.68 The SSSI is of ecological importance at the National level. For the purposes of this ES, this site is therefore considered to be of High sensitivity or importance. There are no statutory designated sites of local importance within 1km of the Site (the relevant ZoI).

Non-Statutorily Designated Sites

7.69 Two LWS were identified within 1km of the site. The LWS designation is equivalent to a County Wildlife Site designation. The two recorded LWS are therefore of importance at the County level.

7.70 The Royal Military Canal LWS is located adjacent to the northern boundary of the site. Based on publicly available information, this LWS is designated for its rare plant species, as well as twelve species of Odonata (dragonflies and damselflies), its bird assemblage, grass snake, common toad, foraging pipistrelle and Daubenton's bats. This LWS is of ecological importance at the County level. For the purposes of this ES, this site is therefore of Medium sensitivity or importance.

7.71 Paraker Wood and Seabrook Stream, Shorncliffe LWS is located c.750m north of the site at its closest point. Based on a review of the data search results, aerial imagery and Natural England's Priority Habitat Inventory search tool on the MAGIC website, this LWS supports deciduous woodland, including ancient semi-natural woodland and grassland. This LWS is of ecological importance at the County level. For the purposes of this ES, this site is therefore of Medium sensitivity or importance. The site is not located within a BOA.

Habitats of Principal Importance

7.72 **Appendix 7.1** provides additional detail with regards to Habitats of Principal Importance. The RMC qualifies as a Eutrophic standing water, which is a Habitat of Principal Importance. This eutrophic standing water body supports ecological features for which the LWS was designated. For this reason, this Habitat of Principal Importance is of ecological importance at the County level. For the purposes of this ES, this site is therefore of Medium sensitivity or importance.

Other Habitats and Flora

7.73 **Appendix 7.1** provides additional detail with regards to other habitats and flora. The on-site maritime grassland community is of ecological importance at the Local level. For the purposes of this ES, this site is therefore of Low sensitivity or importance. The remainder of the other habitats are of negligible ecological importance and have therefore not been considered further within this assessment. For the purposes of this ES, these habitats are of Negligible sensitivity or importance.

7.74 The KWT letter dated 23/07/2013 (Ref. 7.21) states that the site supports 'fixed sand dunes with herbaceous vegetation.' However, for the reasons detailed in Appendix 7.1 (including the historic landfill within the site), this habitat classification is not considered appropriate for the habitats present on site. Therefore, sand dune habitats are not considered within this ES. Additional detail of the scoping process relating to this habitat type is provided in Appendix 7.1. The ARCH website (Ref. 7.24) was consulted when assessing the likelihood of this habitat being present. The Environment Agency's landfill and waste website was also consulted (Ref. 7.25).

Invertebrates

7.75 **Appendix 7.2** provides additional detail with regards to invertebrates. The nationally scarce weevil Trichosirocalus rufulus, and 'local' species including the bristletail species (Dilta hibernica / littoralis), lygaeid bug Beosus maritimus and the leaf beetle Chrysolina banksi were found within the on-site southern grassland strip that is located adjacent to Princes Parade. The conservation status, location and details of these records are presented in Appendix 7.2.

7.76 Based on the survey findings, and the fact that the grassland present adjacent to Princes Parade is not common within the surrounding local landscape, this habitat is of ecological importance for invertebrates at the Local level. For the purposes of this ES, this grassland habitat is therefore of Low sensitivity or importance for invertebrates.

7.77 The remainder of the other habitats are of ecological importance for invertebrates at the ZoI level and have therefore not been considered further within this assessment. For the purposes of this ES, these habitats are also considered to be of Negligible sensitivity or importance for invertebrates.

7.78 Based on the 2016 survey results, the adjacent section of the RMC supports important species including the hairy dragonfly (Brachytron pratense). Based on the survey results, the reasons for designation of the RMC LWS, and the extent of habitats present, the adjacent (off-site) section of the RMC is of ecological importance for invertebrates at the County level. For the purposes of this ES, these off-site habitats are therefore of Medium sensitivity or importance for invertebrates.

Common Toad

7.79 **Appendix 7.3** provides additional detail with regards to common toad. A 'low' breeding population of common toads utilise the adjacent RMC corridor (terrestrial and aquatic habitats) and terrestrial habitats on the site. These habitats are of ecological importance for common toad at the Local level. For the purposes of this ES, these habitats are therefore of Low sensitivity or importance for common toad.

Reptiles

7.80 **Appendix 7.4** provides additional detail with regards to reptiles. Slow worm (Anguis fragilis), common lizard (Zootoca vivipara) and grass snake are present on the site. The site is of ecological importance for reptiles at the Local level. For the purposes of this ES, the site is therefore of Low sensitivity or importance for reptiles.

Birds

7.81 **Appendix 7.5** provides additional detail with regards to birds. Four red-status bird species utilise on-site habitats. These are song thrush, starling, house sparrow and linnet. In addition, seven amber-status bird species also utilise on-site habitats. Of the bird species that use the site, six are Species of Principal Importance and two are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Ten bird species were recorded as 'confirmed breeders', eight were 'probable breeders' and eight were 'possible breeders'.

7.82 The site is of ecological importance for Cetti's warbler, house sparrow (foraging only) and reed bunting at the Local level. For the purposes of this ES, the site is therefore of Low sensitivity or importance for these bird species. All other bird species have been scoped out of further assessment. See Appendix 7.5 for further details.

Water Vole

7.83 No evidence of water vole presence was recorded during the 2016 water vole survey. In addition, American mink are known to be present within the RMC. For these reasons, water voles are likely to be absent from the adjacent section of the RMC. These habitats are therefore of negligible ecological importance for water vole and are not considered further in this assessment. For the purposes of this ES, the site is therefore of negligible sensitivity or importance for water vole. Therefore, water vole has been scoped out of further assessment. **Appendix 7.6** provides further details of the survey and assessment for water vole.

Badger

7.84 No evidence of current use of on-site burrows by badger was recorded during the 2016 mammal survey work. In addition, badger is a common and widespread species of negligible conservation importance. For these reasons, the site is of negligible ecological importance for badger. Potential effects upon badger are therefore not considered further in this assessment. **Appendix 7.6** provides further details of the survey and assessment for badger.

Bats

7.85 **Appendix 7.7** provides additional detail with regards to bats. The site does not support any features suitable for roosting bats. Eight bat species were confirmed using the 'survey area' during the 2016 bat activity survey. It is possible that additional Myotis species are also present. The 'survey area' comprises the adjacent section of the RMC and the site. The survey area was divided into two survey compartments. Survey compartment one comprises the adjacent section of the RMC and vegetation on the northern embankment on the site. Survey compartment two comprises the remainder of the site - south of the northern embankment. The extent of the survey area and arrangement of survey compartments is detailed in Appendix 7.7.

7.86 There was a difference in the recorded levels of bat activity between the survey compartments. Bat activity was higher within survey compartment one. For this reason, the two survey compartments have been assessed separately - to determine their importance for foraging bats and assist with the EcIA. Four species of bat were recorded 'regularly' foraging within survey compartment one. Multiple animals of each species were typically recorded foraging within this survey compartment. Survey compartment one is of ecological importance for foraging bats at the County level. For the purposes of this ES, habitats within this survey compartment are therefore of Medium sensitivity or importance for foraging bats.

7.87 One bat species was recorded regularly foraging within compartment two. Occasional passes by individual animals were recorded within this survey compartment. These passes were mostly along the northern boundary of the survey compartment, and animals typically passed back and forth into / from survey compartment one. On one occasion, one bat of one species (a single common pipistrelle) was recorded foraging further into survey compartment two. Survey compartment two is of ecological importance for foraging bats at the ZoI level. For the purposes of this ES, habitats within this survey compartment are therefore of negligible sensitivity or importance for foraging bats and have therefore not been considered further within this assessment. Additional details of the surveys and assessment for bats, and the location and extents of the bat survey compartments, are provided in Appendix 7.7.

Future Baseline

7.88 The projected future baseline has been assessed over the same timescales as those considered in the event the proposed development goes ahead (i.e. up to May 2019 - which is when Phase 1 of the proposed development (site clearance and capping) would be completed). Other development proposals outside of the site are unlikely to influence the future ecological baseline within the site, considering the incorporation of any necessary mitigation measures within those proposals.

7.89 Given that Phase 1 of the construction stage (site clearance) would be complete by May 2019 (c.21 months from present), the future ecological baseline of the site and ZoI at this point is unlikely to be materially different from the current ecological baseline. If the existing management regimes for the RMC Habitat of Principal Importance and the grassland adjacent to Princes Parade are maintained, this will further reduce the likelihood of any change in the ecological baseline prior to the completion of site clearance.

7.90 Stochastic pollution events could affect the ecological baseline for Habitats of Principal Importance, the RMC LWS and common toad, but this cannot be accounted for within any prediction of a future ecological baseline. It is possible that badgers could colonise the

site in the intervening period. This risk is addressed through the precautionary methods of work set out in **Appendix 7.8**.

Approach to Assessing Effects

7.91 The potential impacts, and the significance of the associated effects on ecological receptors, are described in the absence of mitigation measures (beyond those already incorporated directly into the design of the proposed development). **Appendix 7.8** presents previous versions of the development proposal. The impacts on ecology associated with these alternative options can therefore be compared to the final Land Use Parameter Plan. During the development of the Parameter Plans, various amendments were made to avoid impacts to sensitive ecological features. These avoidance measures are described in Appendix 7.8.

7.92 Effects during the construction and the post-completion stage (also referred to as the operational phase of the proposed development) are considered. The effects during construction are anticipated to be of short to medium term duration, while effects during operation are anticipated to be of long term duration unless otherwise specified. Only those ecological features within the ZoI and that are of Local / low ecological importance or higher are considered.

Potential Effects during Construction

Statutorily Designated Sites

Folkestone to Etchinghill Escarpment SAC

7.93 The Natura 2000 Standard Data Form for the Folkestone to Etchinghill Escarpment SAC provides detail of threats, pressures and activities with potential to impact upon the SAC. These are: air pollution / airborne pollutants; intensive grazing or abandonment of grazing (within SAC); and loss of habitat due to encroachment of other vegetation (natural succession) (within SAC) (Ref. 7.23). The construction stage operations are unlikely to result in a material increase in any of the above threats or pressures.

7.94 The site has some indirect transport connectivity to areas close to the SAC via major roads. For example, the SAC sits within 50m of the A20. However, the Habitats Regulations Assessment (HRA) of the Shepway Core Strategy (Ref. 7.4) concludes that it (the core strategy) is unlikely to lead to significant effects arising from recreational pressure and air quality.

7.95 The Shepway HRA reports states that 'the SAC is not currently subject to nitrogen deposition greater than the critical load; according to APIS, actual nitrogen deposition is 13 kgN/ha/yr, whereas the minimum critical load is 15kgN/ha/yr.' The HRA provides evidence that 'the nitrogen deposition rates in 2026 remain below the critical load for calcareous grassland and that the actual contribution made by development in the Shepway Core Strategy will be an increase of 0.01kgN/ha/yr' (Ref. 7.4).

7.96 Given that 'to cause exceedance of the minimum critical load…deposition would need to increase by over 2kgN/ha/yr (Ref 7.4),' and that (based on the above) it will only increase by c.0.01kgN/ha/yr, there is a negligible risk of impacts at the construction stage of the proposed development. Therefore, the effects are likely to be Negligible and the proposed development is unlikely (alone or in combination) to result in a 'likely significant effect' upon the SAC vegetation communities. Consequently, construction impacts upon the SAC habitats are scoped out of further assessment. Confidence in prediction: probable.

Seabrook Stream SSSI

7.97 The site is located within an IRZ of the Seabrook Stream SSSI. The indicative proposed development does fall within any of the planning application types identified by the IRZ search tool as requiring assessment to determine potential impacts upon the SSSI. The SSSI is located c.1.6km upstream of the proposed development. The flow rate and fall of the stream mean that upstream travel of contaminants from the RMC to the SSSI is unlikely. Therefore, any contamination of the RMC during the construction stage is unlikely to result in any adverse effects upon the SSSI. For this reason, there is a negligible risk that the proposed development will result in contamination impacts upon the SSSI. Consequently, construction impacts upon the SSSI are scoped out of further assessment. Confidence in prediction: probable.

Non-Statutorily Designated Sites

Royal Military Canal LWS

7.98 There is a risk that construction works associated with the proposed development could have an indirect, reversible impact through, for example, a pollution event involving a noxious substance. The longevity and magnitude of such an impact would be dependent on the volume and nature of any pollutant. However, any resultant adverse effects would be reversible in the long-term. For this reason, any potential effects upon the LWS arising from pollution events (should they occur) are likely to be Major or Moderate adverse (and spatially local) in the short-term, but Minor adverse in the medium to long-term. Confidence in prediction: probable.

7.99 In the absence of mitigation, and whilst it is unlikely, works on the northern embankment could also have direct and indirect impacts upon the LWS. Direct impacts could include the permanent and irreversible loss of small sections of bankside habitat as a result of unclear working areas. This in turn could reduce overall habitat quality within the LWS. Given that site works will be limited to the red line boundary of the Site (except for the drainage outfalls to the beach), construction operations are unlikely to impact upon bankside habitats within the LWS. However, if any such impacts were to occur as the incidental result of site works, these impacts are likely to be spatially limited. For this reason, any such impacts are likely to be moderate. The resultant effect upon the LWS is therefore likely to be Moderate adverse. Confidence in prediction: probable.

Paraker Wood and Seabrook Stream LWS

7.100 The section of the Paraker Wood and Seabrook Stream that includes the watercourse is located c.1.6km upstream of the proposed development. The flow rate and fall of the stream mean that upstream travel of contaminants from the RMC to the LWS is unlikely. Therefore, any contamination of the RMC during the construction stage is unlikely to result in any adverse effects upon this LWS. Consequently, construction impacts upon this LWS are scoped out of further assessment. Confidence in prediction: probable.

Habitats of Principal Importance: Eutrophic Standing Water

7.101 In the absence of mitigation, the construction works associated with the proposed development could result in contamination of the RMC, which comprises a eutrophic standing water Habitat of Principal Importance. The contamination risks for this ecological feature are as per those described for the RMC LWS. As per the LWS assessment, any resultant adverse effect would be reversible in the long-term. For this reason, any potential effects upon the Eutrophic standing water Habitat of Principal

Importance arising from pollution events (should they occur) are likely to be Major or Moderate adverse (and spatially local) in the short-term, but Minor adverse in the medium to long-term. Confidence in prediction: probable.

7.102 In the absence of mitigation, site works could also result in direct impacts upon the eutrophic standing water Habitat of Principal Importance. Direct impacts could include the permanent and irreversible loss of small sections of bankside habitat, which in turn could reduce overall habitat quality. Given that site works will be limited to the red line boundary of the site (except for the drainage outfalls to the beach), construction operations are unlikely to impact upon bankside habitats within the Habitat of Principal Importance. However, if any such impacts were to occur as the incidental result of site works, these impacts are likely to be spatially limited. For this reason, any such impacts are likely to be moderate. The resultant effect upon the Habitat of Principal Importance is therefore likely to be Moderate adverse.

Other Habitats and Flora

7.103 The construction stage will result in total loss of the grassland plant community that is adjacent to the existing Princes Parade road. In the absence of mitigation, impacts upon local plant communities are likely to be large. Therefore, the resultant effects are likely to be Moderate adverse. Confidence in prediction: probable.

Invertebrates

7.104 The construction stage will result in total loss of the grassland plant community that is present adjacent to the existing Princes Parade road. In the absence of mitigation, impacts upon local invertebrate communities are likely to be large. Therefore, the resultant effects are likely to be Moderate adverse. Confidence in prediction: probable.

Common Toad

7.105 In the absence of mitigation, there is a high risk that construction works associated with the proposed development would kill and injure individual common toads. The effect upon individual animals would be Major adverse. In the absence of mitigation, the confidence in the prediction that animals will be killed or injured is near certain. Any impacts upon the common toad population because of incidental killing and/or injury of individual animals are likely to be moderate. The resultant effect upon the common toad population is likely to be Minor adverse. Confidence in prediction: probable.

7.106 In addition to killing and injuring of individual animals (and the resultant impact on the population), the removal of on-site terrestrial habitat during construction could also impact on the common toad population through loss of foraging and shelter opportunities. Common toads use on-site habitats. However, the on-site habitats only form part of the habitat resource used by the toad population. Therefore, impacts upon the common toad population because of on-site habitat loss are likely to be moderate. The resultant effect upon the common toad population is likely to be Minor adverse. Confidence in prediction: probable.

7.107 In the absence of mitigation, construction works could also result in direct impacts upon the common toad population through damage to off-site habitats. Given that site works will be limited to the red line boundary of the site (except for the drainage outfalls to the beach), construction operations are unlikely to impact upon off-site habitats used by common toad. However, if any such impacts were to occur as the incidental result of site works, these impacts are likely to be spatially limited. For this reason, any such impacts

are likely to be moderate. The resultant effect upon the common toad population is therefore likely to be Minor adverse.

7.108 There is a risk that construction works associated with the proposed development could have an indirect impact upon the common toad population through, for example, a pollution event involving a noxious substance. The longevity and magnitude of such an impact would be dependent on the volume and nature of any pollutant. However, due to the size and volume of the RMC, the magnitude of the impact is likely to decrease with distance from source - due to dilution and dissipation of pollutants within the waterbody. Any resultant adverse effects upon the common toad population would be reversible in the long-term. For these reasons, any potential effects upon the toad population arising from pollution events (should they occur) are likely to be Moderate adverse (and spatially local) in the short-term, but Minor adverse in the medium to long-term. Confidence in prediction: probable.

Reptiles

7.109 In the absence of mitigation, there is a high risk that construction works associated with the proposed development would kill and injure individual reptiles. The effect upon individual animals would be Major adverse. In the absence of mitigation, the confidence in the prediction that animals will be killed or injured is near certain. Any impacts upon the reptile population because of incidental killing and/or injury of individual animals are likely to be large, because it is likely that most animals of the on-site population would be impacted. The resultant effect upon the reptile population is likely to be Moderate adverse. Confidence in prediction: probable.

7.110 In addition to killing and injuring of individual animals (and the resultant impact on the population), the removal of on-site terrestrial habitat during construction could also impact on the reptile population through loss of foraging and shelter opportunities. Impacts upon the reptile population because of on-site habitat loss are likely to be large. The resultant effect upon the reptile population is likely to be Moderate adverse. Confidence in prediction: probable.

7.111 In the absence of mitigation, construction works could also result in direct impacts upon the reptile population through damage to off-site habitats. Given that site works will be limited to the red line boundary of the site (except for the drainage outfalls to the beach), construction operations are unlikely to impact upon off-site habitats used by reptiles. However, if any such impacts were to occur as the incidental result of site works, these impacts are likely to be spatially limited. For this reason, any such impacts are likely to be moderate. The resultant effect upon the reptile population is therefore likely to be Minor adverse. Confidence in prediction: probable.

Birds

7.112 In the absence of mitigation, there is a risk that construction works associated with the proposed development could damage or destroy active nests, eggs or dependent chicks. If individual animals were killed or injured, the effect on individuals would be Major adverse. Any resultant effects upon bird populations are likely to be Negligible, because only a low number of individuals are likely to be impacted, and most individuals within these populations (Cetti's warbler, house sparrow and reed bunting) breed off-site. Confidence in prediction: near certain.

7.113 The loss of scrub and tall ruderal vegetation from the northern embankment, and loss of scrub from the remainder of the site, during the construction stage will result in the temporary loss of c.2.6ha of habitat suitable for Cetti's warbler, house sparrow (foraging

only) and reed bunting. These birds will be displaced to alternative habitat. Therefore, it is likely the construction stage will have a temporary small impact on Cetti's warbler, house sparrow (foraging only) and reed bunting within the ZoI of the proposed development. Therefore, any resultant effect on the populations of these species is likely to be Minor adverse. Confidence in prediction: probable.

Bats

7.114 The construction stage of the proposed development will result in the temporary loss of all suitable bat foraging habitat from the site. This includes loss of c.0.78ha of high-quality foraging habitat and c.1.81ha of moderate-quality foraging habitat from the on-site area of survey compartment one. Lighting associated with the construction stage could also result in light spill into off-site, high-quality bat foraging habitat - which would reduce the suitability of these off-site habitats for foraging bats. These bats could be displaced to alternative habitats, including those within the RMC corridor. Therefore, it is considered the construction stage will have temporary moderate adverse impacts upon bats foraging within the ZoI of the proposed development. The resultant effect on bat populations is likely to Moderate adverse. Confidence in prediction: probable.

Potential Effects of the Completed Development

Statutorily Designated Sites

Folkestone to Etchinghill Escarpment SAC

7.115 Based on the results of a MAGIC designated site search, the application site sits within an Impact Risk Zone (IRZ) for the SAC. The MAGIC IRZ search tool indicates that the proposed development does not require further assessment to determine whether it is likely to result in any 'likely significant effects' upon the SAC. Furthermore, for the same reasons cited in the construction stage assessment, there is a negligible risk of impacts upon the SAC at the operational stage of the proposed development.

7.116 Therefore, the effects are likely to be Negligible and the proposed development is unlikely (alone or in combination) to result in a ‘likely significant effect’ upon the SAC vegetation communities. Consequently, construction impacts upon the SAC habitats are scoped out of further assessment. Confidence in prediction: probable

Seabrook Stream SSSI

7.117 For the same reasons cited for the construction stage (distance of SSSI upstream from the RMC / Site), there is a negligible risk that the operational stage will result in contamination of the SSSI. Operational stage pollution impacts have therefore been scoped out of further assessment. The reasons for notification of the Seabrook Stream SSSI do not include any features that are known to be sensitive to recreational disturbance.

7.118 In addition, the SSSI has weak recreational connectivity to the application site via local road and footpath networks, and the proposed development will contain extensive areas of formal and informal open space. For these reasons, the proposed development is unlikely to result in any material increase in recreational activity within the SSSI. Therefore, the risk of impacts is negligible and consequently potential effects upon the SSSI are not considered further within this assessment.

Non-statutorily Designated Sites: The RMC LWS

7.119 In the absence of mitigation, there is a low-level risk that the operation of the proposed development could result in contamination of the RMC LWS. However, the surface water drainage system will not outfall to the canal. Therefore, any pollution events within the RMC LWS are likely to be limited to those caused by individual actions by residents / occupants. For this reason, the magnitude of impacts (if they occur) is likely to be small. Consequently, there is a negligible risk of adverse impacts upon the LWS because of contamination. Therefore, potential operational stage effects upon the LWS are not considered further within this assessment. Confidence in prediction: probable.

Habitats of Principal Importance: Eutrophic Standing Water

7.120 In the absence of mitigation, there is a low-level risk that the operation of the proposed development could result in contamination of the eutrophic standing water Habitat of Principal Importance. The pollution risk is as per that detailed for the RMC LWS. Consequently, there is a negligible risk of adverse impacts upon the Eutrophic standing water Habitat of Principal Importance because of contamination. Therefore, potential operational stage effects upon the Habitat of Principal Importance are not considered further within this assessment. Confidence in prediction: probable.

Other Habitats and Flora

7.121 The grassland plant community adjacent to Princes Parade will be removed during the construction stage. Some off-site grassland habitat might remain beyond the construction zone, but within the ZoI. Overall, however, there is a Negligible risk of adverse impacts upon the existing grassland habitat during the operational stage because most of it will no longer be present.

Invertebrates

7.122 The on-site grassland adjacent to Princes Parade will be removed during the construction stage. Therefore, the associated invertebrate assemblage will be impacted at the construction stage in the development. There is a low risk that some animals might remain in marginal habitat or in immediately adjacent habitat. Overall, however, there is a Negligible risk of adverse impacts upon the invertebrate assemblage during the operational stage because most of the impacts occur at the construction stage.

Common Toad

7.123 The realigned Princes Parade will be located closer to the common toad breeding site. In addition, the local area will receive greater road traffic because of the new residences, commercial units and leisure facilities. There is therefore an increased risk of common toads being killed and/or injured by vehicles. The effects upon individual animals would be Major adverse. However, new terrestrial habitats suitable for common toads will be concentrated on the northern side of the realigned road. Common toads are most likely to use the northern scrub habitats (which are located north of the road and close to the RMC breeding site) (Ref. 7.26). For these reasons, the resultant impact upon common toad populations is likely to be moderate. Therefore, the effects are likely to be Minor adverse. Confidence in prediction: probable.

7.124 Given that common toads have natural defences against predation (secretion of toxins), cat predation is likely to have a Negligible impact / effect on the local common toad population. Confidence in prediction: probable. In the absence of mitigation, there is a low-level risk that the operational phase of the proposed development could result in contamination of the common toad breeding site (the RMC). The pollution risks are as

per those detailed for the RMC LWS. Consequently, there is a negligible risk of adverse impacts upon the common toad population because of contamination. Therefore, potential operational stage effects upon the common toad population are not considered further within this assessment. Confidence in prediction: probable.

7.125 There is also a risk that inappropriate habitat management on the Site could result in the killing and/or injury of individual common toads. Any effects upon individual animals would be Major adverse. Any resultant impact upon the common toad population is likely to be small, because not all animals in the population would be affected. Therefore, there is likely to be a Minor adverse (and spatially local) effect upon the common toad population. Confidence in prediction: probable.

Reptiles

7.126 There is a risk that inappropriate habitat management (within the Site and within the off-site reptile receptor area) could result in the killing and/or injury of individual reptiles. Any such impacts upon individual animals would be Major adverse. Any impact upon the reptile population resulting from extensive inappropriate habitat management is likely to be large, because it is likely that most animals of the population would be impacted. The resultant effect upon the reptile population is likely to be Moderate adverse.

7.127 Given that the new on-site reptile habitats will fall within the home ranges of cats associated with the new dwellings, cat predation is likely to have either a Moderate or Minor adverse effect on the local reptile populations. Confidence in prediction: probable.

Birds

7.128 Most impacts on birds will occur during the construction stage of the proposed development. The activities associated with the operational phase of the proposed development are unlikely to directly or indirectly affect birds. Confidence in prediction: near certain. There is some evidence that bird behaviour can be affected by external lighting. This may therefore affect species such as song thrush and dunnock. However, any potential impact on bird populations by external lighting are likely to be Negligible. Confidence in prediction: probable. There is a risk that inappropriate habitat management could result in damage and/or destruction of active bird nests, eggs and dependent chicks. Cat predation is likely to have a Negligible impact / effect on the local bird populations (Ref. 7.27). Confidence in prediction: probable.

Bats

7.129 In the absence of mitigation, there is a significant risk that on-site lighting would result in a reduction in the suitability of high-quality habitats for foraging bats. Foraging bats are likely to be displaced to other habitats, including those within the RMC corridor. This would most likely result in a moderate adverse impact upon bats foraging within the ZoI of the proposed development. The arising effect on bat populations is therefore likely to be Moderate adverse, but reversible through remedial measures. Confidence in prediction: probable.

Proposed Mitigation

General Approach

7.130 Mitigation measures reduce the severity of impacts, and hence the levels at which effects are considered significant. The final details of any mitigation measures are likely to be developed as part of compliance with Reserved Matters associated with the proposed

development. The contractor, relevant statutory agencies and nature conservation organisations may be involved with the development of the final mitigation measures. Those measures relating to construction activities will be set out in a CEMP. This would be secured by a pre-commencement condition on any grant of planning permission.

7.131 A Landscape and Ecology Management Plan (LEMP) will be developed to ensure habitats are managed in a wildlife-sensitive manner, especially in those locations where habitats have been created or enhanced specially aimed at protected or priority species. Again, this would be secured by a pre-commencement condition. The precise contents of the CEMP and LEMP are likely to be determined by the avoidance, mitigation and compensation measures detailed in **Appendix 7.8**. These are summarised below. The measures included in Appendix 7.8 will also deliver ecological enhancements to a range of other species groups, including those identified as Species of Principal Importance.

Construction

RMC LWS and Habitat of Principal Importance

7.132 Pollution prevention and control, and habitat protection, measures will be implemented for the duration of the construction phase. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

On-Site Grassland and Invertebrates

7.133 Compensatory plantings of native grassland will be undertaken within the Western Open Space and Linear Park. The species composition of these grassland areas will be informed by the species composition of the existing grassland. Invertebrate assemblages are dynamic and the new habitats will provide a range of new opportunities for invertebrates, including maritime grassland species. Details of this measure are provided in Appendix 7.8. Additional detail regarding habitat creation and the associated management prescriptions that will be adopted to maximise the ecological importance of the new grassland areas will be provided in the LEMP, which will be delivered at the Reserved Matters stage.

Common Toad

7.134 Site clearance will be conducted under the supervision of a suitably experienced ecologist(s). Herptile (reptile and amphibian) exclusion fencing will be installed around the Site to prevent recolonization of the construction zone by common toad. In addition, pollution prevention and control measures will be implemented, and the off-site habitats used by common toads will be protected. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

Reptiles

7.135 Prior to site clearance, reptiles will be trapped and translocated to a suitable off-site receptor area. Herptile exclusion fencing will be installed around the Site to prevent recolonization of the construction zone by reptiles. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

Birds

7.136 Wherever possible, clearance of scrub and ruderal vegetation will be undertaken within the period mid-September to February (inclusive) - which is outside of the typical bird nesting period. If this is not possible, prior to habitat clearance a check for nesting birds will be undertaken by a suitably experienced ecologist. Any active nest will be left in situ until birds have stopped using it. The precise timing and method of habitat clearance works will be subject to reptile mitigation requirements. In addition, bird nesting habitat in the adjacent (off-site) areas will be retained and protected throughout the construction stage. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

Bats

7.137 During the construction stage, on-site lighting will be minimised. Lighting units will be chosen to minimise light spill into off-site bat foraging habitats within the adjacent canal corridor and into the reinstated scrub habitats on the northern embankment. Lighting will also be positioned to minimise light spill to surrounding habitats. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

7.138 The high-quality bat foraging habitat that will be lost from the northern embankment during Phase 1 of construction will be replaced during Phase 2 of construction. A sufficient depth of soil will be provided on the northern embankment to allow establishment of tall scrub vegetation. This habitat will take time (potentially several years) to mature.

Completed Development

RMC LWS and Habitat of Principal Importance

7.139 A Sustainable Drainage System (SUDS) will be included within the proposed development. This will minimise the risk of any pollution events resulting in impacts upon the RMC LWS. In addition, the delivery of extensive new scrub habitats on the northern embankment, and grassland and scrub habitats within the Linear Park and Western Open Space, will provide a habitat buffer between most of the Site and the RMC LWS. This will further minimise the risk of pollution entering the watercourse via surface water runoff.

7.140 The proposed SUDS and habitat buffer will also minimise the risk of any pollution events resulting in impacts upon the Eutrophic standing water Habitat of Principal Importance during the operational stage of the proposed development.

On-Site Grassland and Invertebrates

7.141 The operational stage of the proposed development is unlikely to result in significant impacts upon habitats or invertebrates. For this reason, no mitigation is proposed with regards to the operational stage of the proposed development.

Common Toad

7.142 To minimise the risk of killing and/or injury of common toads during the operational phase, an amphibian-friendly road scheme will be designed and implemented. Detail is provided in Appendix 7.8. Additional detail will be provided in the EMS, which will be delivered at the Reserved Matters stage. To minimise the risk of killing and/or injury of common toads during the operational phase because of inappropriate habitat management, habitat management prescriptions will be designed to minimise these risks - for example, timing

works to avoid the typical common toad active period. Detail of these management prescriptions will be provided in the LEMP, which will be delivered at the Reserved Matters stage.

Reptiles

7.143 To minimise the risk of killing and/or injury of reptiles during the operational phase because of inappropriate habitat management, habitat management prescriptions will be designed to minimise these risks - for example, timing works to avoid the typical reptile active period. Creation and maintenance of dense new habitats suitable for reptiles will also help to reduce the risk of cat predation. Detail of these management prescriptions will be provided in the LEMP, which will be delivered at the Reserved Matters stage.

Birds

7.144 To minimise the risk of damage and/or destruction of active bird nests, eggs and dependent chicks during the operational phase because of inappropriate habitat management, habitat management will be timed to avoid the bird nesting season wherever possible. Detail of these management prescriptions will be provided in the LEMP, which will be delivered at the Reserved Matters stage.

7.145 To further minimise the negligible risk of light-related impacts upon bird behaviour, on-site lighting will be minimised during the operational phase and targeted to avoid light spill onto the northern embankment, the new Western Open Space and Linear Park, and off-site areas. The light-related mitigation measures for bats provided in Appendix 7.8 will also address potential light-related impacts upon birds.

Bats

7.146 During the operational stage, on-site lighting will be minimised. Lighting units will be chosen to minimise light spill into off-site bat foraging habitats within the adjacent canal corridor, the reinstated scrub habitats on the northern embankment, and new bat foraging habitats within the Western Open Space. Lighting will also be positioned to minimise light spill to surrounding habitats. Details of these measures are provided in Appendix 7.8. Additional detail will be provided in the CEMP, which will be delivered at the Reserved Matters stage.

Residual Effects

7.147 All construction impacts have been mitigated to a level that is not considered to be significant in terms of the EIA, except for effects on the on-site grassland plant community, invertebrates and breeding reed bunting, which are all of ecological importance at the local level.

7.148 All operational impacts have been mitigated to a level that is not considered to be significant in terms of the EIA, except for effects on individual common toads (with regards to killing / injury by vehicles only) and reptiles (with regards to cat predation only), which are of ecological importance at the local level. The residual effects are summarised in **Table 7.4** below (excluding those predicted to be negligible prior to mitigation).

Table 7.4: Summary of Effects

Potential effect(s)	Significance (pre-mitigation)	Mitigation measure(s)	Significance of residual effect
Construction			
Non-statutory designated sites: Royal Military Canal LWS. Indirect impact because of pollution event.	**Major or Moderate adverse** (and spatially local) in the short-term, but **Minor adverse** in the medium to long-term.	Implementation of pollution prevention and control measures and implementation of CEMP.	**Negligible**
Non-statutory designated sites: Royal Military Canal LWS. Direct impact because of damage / loss of habitats.	**Moderate adverse**	Implementation of habitat protection measures and implementation of CEMP.	**Negligible**
Habitats of Principal Importance: Eutrophic standing water. Indirect impact because of pollution event.	**Major or Moderate adverse** (and spatially local) in the short-term, but **Minor adverse** in the medium to long-term.	Implementation of pollution prevention and control measures and implementation of CEMP.	**Negligible**
Habitats of Principal Importance: Eutrophic standing water. Direct impact because of damage / loss of habitats.	**Moderate adverse**	Implementation of habitat protection measures and implementation of CEMP.	**Negligible**
Other habitats: Grassland. Direct impact because of construction works.	**Moderate adverse**	Provision of compensatory grassland habitats, including maritime species.	**Minor adverse**
Invertebrates: Direct impacts on local invertebrate communities because of habitat loss.	**Moderate adverse**	Provision of compensatory grassland habitats suitable for maritime species	**Minor adverse**
Common toad: Impacts upon individual animals through killing and/or injury.	**Major adverse**	Supervised clearance. Installation of herptile fence. Implementation of CEMP and EMS	**Negligible**
Common toad: Impacts upon population because of killing / injury of individual animals.	**Minor adverse**	Supervised clearance. Installation of herptile fence. Implementation of CEMP and EMS.	**Negligible**
Common toad: Impacts upon population because of loss of on-site habitat.	**Minor adverse**	Provision of compensatory scrub and grassland habitats suitable for common toad.	**Negligible**
Common toad: Impacts upon population because of damage / loss of off-site habitats.	**Minor adverse**	Implementation of habitat protection measures and implementation of CEMP.	**Negligible**
Common toad: Indirect impacts upon population because of pollution event.	**Moderate adverse** (and spatially local) in the short-term, but **Minor adverse** in the medium to long-term.	Implementation of pollution prevention and control, and habitat protection, measures and implementation of CEMP.	**Negligible**
Reptiles: Impacts upon individual animals through killing and/or injury.	**Major adverse**	Supervised clearance. Installation of herptile fence. Trapping and translocation programme. Implementation of CEMP and EMS.	**Negligible**
Reptiles: Impacts upon population because of killing / injury of individual animals.	**Moderate adverse**	Supervised clearance. Installation of herptile fence. Trapping and translocation programme. Implementation of CEMP and EMS.	**Negligible**

Reptiles: Impacts upon population because of loss of on-site habitat.	**Moderate adverse**	Creation and/or enhancement of off-site receptor habitats. Provision of compensatory scrub and grassland habitats suitable for reptiles on Site post-development.	**Negligible**
Reptiles: Impacts upon population because of damage / loss of off-site habitats.	**Minor adverse**	Implementation of habitat protection measures and implementation of CEMP.	**Negligible**
Birds: Cetti's warbler, house sparrow (foraging only) and reed bunting populations. Impacts upon individual animals through killing and/or injury.	**Major adverse**	Clearance of bird nesting habitat outside of bird nesting season and/or clearance preceded by nesting bird checks. Implementation of habitat protection measures and implementation of CEMP.	**Negligible**
Birds: Cetti's warbler, house sparrow (foraging only) and reed bunting populations. Indirect impacts because of displacement of individual animals.	**Minor adverse**	Scrub habitat to be re-instated on northern embankment and new scrub habitats to be created within open spaces	**Negligible** for house sparrow (foraging only) and Cetti's warbler. **Minor adverse** for breeding reed bunting.
Bats: Direct impacts upon foraging bats because of habitat loss. Indirect impacts upon foraging bats because of lighting.	**Moderate adverse**	Scrub habitat to be re-instated on northern embankment and new scrub habitats to be created within open spaces. Lighting to be minimised throughout construction stage. Implementation of CEMP.	**Negligible**
Completed Development			
Common toad: Killing / injury of individual animals by vehicles.	**Major adverse**	Implementation of amphibian-friendly road scheme.	Risks significantly reduced. However, **Major adverse effect** remains for any individual animals that stray onto road.
Common toad: Impacts upon population because of killing / injury of individual animals by vehicles.	**Minor adverse**	Implementation of amphibian-friendly road scheme.	**Negligible**
Common toad: Killing / injury of individual animals during habitat management.	**Major adverse**	Implementation of LEMP.	**Negligible**
Common toad: Impacts upon population because of killing / injury of individual animals during habitat management.	**Minor adverse**	Implementation of LEMP.	**Negligible**
Reptiles: Killing / injury of individual animals during habitat management.	**Major adverse**	Implementation of LEMP.	**Negligible**
Reptiles: Impacts upon populations because of killing / injury of individual animals during habitat	**Moderate adverse**	Implementation of LEMP.	**Negligible**

management.			
Reptiles: Impacts upon populations because of cat predation.	**Moderate** or **Minor adverse.**	Creation of new, dense habitats suitable for reptiles. Implementation of LEMP.	**Minor adverse**
Bats: Indirect impact upon foraging bats because of light spill.	**Moderate adverse**	Minimisation of lighting across Site. Planting of habitat buffer along northern edge of site	**Negligible**

Cumulative Effects

7.149 The assessment of cumulative ecological effects has focused on those arising from the proposed development in combination with the planned development of: Seapoint Canoe Centre (planning reference no: Y14/1248/SH); Imperial Green (planning reference no: Y08/1036/SH); and Shorncliffe Garrison (planning reference no: Y14/0300/SH).

7.150 The Shorncliffe Garrison development is located c.1.4km north-east of the site and is separated from the site by urban and rural land uses. For these reasons, and considering the specific nature of the features assessed within this ES, the Shorncliffe Garrison development and the proposed development are unlikely to result in any adverse cumulative effects upon the features assessed.

7.151 The footprint of the Seapoint Canoe Centre was assessed during site visits. This footprint is of low ecological importance and occupies a small area. For these reasons, and considering the specific nature of the features assessed within this Environmental Statement, the Canoe Centre and the proposed development are unlikely to result in any adverse cumulative effects upon the features assessed.

7.152 Based on the publicly available Landscape Masterplan for the Hythe Imperial development, and an assessment of historic aerial imagery, this scheme avoided impacts to bankside habitats along the RMC. It is therefore likely that the Hythe Imperial development and the proposed development are unlikely to result in cumulative effects upon ecological features associated with the RMC.

7.153 For the reasons given above, the proposed development is unlikely to result in any cumulative effects upon the important ecological features assessed in this EIA. However, limited ecological information is available for the Hythe Imperial development. It is therefore acknowledged that a full assessment of cumulative effects cannot be completed with regards to this scheme.

References

7.1 Chartered Institute for Ecology and Environmental Management (CIEEM) (2016). Guidelines for ecological impact assessment in the UK and Ireland. Institute of Ecology and Environmental Management, Winchester.

7.2 Department for Communities and Local Government (2012). National Planning Policy Framework (NPPF).

7.3 Office of the Deputy Prime Minister (2005). Government Circular 06/05.

7.4 URS Scott Wilson (2012). Shepway Core Strategy Habitat Regulations Assessment (Sites other than the Dungeness complex). Final report following Publication Core Strategy consultation January 2012.

7.5 British Standards Institute (2013). BS42020: 2013 Biodiversity - Code of practice for planning and development.

7.6 Bayne, S.B., and Hyland, V. (2014). An East Kent Approach to Green Infrastructure and Recreation with Particular Reference to 'Natura 2000' sites. Phase 1 Report – Evidence Base. Final Report - April 2014.

7.7 Bat Conservation Trust (BCT) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). Bat Conservation Trust, London.

7.8 Multi-Agency Geographic Information for the Countryside (MAGIC) website. Accessed via: http://magic.defra.gov.uk/ [Accessed 09/08/2017].

7.9 Chartered Institute for Ecology and Environmental Management (CIEEM) (2013). Guidelines for Preliminary Ecological Appraisal. Chartered Institute for Ecology and Environmental Management, Winchester.

7.10 JNCC (2010). Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit. Revised print, JNCC, Peterborough.

7.11 ARG UK (2010). Advice note 5: Great crested newt habitat suitability index. Amphibian and Reptile Groups of the United Kingdom.

7.12 Amphibian and Reptile Conservation (ARC) (2011). Common toads and roads: Guidance for planners and highways engineers in England. Amphibian and Reptile Conservation, Bournemouth.

7.13 ARC (2013). Survey protocols for the British herpetofauna. Version 1.0. Sewell, D., Griffiths, R., Beebee, T., Foster, J., & Wilkinson, J. Amphibian and Reptile Conservation, Bournemouth.

7.14 Froglife (1999). Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

7.15 Strachan R., Moorhouse T. and Gelling M. (2011). Water Vole Conservation Handbook (3rd edition).

7.16 Dean, M., Strachan R., Gow, D., and Andrews, R. (2016). The Water Vole Mitigation Handbook. (The Mammal Society Mitigation Guidance Series). Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.

7.17 BCT (2012). Bat Surveys: Good Practice Guidelines. 2nd edition. Bat Conservation Trust, London.

7.18 Kent Biodiversity Action Plan website: Accessed via: www.kentbap.org.uk [Accessed 09/08/2017].

7.19 Kent Nature Partnership (KNP) (2015). Local Wildlife Sites in Kent: Criteria for Selection and Delineation. Version 1.5 (August 2015).

7.20 Eaton, M.A, Aebischer N.J, Brown A.F, Hearn R.D, Lock L, Musgrove A.J, Noble D.G, Stroud D.A and Gregory R.D (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746.

7.21 Kent Wildlife Trust (KWT) (2013). Letter to Mr J Chambers, Shepway District Council. Letter dated 23/07/2013.

7.22 Elementa Consulting Ltd (2017). Princes Parade: Lighting Impact Assessment. Elementa Consulting, London.

7.23 JNCC (2015). Natura 2000 Standard Data Form: Folkestone to Etchinghill Escarpment Special Area of Conservation. Accessed via: http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0012835.pdf [Accessed 20/07/2017].

7.24 Assessing Regional Habitat Change (ARCH) website: http://www.archnature.eu/mapping-tools.html [Accessed: 11/08/2017].

7.25 Environment Agency (EA) (2017). Waste and landfill online mapping tool. Accessed via: http://maps.environment-agency.gov.uk/wiyby/wiybyController?value=ct21+5qt&submit.x=13&submit.y=12&submit=Search%09&lang=_e&ep=map&topic=waste&layerGroups=default&scale=9&textonly=off#x=618370&y=134789&lg=1,2,3,10,&scale=11 [Accessed 14/08/2017].

7.26 Salazar, R.D., Montgomery, R.A., Thresher, S.E., & Macdonald, D.W (2016). Mapping the Relative Probability of Common Toad Occurrence in Terrestrial Lowland Farm Habitat in the United Kingdom. PLoS ONE, 11, 2.

7.27 RSPB website: Are cats causing bird declines? Accessed via: www.rspb.org.uk/makeahomeforwildlife/advice/gardening/unwantedvisitors/cats/birddeclines [Accessed 06/08/2017].

7.28 Kent Wildlife Trust (KWT) (2016). Letter to R Allan, Shepway District Council. Letter dated 17/08/2016.

7.29 Kent County Council Ecological Advice Service. Letter to Robert Allan, Shepway District Council. Letter dated 26/08/2016.

7.30 Shepway District Council. Letter to Mr. M. Shillito, Tibbalds. Letter dated 30/08/2016.

8. Flood Risk and Drainage

Introduction

8.1 This chapter, prepared by Herrington Consulting Ltd, considers the potential effects of the development relating to flood risk, surfacewater drainage and water quality. It should be read in conjunction with the Flood Risk Assessment (FRA) presented in **Technical Annex 4**.

Scope

8.2 A Scoping Opinion was issued by LBWF on 9th May 2017. This endorsed the proposed scope of work set out in a Scoping Report submitted as the basis of a scoping request. Both documents are attached as **Technical Annex 1**.

8.3 The assessment is based on the FRA, the primary purpose of which is to determine the potential risk of flooding at the site and any associate impacts on future residents of the development. The objectives of the FRA have been to establish:

- whether the proposed development is likely to be affected by current or future flooding from any source;
- whether the development will increase flood risk elsewhere within the floodplain;
- whether the measures proposed to deal with these effects and risks are appropriate; and
- whether the site will be safe and will pass the Exception Test.

8.4 In addition, the impact of the increase in surfacewater runoff associated with the proposed development has been considered in detail, and a surfacewater management strategy has been prepared to demonstrate how site runoff can be discharged in a safe and sustainable manner, in accordance with the principles of sustainable drainage.

Policy and Guidance

8.5 The following documents have been referred to and are discussed fully within the FRA:

- National Planning Policy Framework (NPPF) 2012;
- Shepway District Council Strategic Flood Risk Assessment (SFRA) 2015; and
- National Technical SUDS Standards, April 2015.

Exception Test

8.6 **Table 8.1** below shows the vulnerability classification and flood zone compatibility, identifying that the scheme falls into a category which requires the Exception Test to be applied.

Table 8.1: Flood Risk Vulnerability and Flood Zone Compatibility

Flood Risk Vulnerability Classification	Zone 1	Zone 2	Zone 3a	Zone 3b
Essential infrastructure – Essential transport infrastructure, strategic utility infrastructure, including electricity generating power stations	✓	✓	e	e
High vulnerability – Emergency services, basement dwellings caravans and mobile homes intended for permanent residential use	✓	e	×	×
More vulnerable – Hospitals, residential care homes, buildings used for dwelling houses, halls of residence, pubs, hotels, non-residential uses for health services, nurseries and education	✓	✓	e	×
Less vulnerable – Shops, offices, restaurants, general industry, agriculture, sewerage treatment plants	✓	✓	✓	×
Water compatible development – Flood control infrastructure, sewerage infrastructure, docks, marinas, ship building, water-based recreation etc.	✓	✓	✓	✓
Key: ✓ Development is appropriate × Development should not be permitted e Exception Test required Shaded cells represent the classification of this development				

8.7 For the Exception Test to be passed, the following criteria that must be satisfied:

1. It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and

2. A site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Methodology

Quantifying Baseline Conditions

8.8 A site-specific topographic survey has been commissioned and the land levels have been considered in relation to each source of flooding, with the aim of accurately quantifying any

associated risk. The FRA has considered the impacts of flooding from the following sources: groundwater, sewers, surfacewater (pluvial), river (fluvial), coastal (tidal) and reservoirs/ordinary Watercourses.

8.9 The associated risk from each of these potential sources of flooding has been appraised by referencing a variety of data sets, each of which have been used to consider the baseline conditions (i.e. current risk 2017) and the future risk (i.e. 100 years in the future). Climate change has been considered in accordance with the NPPF for all of the flooding sources. The accompanying Planning Practice Guidance Suite (NPPG) to the NPPF provides allowances for the regional rates of relative sea level rise, as set out in **Table 8.2** below.

Table 8.2: Recommended Contingency Allowances for Net Sea-Level Rise

Region	Net Sea Level Rise (mm/yr) Relative to 1990			
	1990 to 2025	2026 to 2055	2056 to 2085	2086 to 2115
East of England, East Midlands, London, SE England (south of Flamborough Head)	4.0	8.5	12.0	15.0
South West	3.5	8.0	11.5	14.5
NW England, NE England (north of Flamborough Head)	2.5	7.0	10.0	13.0

8.10 Using the values from Table 8.2, the 1 in 200-year extreme sea level has been calculated for a number of time-steps between the current day and the year 2115. These values are shown in **Table 8.3** below.

Table 8.3: Climate Change Impacts on Extreme Sea Levels at the Application Site

Year	1 in 200-year extreme water level (m AODN)
Current day (year 2008)	4.74
2025	4.81
2055	5.06
2075	5.30
2085	5.42
2115	5.87

8.11 The increase in the tidal extreme water levels that results from rising sea levels is significant and therefore needs to be taken into account to ensure that the risk of flooding is appropriately mitigated over the lifetime of the development. The design flood level that is used in the FRA to inform the recommendations for mitigation include an appropriate allowance for climatic change (i.e. 100 years of climate change).

8.12 In addition to increases in sea level, the NPPF also provides information in relation to increases in peak rainfall intensity, which are applicable nationally. There is a range of values provided which correspond with the central and upper end percentiles (the 50th and

90th percentile respectively) over three time epochs. The recommended allowances are shown in **Table 8.4** below.

Table 8.4: Recommended Peak Rainfall Intensity Allowance for Small and Urban catchments (1961 to 1990 baseline)

Allowance Category (applicable nationwide)	Total potential change anticipated for each epoch		
	2015 to 2039	2040 to 2069	2070 to 2115
Upper End	+10%	+20%	+40%
Central	+5%	+10%	+20%

Significance Criteria

8.13 The significance of the effects for EIA purposes has been derived by relating the sensitivity of the receiving environment to the degree of change represented by the development. These factors have been categorised in accordance with a high/medium/low scale to give rise to major, substantial, moderate, minor or negligible effects on the basis of the matrix presented in **Table 8.5**.

Table 8.5: Effects Matrix

Sensitivity of Receiving Environment	Magnitude of Change		
	Low	Medium	High
Low	Negligible	Minor	Moderate
Medium	Minor	Moderate	Substantial
High	Moderate	Substantial	Major

Flood Risk

8.14 For the assessment of flood risk effects, environmental sensitivity has been categorised in accordance with the level of flood risk identified in the FRA (i.e. a low level of risk = a low level of sensitivity etc). The magnitude of change has been categorised as follows, based on the proposed number and vulnerability of receptors that the development would introduce to the site:

- High: Introduction of a large number of relatively vulnerable receptors.
- Medium: Introduction of a modest number and/or less vulnerable receptors.
- Low: Introduction of a small number and/or less vulnerable receptors.

Surfacewater Runoff

8.15 For the assessment of hydrological effects related to changes in surfacewater runoff, the sensitivity of the receiving environment (the surfacewater bodies into which runoff from the site may be discharged) has been categorised in line with their level of flood risk as follows

- High: Surfacewater bodies at risk from fluvial and tidal flooding (e.g. the RMC);
- Medium: Surfacewater bodies at risk from either fluvial or tidal flooding; or

- Low: Surfacewater bodies with a low identified risk of flooding.

8.16 The magnitude of change to the runoff characteristics of the site has been categorised as follows:

- High: Runoff characteristics of site largely altered (e.g. by the introduction of extensive impermeable surfaces onto a greenfield site);
- Medium: Partial alteration to runoff characteristics (e.g. introduction of some built development); or
- Low: Minimal change to runoff characteristics.

Pollution Risk

8.17 For the assessment of pollution risk, the sensitivity of the receiving environment (the surfacewater bodies that may be affected by runoff or groundwater flow from the site) has been categorised as high. Medium or low on the basis of their ecological or other importance (e.g. as fisheries, recreational assets or sources of water supply).

8.18 The magnitude of pollution risk has been categorised on the basis of the following factors:

- High: Extensive site disturbance during construction and/or known risk from residual contamination and/or development would introduce uses with a high contamination risk;
- Medium: A modest degree of site disturbance and/or limited risk from residual contamination and/or development would introduce uses with some contamination risk; and
- Low: Minimal site disturbance and/or no known contamination risk and/or development would introduce uses with no material contamination risk.

Baseline Conditions

Flood Risk

Flooding from Rivers

8.19 The site is located directly adjacent to both the Royal Military Canal (RMC) and Seabrook Stream, which discharges into the RMC. Both watercourses are classified as 'main rivers' and the RMC discharges into the sea via a tidal outfall located to the east of Princes Parade.

8.20 The EA Flood Map locates the site within Flood Zone 3a, which denotes a "high probability" of flooding, equating to a 1 in 100 or greater annual probability of river flooding or a 1 in 200 or greater annual probability of tidal flooding. However, topographic data confirm that the site is elevated approximately 3m above the RMC. Consequently, any anticipated rise in water level associated with a flood event would be unlikely to reach the developed part of the site, even when an allowance for 100 years of climate change is considered. The risk from this source of flooding is therefore considered to be low.

Flooding from Ordinary or Man-made Watercourses

8.21 Natural watercourses that are not classified as “main rivers”, together with man-made drainage systems such as irrigation drains, sewers or ditches, could potentially cause flooding. Inspection of the site and surrounding area reveals that there are no non-main rivers or artificial watercourses within close proximity to the site (the RMC is classified as a main river). The risk of flooding from this source is therefore considered to be negligible.

Flooding from Land (Overland Flow and Surfacewater Runoff)

8.22 Overland flooding typically occurs in natural valley bottoms, as normally dry areas become covered in flowing water, and in low spots where water may pond. This flooding mechanism can occur almost anywhere, but is likely to be of particular concern in any topographical low spot, or where the pathway for runoff is restricted by terrain or man-made obstructions. Inspection of the Environment Agency surfacewater mapping for the site shows that the area is currently at low risk of surfacewater flooding. Notwithstanding this, a detailed drainage strategy has been included within the FRA to ensure that any run-off from the new development is managed in a sustainable manner, taking into consideration the climate change allowances specified in Table 8.4.

Flooding from Groundwater

8.23 The geology in this location is Weald Clay Formation overlain by Storm Beach Deposits. In certain circumstances groundwater flows can occur at the interface with the more impervious clay deposits. However, the proximity of the development to the coastline will act to maintain lower groundwater levels in this location, ensuring that the groundwater level is no greater than the maximum predicted flood level. The site investigation report confirms this assumption, and the risk of flooding directly related to groundwater emergence is therefore considered to be low.

Flooding from Sewers

8.24 Reference to the Shepway SFRA shows that there are no known records of flooding from sewers in this area. The are no surfacewater sewers at this location, with runoff from the highway currently discharging at an unattenuated rate to the beach. There is a foul sewer located in the existing road. It is proposed to relocate this sewer within the realigned road. The drainage strategy does not propose to discharge surfacewater into the foul sewer network, and the risk of the system becoming surcharged will therefore remain low.

Flooding from Reservoirs, Canals and other Artificial Sources

8.25 The OS mapping for the area shows that there are no artificial sources of flooding within close proximity to the site. In addition, the Environment Agency’s ‘Risk of Flooding from Reservoirs’ website shows that the site is not located within an area considered to be at risk of flooding from reservoirs. The risk of flooding from this source is therefore considered to be low.

Coastal Flooding

8.26 Coastal flooding is considered to be the primary source of flood risk, and therefore further analysis has been undertaken within the FRA to accurately quantify the risk from this source. Joint probability data relating to an offshore location have been transformed inshore (to the toe of the beach at -4.0m AODN), using the Goda wave transformation formula. This has been undertaken for a range of wave height and water-level combinations for both current and future climate change conditions (for a 1 in 200-year return period in 2116). The results of this analyses are shown in **Table 8.6** below.

Table 8.6: Results of Wave Transformation Analyses

Test No.	Sea Level 2016	T_z	H_s(m)	R_c	Depth (m)
1	3.77	7.51	4.23	2.93	5.77
2	3.95	7.12	4.00	2.75	5.95
3	4.15	6.69	3.54	2.55	6.15
4	4.35	6.20	3.04	2.35	6.35
5	4.53	5.67	2.53	2.17	6.53
6	4.70	5.12	2.05	2.00	6.70
7	4.48	7.51	4.74	2.22	6.48
8	4.66	7.12	4.40	2.04	6.66
9	4.86	6.69	3.90	1.84	6.86
10	5.06	6.20	3.34	1.64	7.06
11	5.24	5.67	2.78	1.46	7.24
12	5.41	5.12	2.26	1.29	7.41

8.27 Wave overtopping analysis has subsequently been undertaken to establish the rate at which water could pass over the defences during an extreme storm event with a 1 in 200-year return period. The calculations include an allowance for 100 years of sea level rise. Two methods of calculating wave overtopping discharge rates have been used, J.W. Van der Meer (1998) and R Wallingford R&D Technical Report W178 (1999). Both analyses assume a diminished beach crest width (5m rather than the recommended 10m), which adopts the precautionary approach promoted by the NPPF and thereby reflects the typical beach conditions before the bi-annual beach recycling works have been completed.

8.28 Twelve wave and water level combinations have been tested as part of the wave overtopping analyses, with both methodologies yielding similar results (<100l/s/m). The European (EurOtop II) Wave Overtopping Manual (2nd edition, October 2016) suggests that no damage will occur to a seawall/promenade when overtopping rates are <200 l/s/m. Consequently, the main risk of flooding from this source is limited to water reaching the properties at the rear of the new promenade.

8.29 The extreme sea level has also been calculated for the coastal frontage and an allowance for 100 years of sea level rise has been included. The marginal extreme sea level for the 1 in 200-year return period, including 100 years of climate change, is 5.87m AODN. The development is located above this level and as such, the occupants will remain safe.

Surfacewater Drainage

8.30 The general requirement for all new development with respect to surfacewater runoff is to ensure that the runoff is managed sustainably and that the drainage solution for the development does not increase the risk of flooding at the site or within the surrounding area. Consequently, the FRA also includes a comprehensive strategy for managing surfacewater runoff from the development in a sustainable manner.

8.31 From 6 April 2015, changes relating to The Flood and Water Management Act 2010 National Standards (Schedule 3 – paragraph 5) for design, construction, maintenance, and operation of Sustainable Drainage Systems (SUDS), came into effect. These changes provide additional detail and requirements not initially covered by the NPPF, and are (non-statutory) Technical Standards for SuDS.

8.32 The proposed development is classified as 'major development, with more than 10 units located on land totalling greater than 1 hectare. Consequently, the National Technical SuDS Standards apply.

8.33 Synthetic rainfall data have been derived using the variables obtained from the Flood Studies Report (FSR) and the routines within the Micro Drainage Source Control software. The peak surfacewater flows generated on site for the existing and post-development conditions have been calculated by using the Modified Rational Method.

8.34 Various opportunities have been considered for managing the surface water runoff discharged from the development site, in accordance with the hierarchy of drainage option and the drainage assessment confirms that it is not appropriate to discharge surface water from the developed parts of the site directly into the ground (i.e. by infiltration). This is to reduce the risk of mobilising any contaminants which could otherwise occur under direct point discharge (i.e. concentrated runoff from roofs and hardstanding).

8.35 Site investigations suggest that the site and the RMC are not directly, or hydraulically connected and consequently, despite the RMC being located within close proximity to the site, discharge to this watercourse is not considered a suitable option. Discharging additional surface water into this watercourse could result in an increased risk of flooding to the lower areas surrounding the RMC during peak rainfall events and as such, the most appropriate solution for managing surface water runoff in this instance is to discharge clean surface water directly to the sea, via a series of coastal outfalls.

Predicted Effects and Proposed Mitigation

Flood Risk

Coastal Flooding

8.36 The primary source of flooding risk relates to overtopping under storm surge and high-tide conditions. Modelling has confirmed that the closest properties could be at some risk, although this will be insufficient to pose a safety risk to residents. A medium degree of risk has therefore been assumed. The degree of change to the site is considered to be high, due to the introduction of a substantial number of relatively vulnerable receptors, giving rise to a substantial adverse effect.

8.37 The EA has been consulted regarding the finished floor levels for the proposed development. The EA has confirmed that finished floor level should be set no lower than 600mm above the existing height of the promenade.

8.38 The wave overtopping analysis has shown that the existing primary seawall will protect the site from the direct impact of wave overtopping, under the 1 in 200-year event. Notwithstanding this, it is proposed to relocate the existing road to the north of the site and to create a new promenade, 11m in width. The EA has been consulted regarding these proposals and confirm that they are in agreement with setting the development back 12m from the primary seawall, which will further reduce the risk from coastal flooding.

8.39 In addition to the new 11m promenade, the proposals include the construction of a secondary seawall, located to the rear of the new promenade. This secondary is proposed to be 1m in height and 1m in depth, designed to prevent water from flowing onto the residential parts of the development, thus providing a secondary means of defence. The promenade will be designed with a seawards cross fall, which will help to direct both floodwater and surface water back towards the beach.

8.40 With this mitigation incorporated into the scheme, the residual level of risk is considered to be reduced to low, resulting in a moderate adverse effect.

Other Sources of Flooding

8.41 The FRA concludes that the risk to the development from other sources of flooding will be low. Assuming a high magnitude of change, this will give rise to a moderate adverse effect. The design measures incorporated into the development, notably the compliance with minimum floor levels and the provision of a sustainable surfacewater drainage system, will reduce the risk to less-than-low, resulting in a minor adverse effect.

Surfacewater Runoff

8.42 The nearest receiving water to the site, the Royal Military Canal, is considered to be of high sensitivity, due to its susceptibility to both fluvial and tidal flooding, which could occur simultaneously under storm surge and high rainfall conditions. The development represents a fundamental change to the runoff characteristics of the site, which is currently in a largely greenfield condition. In the absence of mitigation, discharge of runoff to the canal would amount to a high magnitude of change, potentially giving rise to a major adverse effect.

8.43 However, surfacewater would be discharged directly to the foreshore, resulting in no – or, at worst, a negligible – residual effect on the canal.

Pollution Risk

Construction

8.44 Most of the site will be disturbed during construction, which will involve substantial groundworks. As described in Chapter 9, the site is known to be contaminated at levels capable of representing an environmental risk. The magnitude of change is therefore considered to be high. The closest receiving water, the RMC, is a Local Wildlife Site and of recreational and amenity value, and is considered to be of high sensitivity. An uncontrolled spillage or release of contamination could therefore cause a major adverse effect.

8.45 Remediation of ground contamination, together with adherence to best practice for activities such as dewatering and waste disposal, would reduce the risk of such incidents. In addition, the canal is not in hydraulic continuity with groundwater beneath the site, which reduces the likelihood that contamination could spread into the RMC. With mitigation in place, the residual impact is anticipated to be reduced to low, and the associated effect reduced to moderate adverse.

Completed Development

8.46 The proposed development would not introduce to the site uses that intrinsically represent a contamination risk. Such risks would be confined to hydrocarbon spills from trafficked

areas, surcharging of foul sewers and spillage of chemicals (e.g. associated with the leisure centre). In practice, foul drainage would be segregated, whilst surfacewater drainage would not discharge to the canal and would be provided with oil interceptors.

8.47 A tanked permeable paving system has also been specified across the hardstanding and car parking areas of the proposed leisure centre, proving a level of treatment at source and helping to improve the quality of the water before it is discharge to the sea. The level of risk to the canal would therefore be reduced to less-than-low, resulting – at worst - in a minor adverse effect.

Foul Drainage

8.48 A Southern Water (SW) combined rising main runs east/west within the site close to the southern boundary. This main lies within the footprint of the proposed built development, and will be diverted along the realigned section of Princes Parade.

8.49 A Level 2 Foul Sewer Capacity Check by SW has confirmed that there is insufficient capacity within the existing network to accommodate the discharge from the development. SW propose to reinforce the network by installing a 160mm length of 1400mm diameter main and three new manholes at the point of connection between the existing and realigned sewers. This work will be funded by the applicant and will be implemented in advance of any foul discharge from the completed development. The additional capacity will avoid any potential environmental effects associated with surcharging of the sewer.

Cumulative Effects

8.50 In relation to the three identified schemes:

- The proposals for the Seapoint Canoe Centre are of insufficient scale to give rise to any identifiable effects.
- Shorncliffe Garrison lies partly within the catchment of the Seabrook Stream, which flows into the RMC. However, the adoption of sustainable drainage features would avoid any net increase in runoff that could affect the hydrological regime of the canal.
- Imperial Green occupies a similar hydrological context to the application site, between the canal and the foreshore. It is, however, located about 0.9km from the site, and incorporates its own mitigation features to minimise runoff and flood risk.

8.51 No additional sources or combinations of impact have been identified that could give rise to cumulative effects beyond those identified for the development.

9. Geo-Environment

Introduction

9.1 This chapter, prepared by Idom Merebrook (Merebrook), assesses the potential effects relating to ground conditions and contamination. It draws primarily on information from the Geo-Environmental Assessment undertaken by Merebrook (GEA-17436AI-15-193 Rev E, May 2017), which is presented in **Technical Annex 5**. Although the extent of the investigation was limited by ecological constraints, the assessment of risks and environmental effects is considered to be robust.

Legislation and Planning Policy Context

NPPF

9.2 Section 11 of the NPPF 'Conserving and enhancing the natural environment' states that "Planning policies and decisions should also ensure that:

i. the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;

ii. after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and

iii. *adequate site investigation information, prepared by a competent person, is presented.*"

9.3 Paragraph 109 of the NPPF states that the planning system should "contribute to and enhance the natural and local environment by…remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

National Planning Practice Guidance

9.4 New Planning Practice Guidance (PPG) regarding land affected by contamination was published on 6 March 2014. The PPG states that "to ensure a site is suitable for its new use and to prevent unacceptable risk from pollution, the implications of contamination for a new development would be considered by the local planning authority to the extent that it is not addressed by other regimes" such as the Environmental Protection Act.

9.5 The PPG sets out the available data sources that should be considered when assessing the likelihood of contamination and provides links to Environment Agency good practice guidance that should be followed when assessing land contamination (see Section 9.23). The PPG also sets out the principle of granting planning permission subject to conditions which secure the investigation and assessment of land contamination and which prevent development occurring until appropriate remediation has been implemented. This assessment has been carried out in line with the approach set out in the PPG.

Environmental Protection Act (1990)

9.6 Part IIA and the planning system are complementary and the development will ensure that the land is 'suitable for use' in the context of the proposals, as well as demonstrating that the land does not meet the Part IIA definition of "*contaminated land*". Part IIA of the Environmental Protection Act (1990) provides a framework for the regulation of '*contaminated land'*. It has implications for parties who cause land to be contaminated or who own land that is contaminated.

9.7 Under Part IIA of the Environmental Protection Act, contaminated land is currently defined in England as "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that - a) significant harm is being caused or there is a significant possibility of such harm being caused; or b) significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused". The term "*harm*" is used in Part IIA to describe damage to the following types of receptor:

i. human beings;
ii. ecological systems; and
iii. property in the form of crops, produce, livestock and property in the form of buildings.

9.8 Pollution of controlled waters means the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter. Controlled waters include groundwater (water contained in underground strata and soils), rivers, lakes, ponds, streams, canals, coastal waters and estuaries. The significance of any identified contamination is assessed by considering the presence of a contaminant source, and a pathway via which a receptor can be exposed to the source and is in accordance with government guidance on assessment of potentially contaminated land.

Shepway Council Local Plan

9.9 Policy U10a of the saved policies of the Shepway Local Plan states that "when development is proposed on or near a site that: has been used for the purpose of waste disposal; is known to be contaminated; or there is good reason to believe that contamination may exist, the applicant will be required to carry out a site assessment and submit a report of the findings in order to establish the nature and extent of the contamination. Development will only be permitted if practicable and efficient measures are to be taken to treat, contain and/or control any contamination so as not to:

- Expose the occupiers of the development and neighbouring land users, including in the case of housing the users of gardens, to unacceptable risk.
- Threaten the structural integrity of any building built or to be built on or adjoining the site.
- Lead to the contamination of any watercourse, water body or aquifer.
- Cause the contamination of adjoining land or allow such contamination to continue.

9.10 Any permission for development will require that the remedial measures agreed with the Authority must be completed as the first step in the carrying out of the development."

Methodology

9.11 Current best practice for the assessment of land contamination is set out in the Environment Agency (EA) document 'Model Procedures for the Management of Land Contamination', 2004, Environment Agency and Department for Environment, Food and Rural Affairs (EA & DEFRA) (CLR11). This document was developed to provide the technical framework for applying a risk management process when dealing with land affected by contamination. Such a phased approach has been applied to the site, with Phase I and Phase II assessments undertaken, as presented in Technical Annex 5.

9.12 This chapter considers the anticipated environmental effects on relevant receptors, both without and following implementation of appropriate mitigation measures. The environmental effects are described in terms of whether they are adverse, beneficial or negligible. The assessment pays regard to the following criteria where considered appropriate: the extent of the impact (geographical area and size of population affected), magnitude and complexity of the impact, the probability of the impact, duration, frequency and reversibility. The significance of the effects has been categorized as minor, moderate or major, as described in **Table 9.1** below.

Table 9.1: Description of Environmental Effects

Effect	Descriptor
Major adverse	Severe detrimental effect from contamination on human health, plant growth, controlled waters, building materials and safe use of buildings. Permanent or widespread detrimental effects on water quality.
Moderate adverse	Moderate detrimental effect from contamination on human health, plant growth, controlled waters, building materials and safe use of buildings. Severe temporary detrimental effect on water quality.
Minor adverse	Temporary and slight detrimental effect from contamination on human health, plant growth, controlled waters, building materials and safe use of buildings. Moderate, local detrimental impact on water quality, but reversible. Moderate detrimental effects on plant growth.
Negligible	No appreciable impact on human and environmental receptors.
Minor beneficial	Slight reduction in risk from contamination on human health, plant growth, controlled waters, building materials and safe use of buildings. Minor local improvement to quality of controlled waters.
Moderate beneficial	Moderate reduction in risk from contamination on human health, plant growth, controlled waters, building materials and safe use of buildings. Moderate improvement to quality of controlled waters.
Major beneficial	Large reduction in risk from contamination to human health, plant growth, controlled waters, building materials and safe use of buildings.

Baseline Conditions

Overview

9.13 A site walkover was undertaken by Merebrook. A site walkover plan and photographic record are presented in the Technical Annex. The following observations were made:

- The site is bounded by the Royal Military Canal (a Scheduled Ancient Monument) to the north, flatted accommodation to the east, Princes Parade Road and the beach to the south and a golf course to the west;
- The majority of the site is disused. The site is an overgrown former inert landfill with much of the site comprising rough grass, weeds, scrubland and trees. A gated entrance onto the site is located in the southwestern corner with historical hardstanding noted in this area. The eastern portion of the site is developed with Seapoint Canoe Centre, playground and picnic area present;

- A pathway crosses the northern section of Princes Parade through the central portion of the site and connects via a footbridge to a footpath across the canal. A pathway encircles the western, northern and eastern perimeter of the site; and
- No invasive plant species were noted during the site walkover; however, sporadic littering was recorded.

Site History

9.14 Historic plans dated from the 1870s to present show that the majority of the site has not been subject to built development. Between 1931 and the late 1950s part of the site was designated as a recreation ground. The beach was shown covering at least part of the site until the early 1960s. A possible gravel pit was identified between 1958 and 1961 (no longer identified by 1975). By 1961 a drain was marked along the northern portion of the western part of the site. An entrance into the site was constructed in the southwestern corner with, a slope also noted potentially indicating that the site was accessed by vehicles.

9.15 A carpark was developed in the eastern portion of the site prior to 2010. A railway (200m to the north), gas works (50m to the north-east) and waterworks (260m to the north) have been identified historically in the vicinity of the site, although these are considered unlikely to be associated with any significant cross-boundary contaminant migration potential due to the distance form site.

Geo-Environmental Setting

Geology

9.16 Given the history of the Site, significant thicknesses of made ground are expected. The geology beneath the site is detailed in the Merebrook GEA (Technical Annex) with a summary presented in **Table 9.2** below. The published geological map indicates the presence of superficial drift deposits of Storm Beach Deposits comprising gravel underlying the majority of the site. Tidal Flat Deposits comprising clay and silt are likely to underlie the northern portion of the site.

Table 9.2: Summary of Sub-Surface Ground Conditions

Strata	Depth to Top Range (m bgl)	Thickness Range (m)
Made Ground	0.0	0.2 – >3.0 m
Drift – Tidal Flats Deposits	2.0	>1.0 m
Drift – Storm Beach Deposits	1.9 – 2.8	>2.1
Solid – Weald Clay Formation	Not encountered	-
Made Ground	0.0	0.2 – >3.0 m

9.17 The published geological map indicates the presence of superficial drift deposits of Storm Beach Deposits comprising gravel underlying the majority of the site. Tidal Flat Deposits formed of clay and silt are likely to underlie the northern portion of the site. The underlying bedrock geology comprises clay and mudstone of the Weald Clay Formation.

Hydrogeology

9.18 The superficial geology underlying the site is classified by the Environmental Agency (EA) as a Secondary 'A' Aquifer. This indicates that the aquifer has permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as

minor aquifers. Groundwater is unlikely to be to be in hydraulic continuity with the Royal Military Canal. The underlying Weald Clay Formation is classified by the EA as Unproductive Stratum.

9.19 According to data provided by Groundsure, there are four groundwater abstraction licences within one kilometre of the site. All four licences are related to potable water abstraction with the closest licence associated with Veolia and located 199 m to the north of the site. An additional Veolia licence is located 761 m to the north, while another licence is relating to Hotel Imperial and is located 847 m to the west. The site is not located within a Groundwater Protection Zone.

Hydrology

9.20 The closest surface water feature is the Royal Military Canal, which forms the northern boundary of the site. A culverted watercourse flows into the central portion of the canal. A tertiary river flows into the western portion of the canal while a secondary river (Seabrook Stream) flows into the canal near the eastern end of the site. Tertiary and Secondary Rivers denote the hierarchal order of river bodies into a Primary River (in this instance the Primary River is the Royal Military Canal). This canal flows in an eastern direction along the boundary of the site, before flowing into the Hythe Bay 50 m to the south. There are no surface water abstractions within one kilometre of the site.

9.21 According the EA's Risk of Flooding from Rivers and Seas (RoFRaS), the site is located in an area at risk from flooding. The majority of the northern and eastern portion of the site is identified as having a medium to high RoFRaS risk. The surrounding areas are also identified as having a high RoFRaS risk from flooding. The site is not located in an area benefitting from flood defences, but a sea-wall runs along the south of Princes Parade.

9.22 According to the Groundsure Report, the site is located within an area of susceptible to groundwater flooding (superficial deposits flooding). This is due to the shallow unconsolidated sedimentary aquifer which overlies an unproductive aquifer.

Statutory Register Searches

9.23 Searches of the statutory registers have identified a potentially significant issue with regard to land contamination. One historic pollution incident was identified on site involving crude sewage, but no significant impact was encountered. One unspecified pollution incident was identified 24 m to the northeast, with no significant impact identified.

9.24 The site was identified as an historic EA landfill (reference SH6) receiving both inert and commercial waste between December 1946 – December 1974. There are no statutory authorisations within 50m of the site. There are no potentially contaminative land uses within a 50m radius of the site. However, an electricity substation was, identified 60 m to the northeast while a service station was noted 110m to the north-east.

9.25 Information from environmental and ecological datasets was obtained from a review of the MAGIC (Multi-Agency Geographic Information for the Countryside) website and the Groundsure report. The data assessed indicates that several environmentally sensitive features are located within one kilometre of the site. This includes Hythe Bay, located 50m to the south, which is a Marine Conservation Zone. The Royal Military Canal to the north is identified as a scheduled monument, while deciduous woodlands were located 150m to the north-east and 300m to the north-west of the site. The Royal Military Canal is also referred to as a local wildlife site.

Previous Environmental Assessments

9.26 The assessment of land quality for the site has involved the review of available information pertaining to the current condition of the soils and groundwater, to develop an understanding of the prevailing baseline conditions. The documents reviewed for this assessment are summarised below and are presented in the Technical Annex.

9.27 Ground Solutions Group Limited (GSG), Phase 1 Desk Study and Walkover – Princes Parade (44518/AMM), June 2002. The report notes the following:

- Shepway District Council confirmed that the landfill on site closed in 1975. It is understood that the landfill received Category B and Category C wastes. Category B wastes include slowly degradable wastes (B1) and scrap metal (B1). Category C wastes are those that are putrescible. The depth of the landfill was reported to be 5 m;
- Weeks Consulting advanced two boreholes prior to the construction of the play area to the west of site. Made ground was encountered between 4.3 and 4.6 m. Significant concentrations phytotoxic metals were encountered in a sample recovered from 2.0 m bgl;
- Dredgings from the canal are likely to have been deposited on site; and
- This report included a soil spike survey (covering 87 positions) undertaken across the site. The survey returned concentrations of methane (CH4) below the instruments detection limit (<0.25 %v/v) while carbon dioxide (CO2) was detected to a maximum of 7.0 % v/v. Thirty-seven locations recorded CO2 between 1.5 to 5.0 v/v, with only five locations recording concentrations greater than 5 % v/v.

9.28 Ground Solutions Group Limited, Phase 2 Geo-Environmental Investigation – Princes Parade (44518/1/OJR), October 2002. The investigation is summarised below:

- Three boreholes to 7.5 m, thirty trial pits to depths between 3.3 and 5.0 m (including ten monitoring standpipes) and ten static cone penetration tests.
- Evidence of household waste was noted in all trial pits. In addition to the household waste, sterile unused stomach tubes were noted at one location. Landfill odours were encountered at four locations and a slight hydrocarbon odour was encountered at a further location.
- Groundwater levels in the boreholes ranged from 5.14 to 6.47 m bgl.
- Made ground where proven ranged from 2.8 to 4.8 m thick, this in turn was underlain by possible made ground/marine alluvium (potentially dredged material from the canal) to between 7.0 and 7.5 m bgl.
- 173 samples were recovered and sent to a laboratory for chemical testing. Arsenic, nickel, lead, boron, copper and sporadic PAH exceeded the applicable residential criteria (with uptake) in samples recovered from the top 5.0 m bgl. A suspected asbestos containing pipe encountered at 2.1 m bgl at one location was found to contain chrysotile asbestos.

Table 9.3: Summary of Contamination encountered by GSG

Contaminant	Depth Range (m)	Max Concentration (mg/kg)
Arsenic	2.1 – 5.0	150

Nickel	2.1 – 5.0	470
Cadmium	2.1 – 5.0	12.4
Mercury	2.1 – 5.0	43.7
Lead	2.1 – 5.0	4,600
Boron	2.1 – 5.0	13.2
Copper	2.1 – 5.0	840
Zinc	2.1 – 5.0	19,000
TPH	0 – 0.2	243
PAH	4.0 (TP4)	264

9.29 Leachate analysis was carried out on some of the recovered soil samples. GSH compared the analytical results against Leachate Quality Threshold (LQT) concentrations, with the following results:

- Depth range GL to 1.0m: Leachable metal concentrations were generally less than the LQT. However, the LQT was exceeded for copper (26 ug/l) at one location. TPH concentrations were less than the analytical detection limit. Total PAH concentrations in two samples exceeded the LQT criteria;
- Depth range 1.0-2.0m: Concentrations of cadmium, chromium, zinc and arsenic exceeded their respective LQT concentration at one location. Concentrations of lead and copper exceeded the LQT concentration (three and two locations respectively). TPH concentrations ranged from less than the analytical level of detection to 622ug/l. Total PAH concentrations exceeded the LQT concentration at one location;
- Depth range 2.0-4.5m: Concentrations of arsenic and lead were encountered above LQT criteria (for one and three samples respectively). Concentrations of the phytotoxic metals cooper and zinc exceeded the recommended threshold at two locations. TPH concentrations ranged from less than the analytical level of detection to 786ug/l. Total PAH criteria were exceeded in two samples;

9.30 Groundwater samples were recovered from the three boreholes. Groundwater results were compared against Dutch Intervention Values and Leachate Quality Threshold Concentrations. The concentrations of all metals were below their respective screening criteria and Total Petroleum Hydrocarbon (TPH) concentrations in all samples were below the analytical detection limits. PAH concentrations were generally below the analytical detection limits, but one sample had a pyrene concentration of 0.15 ug/l. Sulphate concentrations ranged from 36 to 99 mg/l.

9.31 Further gas monitoring was carried out in thirteen piezometers and three boreholes during 15 August 2002. Concentrations of carbon dioxide exceeded 5% v/v in five locations, elevated methane was encountered at three locations (up to 60% v/v). Concentrations of volatile hydrocarbons were generally low across the site and ranged from less than 1ppm to15.6 ppm.

9.32 Idom Merebrook, Geo-Environmental Assessment (GEA) – Princes Parade (GEA-17436AI-15-193 Rev E), May 2017. The investigation is summarised below:

- The investigation comprised seven shallow windowless sample probe holes (MWS1 to MWS7) to a maximum depth of 5.45 m bgl and five machine dug trial pits (MTP1 to MTP5) to a maximum depth of 3.0 m bgl.

- Made ground were proven ranged in thickness from 0.2 to > 3.0 m bgl. Made ground predominantly comprised an upper stratum of topsoil over made ground composed of brown sandy gravelly silt / clay with frequent rootlets. Gravel-sized materials consisted of minor quantities of flint, brick, concrete occasional glass, whole bricks and bituminous pieces. This was underlain by what appeared to be a layer of compacted silty clayey gravelly sand / sandy gravel with frequent whole red bricks, brick and concrete fragments occasional glass, slate and wooden fragments. Possible asbestos containing material and ash, clinker and cinders were encountered at some locations. Drift deposits were encountered beneath made ground and Weald Clay Formation was not encountered.

- Perched ground water was encountered within the made ground or superficial deposits ranging in depth from 2.5 to 3.5 m bgl during the intrusive investigation. Ground water was not encountered during any of the subsequent monitoring rounds.

- Eighteen soil samples were submitted to the laboratory for chemical analysis, including two samples from natural ground and sixteen samples from the made ground. The results were compared to residential screening criteria (with and without home grown produce) and public open space criteria (with reference to the ARC).

- PAH exceedances of relevant screening criteria were encountered sporadically in the made ground. Localised metal contamination with reference to lead and arsenic was also encountered within the landfill waste made ground. Five out of five samples tested recorded asbestos presence however where quantified were recorded at concentrations below the hazardous waste threshold (< 0.1%). Two samples of natural strata were tested immediately below made ground. One sample at MWS2 recorded elevated concentrations of PAH species when compared to both assessment criteria which suggest contamination has possibly leached to underlying natural geology. The sample was also collected just below a pocket of perched groundwater; therefore, it must be considered that contamination recorded could be associated with perched groundwater contamination.

- Groundwater is likely to be tidally influenced, but the Royal Military Canal does not fluctuate with the tides. Therefore, groundwater and the canal are not in hydraulic continuity as the canal is likely to be clay lined. Groundwater was not encountered during any of the monitoring rounds between 2015 and 2016.

9.33 Gas monitoring has been undertaken on four occasions (June 2015, 22 July, 31 August, 21 October 2016). Only MWS7 and MWS1 could be located during the monitoring conducted in 2016. Levels of methane, carbon dioxide and oxygen were recorded in each standpipe, together with associated parameters including borehole flow and ambient air pressure. Methane or positive groundwater flow was not encountered during any monitoring round. Carbon dioxide was detected to a maximum of 9.3 % v/v.

9.34 Given the proposed development, BS8485(2015) was considered in the gas risk assessment. Based on the data to date the site would be considered as a Characteristic Situation 1. This classification indicates a negligible gassing regime and that no ground gas protection measures are required. However, carbon dioxide was recorded over 5 % (during one of the monitoring rounds), and therefore it is appropriate to consider increasing the risk level to characteristic situation (CS2). Given the site history and geo-environmental setting, it is considered that Characteristic Situation 2 (low hazard potential) is appropriate and that gas protection is provided. Further monitoring was recommended, following which it may be possible to delineate areas that require gas protection.

9.35 Geotechnical recommendations comprised foundation solutions such as ground improvement (vibro stone/concrete columns) or a piled solution to be considered. Due to variable thicknesses of made ground was recommended that suspended floor slabs should be adopted.

9.36 Idom Merebrook, Hand Pitting Site Investigation – Princes Parade (L-17436ai-2.4.217-S135-NTD), March 2017. The investigation is summarised below:

- The investigation comprised ten hand-dug holes (HP1 to HP10) to a maximum depth of 0.4 m bgl;
- Topsoil/ made ground was encountered at all locations and generally comprised sandy gravelly clay to clayey sand. Gravel-sized materials consisted of minor quantities of flint, brick, concrete and bituminous pieces. In addition, inclusions of glass, pottery, metal, plastic, glass bottles and shoes were also encountered. A suspected piece of asbestos containing material (ACM) in the form of cement sheet was encountered at the surface close to HP5;
- Eight soil samples were submitted to the laboratory for chemical analysis - the results were compared to criteria for public open space (POSresi);
- The results indicate that PAH species (benzo(b)fluoranthene, benzo(a)pyrene and dibenzo(a,h)anthracene) exceeded relevant screening at five locations. It should be noted that bituminous inclusions were noted at several locations. In addition, several elevations of phytotoxic metals (copper and zinc) were encountered. The highest concentrations of zinc and copper (7,600 mg/kg and 210 mg/kg respectively) were encountered at HP1 which was associated with metal fragments. Asbestos was encountered in two samples in the form of chrysotile/amosite (insulation lagging/loose fibres), however concentrations were recorded below the hazardous waste threshold (<0.1%).

Predicted Effects

Risk Assessment

9.37 The potential sources of contamination at the site and the implications with respect to development have been interpreted in accordance with the current government guidance on source-pathway-receptor risk assessment. The investigations demonstrate that the former uses of the site, particularly with reference to landfilling, have resulted in widespread contamination comprising metals, PAH and asbestos. These materials are considered for their potential to act as sources for a number of pollutant linkages.

9.38 Potential pathways which may exist at the site or could be established during construction and/or once the development is completed, are as follows:

- Potential pathways relating to human health and animal populations include: ingestion, inhalation of, or direct dermal contact with contaminated soils, groundwater, dust, asbestos fibres, gases and vapours;
- Potential pathways via which contamination may cause pollution of the water environment including downward and lateral migration through soils and groundwater; downward and lateral migration along foundations/service trenches, surface run-off and direct spills;

- Potential for root uptake of contamination by plant populations; and

- Potential pathways to building structures and services including direct contact with contaminated soils, groundwater and accumulation of ground gas and vapour.

Potential Impacts

9.39 The potential environmental effects of possible ground conditions and contamination at the site have been considered with respect to the following sensitive receptors:

- Human health, including future site users (workers and visitors), construction workers and maintenance personnel, and off-site land users including surrounding residents, pedestrians and nearby site users (i.e. golf course, public park, etc.);

- Controlled waters including the Royal Military Canal and the underlying groundwater aquifers;

- Adjacent land and its occupiers;

- Ecological systems (including the Royal Military Canal and Hythe Bay);

- Future residents; and

- Buried structures and services, including foundations, concrete and water supply pipes.

9.40 In each case, the existence of a potential environmental effect requires a pathway by which the receptor could be exposed to the contaminant source. An assessment of potential impacts on sensitive receptors from the site in its current condition is considered in the first instance and the potential impacts on sensitive receptors from the site during construction works is considered thereafter. An assessment has also been made of potential impacts on sensitive receptors from the site during the operational period, i.e. following construction. These assessments have all been made assuming the absence of any mitigation measures.

Human Health

9.41 The investigations have demonstrated that the former uses of the site, particularly with reference to landfilling, have resulted in widespread contamination comprising metals, PAH and asbestos. As the majority of the site is densely vegetated, potential exposure is significantly reduced therefore the risk to the general public and current site users is considered to be low.

9.42 Given the history of the site and levels of carbon dioxide encountered to date (Merebrook encountered carbon dioxide above 5% during one monitoring round) it is anticipated that low level gas protection will be required in some parts of the development. Further monitoring is recommended in order to establish which areas of the site will need mitigation measures. Significant flow has not been encountered to date, it is therefore considered that residents of neighbouring properties will be at a low risk of gas ingress.

Controlled Waters

9.43 Although hydrocarbon contamination was recorded in made ground at concentrations which could pose a risk to human health, the contaminants were not sufficiently mobile to pose a

risk to controlled waters. The PAH contamination and heavy TPH (C>16) contamination encountered are generally categorised as having low solubility and high organic partition coefficient.

9.44 These properties lead to the contaminants becoming adsorbed to the organic fraction of the soil. In certain instances, TPH can also be encountered as a phase separated liquid, which due to its buoyancy results in them floating on the surface of the water-table. Light Non-Aqueous Phase Liquid (LNAPL) was not encountered during groundwater monitoring.

9.45 It is considered that groundwater is likely to be tidally influenced. Ground water was encountered by Merebrook during intrusive works (within the made ground or superficial deposits ranging in depth from 2.5 to 3.5 m bgl) but not during monitoring of installed wells. Therefore, perched groundwater may be present in discrete lenses within made ground and superficial deposits rather than and not in a continuous body.

9.46 GSG analysed groundwater and leachate samples during their 2002 investigation. While some leachable contamination was encountered similar contamination was not encountered within groundwater. Risks to the underlying superficial aquifer are therefore considered to be low to moderate. The Royal Military Canal will have a low permeability lining (likely to be clay) and is not considered to be hydraulic continuity with groundwater. It is therefore considered that the risks posed to the canal are low.

Ecological Systems

9.47 The adjoining Royal Military Canal System is considered to be a contained system and as such is a low risk from site derived contamination. Furthermore, the concentrations of contamination encountered within soils were not sufficiently mobile to pose a risk to controlled waters. GSG didn't identify significant groundwater contamination. It is therefore considered that risks to Hythe Bay and surrounding ecological systems are low.

9.48 While phytotoxic metals were identified at concentrations that could be potentially harmful to ornamental planting it should be noted that the site is heavily vegetated. In order to mitigate potential risks to proposed ornamental planting, sufficient provision of clean soils will be required as directed by the landscape architect.

Assessment of Effects

Construction

Disposal of Excavated Materials

9.49 Due to the potential for localised contamination to exist within the underlying soils, a proportion of any site-won material may be classified as hazardous waste for the purposes of disposal to landfill. This would, however, be confirmed by Waste Acceptance Criteria (WAC) testing to determine waste classification and allow identification of an appropriate disposal facility. Without suitable management in place, the disposal of contaminated material would result in local, temporary, moderate adverse environmental effects.

Human Health

9.50 Construction activities, particularly earthworks associated with the construction of new structures, roads and car parks, could potentially disturb and expose construction workers to made ground and potential soil and/or groundwater contamination associated with the onsite historic landfill. Construction activities could create pollutant linkages through ingestion,

inhalation and direct dermal contact. There is a recognised potential for ground gas generation at the site. This could result in migration into poorly ventilated confined spaces, such as excavations and pose a potential risk to construction workers.

9.51 Potentially, construction workers are initially at the greatest risk from exposure to hazardous contamination due to excavation works and during the handling of materials. Construction workers will be made aware of the possibility of encountering contaminated soils in made ground through toolbox talks. Safe working procedures will be implemented, good standards of personal hygiene will be observed and appropriate levels of personal protective equipment (PPE) and respiratory protective equipment (RPE) will be provided and utilised as necessary, thereby minimising the risk of exposure to potentially contaminated soils, ground gas and groundwater.

9.52 Providing that dust levels are kept within statutory limits and appropriate health and safety procedures are adhered to during the construction phase, the levels of chemical contamination recorded to date are not considered to present an acute risk to human health. The likely effect of ground contamination and ground gas on demolition and construction workers would be negligible. If correct procedures are not followed, potential effects are considered to be permanent, local, and of moderate adverse significance.

9.53 During the stockpiling (including during piling) of excavated materials and construction waste and potentially following the vegetation strip, dust could be generated during dry and windy conditions. If good housekeeping measures (including regular cleaning of site and access roads) are not adopted there is the potential for significant dust generation. Under these conditions, users of neighbouring sites (including the Royal Military Canal and Hythe Imperial Golf Club), surrounding residents and the general public could temporarily be exposed to contamination via the inhalation of potentially contaminated dust. In the absence of mitigation, potential effects are considered to be temporary, local, and of minor adverse significance.

Controlled Waters

9.54 Following the removal of vegetation, there may be the potential for increased rainwater and surface run-off infiltration to the subsurface. This could potentially mobilise contaminants which could feasibly migrate into the underlying superficial aquifer or the Royal Military Canal (and sediment to the canal) giving rise to temporary, local effects of minor adverse significance. During the recent GEA, hydrocarbon contamination within made ground was not sufficiently mobile to pose a risk to controlled waters.

9.55 The piling process has the potential to generate preferential pathways for the vertical migration of contaminants within made ground into the underlying superficial aquifer. It should be noted that there is no natural aquitard (clay may have been used at the base of the landfill as a low permeability liner) above the superficial deposits so the potential impact will be limited. It is also possible that previously unidentified contamination could be mobilised. Depending on the method of piling used the following potential contamination pathways could be introduced:

- The forcing of contaminants down into the superficial aquifer during pile driving;
- Contamination of groundwater by wet concrete; and
- Creation of preferential pathways through an aquitard (assuming the landfill is lined) to allow potential contamination of an aquifer.

9.56 Without mitigation, there is potential for temporary impacts of moderate adverse significance. During the construction phase, it is anticipated that potentially polluting substances and activities would be introduced to the site. These may include storage of fuels and chemicals, leaks and spills of fuel and oil from construction vehicles. In the event of an accidental pollution incident, and in the absence of mitigation, potential effects on soils and water environment receptors are considered to be temporary, local and of moderate adverse significance.

Ecological Systems

9.57 Hydrocarbon contamination encountered within made ground during the recent GEA was not sufficiently mobile to pose risks to Hythe Bay or the Royal Military Canal. The Royal Military Canal to the north is contained and has been observed not be tidally influenced. The risk of leachable contaminants to migrate to the canal is also considered to be low as it is not in hydraulic continuity with the groundwater. Furthermore, soil beneath the site will have a large buffering capacity to the transport of contamination.

9.58 During site clearance and earthworks, there is the potential for the generation of contaminated dust and for soil particles to become airborne. However, any contamination within soils would be limited to localised areas and it is not considered likely that migration of contamination within dust or soil particles would pose a significant risk to terrestrial or aquatic habitats. The potential for site-derived contamination to impact ecological systems during construction works is considered to be temporary, local and of minor adverse significance.

9.59 As discussed above, the construction of the proposed development would introduce potentially polluting substances and activities to the site. There is a potential that accidental releases, leaks or spills could occur leading to migration beyond the boundaries of the construction area and potential effects on adjoining sites (Hythe Bay and the Royal Military Canal). Consequently, in the absence of mitigation, the potential effect on Hythe Bay and the Royal Military Canal as a result of construction works is considered to be temporary, local and of moderate adverse significance.

Site Infrastructure

9.60 Hydrocarbon contamination was identified within made ground with the potential to permeate polymeric services. Without mitigation, there is therefore the potential for a permanent effect of moderate adverse significance on site infrastructure.

Completed Development

Human Health

9.61 Soil contamination is widespread particularly within the made ground material. Elevations of PAH, lead, and a single elevation of arsenic were recorded within the upper soil profile (upper 1.0 m) across the site. Testing to date indicates that asbestos is widespread within the made ground at non-hazardous concentrations.

9.62 Following completion of the development, a significant portion of the site will be surfaced with hardstanding or building cover, breaking potential exposure pathways via dermal contact, ingestion or inhalation of dust. In areas of soft landscaping, an appropriate thickness of clean cover will be required in order to provide a suitable growing medium for planting; this will also break exposure pathways to future site users from contaminated made ground. The risk to future potential residents under the residential scenario is moderate due to the small amount of relatively small amount of communal and private gardens proposed. Mitigation measures in the form of clean cover will be required in areas of clean cover and private gardens.

9.63 Given the site history and geo-environmental setting there is expected to be a significant gassing regime. Merebrook and Ground Solutions Group Limited recorded carbon dioxide levels (GSG also encountered significant levels of methane) above 5% v/v at some locations which can lead to the requirement for gas mitigation measures. It should be noted that significant positive flow wasn't encountered during monitoring to date.

9.64 In general, no significant volatile contamination, which may pose a risk via vapour migration and inhalation pathways, was identified within soil or groundwater. The masterplan indicates that the leisure centre will be predominantly surrounded by hardstanding, which would break contamination pathways, thereby reducing exposure. Any outdoor recreation areas will be finished with a capping layer. The risk to future users of the leisure centre from on-site contamination would be negligible.

9.65 The risk to future residents with private gardens from contamination (in all forms) is of moderate adverse significance. The risk to future residents with no gardens from contamination (in all forms) is of minor adverse significance.

9.66 Although hydrocarbon contamination was recorded in made ground at concentrations which could pose a risk to human health, the concentrations were not sufficiently mobile to pose a risk to controlled waters. As mentioned above, the completed development will be surfaced with buildings and hardstanding with gardens and soft landscaping capped with clean cover. There is therefore limited potential for off-site migration pathways via wind movement of dust or soil particles to be active. Due to the depth to groundwater, pathways of dermal contact or accidental ingestion of groundwater are considered highly unlikely.

9.67 Furthermore, in general no significant volatile contamination, which may pose a risk via vapour migration and inhalation pathways, was identified within soil or groundwater beneath the site. While locally significant carbon dioxide concentrations were encountered, significant flow was not encountered. The effect on future off-site human health receptors is therefore considered to be negligible.

Controlled Waters

9.68 Although hydrocarbon contamination was recorded in made ground at concentrations which could pose a risk to human health, the concentrations were not sufficiently mobile to pose a risk to controlled waters. It is considered that groundwater is likely to be tidally influenced. Locally some leachable contamination was encountered, but groundwater monitoring conducted by GSG didn't identify significant groundwater contamination.

9.69 The Royal Military Canal is contained and during the site works was not observed to be tidally influenced. The risk of leachable contaminants to migrate to the canal is also considered to be low as it is not in hydraulic continuity with the groundwater. The drainage plan for the site will mitigate the effect of surface water runoff. The effect on controlled waters is considered to be minor adverse.

Ecological Systems

9.70 Following development, the area of the site will predominantly be surfaced with buildings and hardstanding cover, with limited garden areas, though there will be a large area of public open space. There is therefore limited potential for off-site migration of contamination within airborne soil particles or dust to ecological receptors. The Royal Military Canal is viewed as a contained system and would not susceptible to onsite contamination. The potential effects

on ecological receptors from contamination within the site are therefore considered to be negligible.

Site Infrastructure

9.71 Phytotoxic metals were detected in exceedance of relevant screening levels across the site in made ground which may affect plant growth. Contamination with the potential to permeate polymeric services has been identified, and it is recommended that the utility provider is consulted with respect to their requirements for water supply pipes. In the absence of mitigation measures the risk to infrastructure is of moderate adverse significance.

Mitigation

9.72 Ecological constraints have limited the scope of intrusive investigations to date. Further investigations are recommended following vegetation removal. The additional phase of investigation will determine if any further remediation requirements are required other than those already recommended in the Merebrook GEA. In addition, groundwater will be sampled and further gas monitoring will be carried out to delineate areas requiring gas protection. While the extent of the investigation was limited by ecological constraints, the assessment of risks and environmental effects is considered to be robust.

9.73 All assessments will be carried out in consultation with the regulators (Local Authority Planners and Environmental Health Officer and Environment Agency). If, during construction, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed) shall be carried out at that particular location until a remediation strategy has been submitted to regulator for approval. An assessment of the settlement and compaction requirements will be required as these works have the potential to mobilise contamination. A Verification Report would then be produced to demonstrate that the works set out in the remediation strategy have been completed, prior to occupation of the development.

Construction

Disposal of Excavated Material

9.74 A Materials Management Plan (MMP) is likely to be required under the CL:AIRE Code of Practice to detail the management of materials that will be generated as a result of the site preparation activities, with the emphasis being on the assessment, definition of appropriate classification and end uses for materials arising. It is envisaged that materials will be utilised onsite and prevent offsite disposal where possible.

9.75 All waste soils arising from the site, including pile arisings, will be disposed of in accordance with the relevant statutes and Duty of Care Regulations. A Site Waste Management Plan (SWMP) will be drawn up and adopted by the Principal Contractor. This plan will include details on the effective management of construction materials and wastes and the safe storage of fuels and other potentially contaminative substances used on site.

9.76 Materials, including waste soils which are not to be retained on site, should be removed and disposed of in accordance with all relevant statues including the *Environmental Protection Act 1990*, *The Controlled Waste Regulations 2012* as amended, *The Waste Regulations 2011* as amended, *The List of Wastes Regulations 2005* as amended, *The Hazardous Waste Regulations 2005* as amended, *The Waste Management Regulations 2006* and *The Environmental Permitting Regulations 2010* as amended.

9.77 It is a requirement of these regulations that waste sent to landfill should have been subject to measures to reduce the amount of waste, reduce harmful or hazardous properties and facilitate recycling. These requirements may be satisfied by measures such as segregation and screening of wastes to recover suitable fill and material for crushing, segregation of inert materials and putrescible wastes. The development proposals allow for the sustainable use of site won materials. This will limit the volume of material leaving site and limit the risks of exposure to contaminated soils. If remediation is required, the aim should be to treat material onsite and reuse.

Human Health

9.78 A Construction Environmental Management Plan (CEMP) will be prepared and implemented during construction of the development. The CEMP will include precautions to minimise the exposure of workers and the general public to potentially harmful substances, including:

- Good housekeeping measures including regular cleaning of site and access roads;
- Use of applicable personnel protective equipment (PPE) and if necessary, respiratory protective equipment (RPE);
- Following appropriate personal hygiene protocols;
- The adoption of spill protocols and best practice construction procedures;
- If evidence of previously unidentified contamination is encountered during groundworks (including piling), the nature and extent of the contamination will be fully investigated by a suitable professional, a risk assessment will be carried out to identify any potential risks to sensitive receptors during and following construction and, if necessary, these risks will be mitigated to the satisfaction of the Local Authority and the Environment Agency;
- Measures to avoid surface water ponding and the management of surface water run off; and
- Dust suppression methods as required, this could include wheel washing, covering stockpiles and materials transported to and from site.

9.79 In order to minimise the potential exposure of construction workers (and off site human health receptors) to contaminants associated with dust, control measures would include the implementation of a Dust Management Plan and the following mitigation:

- Ensuring an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible;
- Use of enclosed chutes, conveyors and covered skips, where practicable;
- Minimising drop heights from loading equipment and use of fine water sprays on such equipment wherever appropriate;
- Re-vegetation or covering of earthworks and exposed areas/soil stockpiles as soon as practicable;
- Avoiding dry sweeping of large areas; and

- Installation of hard surfaced haul routes, which are regularly damped down and regularly cleaned.

9.80 The Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended) and the Construction (Design and Management) (CDM) Regulations, 2015. These regulations set out extensive requirements for the protection of construction workers and stress the importance of appropriate procedures in the event of the workforce encountering unexpected contamination. An assessment of the settlement and compaction requirements will be required, as these works have the potential to mobilise contamination.

Off-Site Human Health

9.81 It is not anticipated that wind-blown dust and soil particles will cause significant contaminant migration during construction works. If significant dust generation is observed, dust suppression, including the measures described above will be carried out. Temporary fencing would prevent casual access and limit impacts on the general public.

Controlled Waters

9.82 The CEMP would minimise the potential for contamination of the underlying superficial aquifer and surfacewater receptors, and would set out detailed measures as appropriate. These will include standard good practice measures to control pollution such as Environment Agency Pollution Prevention Guidelines for construction sites and working near water (PPG5 and PPG6). A Piling Risk Assessment would be carried out to mitigate the potential for introducing preferential pathways into the underlying superficial aquifer.

Ecological Systems

9.83 Adherence to the CEMP would reduce the likelihood and severity of any pollution incidents effecting Hythe Bay or the Royal Military Canal as far as practicable.

<u>Completed Development</u>

9.84 Merebrook's GEA highlighted a number exceedances of applicable screening criteria primarily within the made ground. In order to break pollution linkages clean cover would be required in areas of soft landscaping. The various landscaping scenarios detailed within the proposed development layouts should be formed as follows:

- Private gardens with soil: 600 mm;
- Private gardens with shingle: 300 mm and a geotextile marker;
- Communal areas with soil: 300 mm;
- Communal layers of shingle: 150 mm and a geotextile marker; and
- Public Open space: 150 mm of soil and a geotextile marker or 300 mm without.

9.85 Material imported for the formation of landscaped areas should be obtained from a validated source. The validation should incorporate an assessment of the provenance of the material and chemical analysis. Areas of ornamental planting will require a greater provision, but this will be subject to the landscape architect's specification.

9.86 The gas risk assessment conducted to date would classify the site as a Characteristic Situation 1. These classifications indicate a negligible gassing regime and that no ground gas

protection measures are required. However, carbon dioxide was recorded over 5 % (during one of the monitoring rounds and during previous historic investigations), and therefore given the sites historic usage the provision of low level gas protection is recommended. Further gas monitoring is recommended as part of a programme of further intrusive investigation following onsite vegetation clearance. Further gas monitoring is likely to limit the areas of the site that require gas protection.

Off-Site Human Health

9.87 The development will be surfaced with buildings and hardstanding with limited areas of soft landscaping. Proposed mitigation measures will limit the possibility for onsite contamination migrating to off-site receptors. Following completion is not anticipated that wind-blown dust and soil particles will cause a significant issue as long as dust is not allowed to accumulate excessively.

Controlled Waters

9.88 A buffer will be left between the development and the Royal Military Canal. Existing soils will be capped with imported topsoil as detailed in Section 9.132 subject to agreement with the Landscape Architect.

Site Infrastructure

9.89 Phytotoxic metals were detected in exceedance of relevant screening levels across the site in made ground which may affect plant growth. Clean cover will be required in proposed landscaped areas to ensure an adequate growing medium is present. Contamination with the potential to permeate polymeric services has been identified, it is recommended that the utility provider is consulted with respect to their requirements for water supply pipes.

9.90 Utility companies apply strict guideline levels on use of polymeric pipes and may consider all made ground unsuitable for typical plastic pipe materials to be used. Furthermore, as asbestos fibres (at trace levels) were encountered within ground, service trenches should be backfilled with clean validate soils.

Residual Effects

9.91 There will be potential risks to sensitive receptors, such as construction workers, end-users and controlled waters, from the disturbance and mobilisation of ground contamination. However, these can be appropriately mitigated through the implementation of environmental management practices and procedures during the construction works, as described above. Given that contamination will remain in-situ beneath the site within made ground, Shepway District Council would be consulted with regards to any future developments on the site.

9.92 Following implementation of remedial measures, a verification report will be produced, which will include the following:

- Details of gas protection installation and validation;
- Clean cover validation. Clean cover validation will include details of the supplier, and verification of the thickness along with the results of analytical analysis;
- Verification of material used in service corridors (supplier details and *in situ* testing);
- Details of any unforeseen contamination encountered during groundworks;

- Groundwater monitoring; and

- Details of gas protection and clean cover in landscaped areas.

9.93 Assuming the proposed mitigation measures are adopted, residual effects arising from ground conditions at the site are considered to be of negligible or minor beneficial significance, both during and following the development.

Cumulative Effects

9.94 Of the three other developments considered in relation to cumulative effects, Shorncliffe Garrison is sufficiently distant from the application site, and within a very different environmental context, for there to be minimal potential for interaction with the current proposals that could give rise to cumulative geo-environmental effects. Whilst the Imperial Green development has the potential to affect the superficial aquifer and the Royal Military Canal, it is effectively complete, and there would therefore be no overlap in effects during construction.

9.95 Although the Seapoint Canoe Centre adjoins the Princes Parade site and the canal, this development is of very modest scale, such that any geo-environmental effects would be minimal. If construction of Princes Parade overlaps with that of Shorncliffe Garrison, there is a potential for cumulative arisings of waste soils, some of which may be contaminated. However, any cumulative effects would be mitigated by the adoption of best practice as described in this chapter. Cumulative effects during the construction phase are considered to be temporary, local and of minor adverse significance.

10. Landscape and Views

Introduction

10.1 This chapter assesses the potential effects on landscape character and visual amenity, and has been prepared by Lloyd Bore Ltd. It should be read in conjunction with Technical Annex 6, which comprises the Landscape and Visual Impact Assessment (LVIA) produced in accordance with the Landscape Institute and Institute of Environmental Management and Assessment, Third Edition, 2013. Guidelines for Landscape and Visual Impact Assessment (GLVIA).

Scope

10.2 The chapter:

- Describes the existing baseline conditions with regard to key landscape components and identifies the landscape character areas (LCAs) that result from the combination of these components for an appropriately sized study area;
- Appraises the existing landscape in terms of its character and views, and establishes its ability to accommodate change in relation to the proposed development;
- Describes the anticipated changes resulting from the proposed development and assesses the 'magnitude of change' upon landscape character and views;
- Determines the nature of effect of identified impacts with regards to scale, duration, permanence and value; and
- Assesses the 'Significance' of any identified impact.

10.3 In its Scoping Opinion response (dated 30th August 2016, Ref Y16/001/SCO), the local planning authority confirmed that:

- The assessment of effects of the proposal upon the landscape, as identified in the scoping request were agreed necessary;
- It is appropriate that the landscape and visual assessment links through with other assessments based around the heritage aspects of the site, but that it would form a consideration in its own right; and
- It was suggested that the landscape assessment should consider a cumulative assessment of other proposals that have consent or become registered as valid planning applications in close proximity to the site.

Policy and Guidance

Planning Policies

10.4 The following policies are considered relevant to the landscape and visual assessment. They are described fully in the LVIA and are listed here for reference:

National Planning Policy Framework (NPPF)

- Section 11: Conserving and Enhancing the Natural Environment, Paragraphs 109-111 and 113.
- Core Planning Principles. The NPPF sets out 12 core land-use planning principles which should underpin both plan-making and decision-taking.

Shepway Core Strategy 2013

10.5 This document sets out the strategic needs and explains the focal issues to be prioritised in the long-term sustainable development of the district.

Shepway District Local Plan Review: Policies Applicable 2013 Onwards

10.6 Relevant aspects of the following chapters and policies from this document are summarised in the LVIA. These include:

- Chapter 2: Sustainable Development. Policy SD 1.
- Chapter 6: Tourism. Policy TM8.
- Chapter 7: Leisure and Recreation. Policies LR9, LR10, BE1, BE2 and BE16.
- Chapter 9: Utilities. Policy U15.
- Chapter 10: Social and Community Facilities. Policy SC7.
- Chapter 12: Countryside. Policies CO4 and CC05.

Places and Policies Local Plan Preferred Options, October 2016

10.7 The Places and Policies Local Plan Preferred Options document lists sites that are suitable for development to provide much needed new homes and land for offices and other work spaces. It includes land at Princes Parade in Policy UA25 (SHLAA ref: 153).

Guidance and Information Sources

10.8 In addition to the GLVIA, referred to above, the following documents have been referred to in the production of this report and are discussed in Technical Annex 6:

Guidance

- The Countryside Agency and Scottish Natural Heritage, 2002.
- Landscape Character Assessment: Guidance for England and Scotland.
- Landscape Institute Advice Note 01/11. Photography and photomontage in landscape and visual impact assessment;
- Scottish Natural Heritage, Visual Representation of Wind Farms, Version 2, 2014. Note. The latter document is relevant to photographic methodology in general.

Other Sources

- OS digital mapping data.
- MAGIC online mapping data.

- National Planning Policy Framework (March 2012), Department for Communities and Local Government.
- Core Strategy Local Plan (2013) Shepway District Council.
- The Places and Policies Plan (October 2016), Shepway District Council.
- Shepway District Council Online Interactive Map.
- The Kent Downs AONB Management Plan (2014 – 2019) and the Kent Downs AONB Landscape Design Handbook (January 2005).
- NE465: NCA Profile:120 Wealden Greensand (July 2013), Natural England.
- Landscape Assessment of Kent (October 2004), KCC/Jacobs Babtie.

Methodology

10.9 The methodology for this assessment is contained within Appendix 1 of the LVIA (ref **Technical Annex 6)**.

Baseline Conditions

10.10 All diagrams and photos which support the baseline studies are included within Section 3 of the LVIA**.**

Land Use

10.11 Land use and vegetation are shown on an aerial image of the site and study area within the LVIA. The main part of the site is given over to unmanaged grass and areas of scrub, with occasional small trees/outgrown shrubs. The Seapoint Canoe Centre occupies part of the eastern end of the site, together with a public car park and small play area. Further to the north-east (outside the proposal site boundary), is the eastern terminus of the Royal Military Canal (RMC), with its redoubt and wharf. To the north of this is a small area of public open space overlooking the canal and its wharf. The redoubt (stone wall) is to the west of this area of open space.

10.12 In the wider context, land to the north, north-east and north-west of the site is given over principally to residential land use, with occasional mixed uses including education, retail, office, commercial and medical, located along Seabrook Road. There is a petrol service station at the eastern end of Prince Parade. Land to the far north and north-west of the local study area is occupied by leisure use, principally the Sene Valley Golf Club. Alongside this are pockets of agricultural land to the north, and land occupied by the MOD at Shorncliffe Camp.

10.13 Land immediately to the west of the site is occupied by the Hythe Imperial Golf Club (leisure land use), with the Imperial Hotel beyond. A recently constructed residential development known as Imperial Green is situated to the north of the Hotel, forming part of the north-western edge of the golf course. The beaches and coastal promenade are used primarily for sports and leisure uses including walking, cycling and fishing.

Vegetation

10.14 The site is dominated by a matrix of tall ruderal vegetation, low bramble (Rubus fruticosus agg) scrub and patches of taller scrub that is dominated by willow (Salix sp) and elder (Sambucus nigra). Common nettle (Urtica dioica) dominates large areas of the tall ruderal

vegetation. A narrow strip (approx. 6m) of semi-improved maritime grassland runs along the southern boundary of the site. Some of the grass strip appears regularly managed, whilst the edge closer to the tall ruderal vegetation and low-level scrub is less intensively managed. There is a well-managed grass footpath approximately 3-4m in width between the site and the Royal Military Canal. There is a strip of dense marginal vegetation (approx. 2-3m wide) between the footpath and the canal.

10.15 Within the local study area, there is mixed deciduous woodland at Hospital Hill. This extends west and north-west across Horn Street towards higher terrain north of the Seabrook residential area, and westwards in narrow bands running parallel to Seabrook Road and Cliff Road. The tree cover includes a proportion of conifers, including pine (Pinus) in the Cliff Road area and Sene Valley Golf Club.

Topography

Study Area

10.16 The site forms part of the low-lying landform alongside the coast at around 7m Above Ordnance Datum (AOD). This begins to rise inland, along the northern edge of Seabrook Road and Sandgate Esplanade, forming three distinctive tracts of land which eventually form plateaus at Sene Valley Golf Club (high points +97m), Hospital Hill (at around 80m) and the eastern side of Hythe (at around 50-60m in the western part of the study area). These landforms form the edges of valleys running from the Horn Street area in the central, northern part of the study area and from Saltwood to the north-west. A further valley feature extends towards Sandgate, to the west of Coolinge.

Application Site

10.17 Along the coastline, the shingle beach rises from around 1.5m to 4.5m. Princes Parade runs fairly consistently around 7m, with a cross fall of around 0.5m back towards the shoreline. In the eastern part of the site, the Seapoint Canoe Centre is situated at around 5-6m. Levels within the main part of the site are typically between 7-7.5m, with a high point of 8m, broadly in the central eastern part between Seaview Footbridge and the Seapoint Canoe Centre.

10.18 The path leading north across the site from Princes Parade to Seaview Bridge falls from around 6.97m at the road to 4.42m along the southern bank of the canal. The path from Princes Parade to Seabrook Lodge Footbridge falls from around 7.19m to 4.26m. Seabrook Road undulates gently along its length and fluctuates between approx. 5-6.5m. It has a cross fall down towards the coast of around 0.5m.

10.19 The redoubt (stone wall) at the eastern end of the canal is around 6.3m, while the surrounding level of Seabrook Road is around 5.84m. The northern side of the canal in that area is lower still at around 4.89m. Cliff Road is elevated at around 25-35m, with land to the north at Sene Valley Golf Club rising to approx. 85m. Land north of Hospital Hill (road) is elevated at around 60m. Horn Street which leads north from Seabrook Road is set within a valley which ranges from around 10m at its base to 20m on the valley sides.

Public Rights of Way

10.20 Public bridleway HB83 runs along the southern side of the RMC and the northern boundary of the site. Public footpath HB56 follows the northern bank of the canal, with public footpath HB65 (The Royal Military Canal Path) running parallel to that, a short distance to the north, separated by a belt of vegetation. National Cycle Route 2 runs along Princes

Parade to the south of the site. This is a long-distance cycle route running from Dover in the east and, when complete, will connect with St. Austell in Cornwall.

10.21 There are two PRoWs to the north-east of the site which run through woodland at Hospital Hill: public footpath HB1 and public bridleway HB2. These connect with Sandy Lane at the southern end of Hospital Hill Road via restricted byway HB2A and the Shorncliffe Camp Military Cemetery further to the north-east via public bridleway HF46.

10.22 There are a small number of PRoWs leading north from Cliff Road and the Seabrook residential area. These include public footpath HB19 and public bridleway HB8 from Cliff Road, and public bridleway HB18 which leads north-west from Whitenbrook (just off Naildown Road) and connects with HB8 at Sene Farm.

10.23 To the north of the site, the Elham Valley Way runs from the northern part of the broad study area, where it crosses the M20 corridor and heads south-east, crossing the Sene Valley Golf Club before entering Hythe. There are a number of public footpaths in the Horn Street area, generally running south-east / north-west. Public footpath HB13 heads north-west from Horn Street, just north of Paraker Wood.

Kent Downs AONB

10.24 The AONB is located to the north and north-west of the site and is approximately 260m away from the northern boundary at its closest point. The baseline studies within the LVIA confirm that it can be effectively scoped out of assessment, as it is outside the visual influence of the site and development proposals.

National Landscape Character Area: Wealden Greensand

10.25 The site is located within the 'Wealden Greensand' National Character Area (NCA). Relevant descriptions of this NCA are included in the LVIA, as extracted from the National Character Area Profile 120. A brief description of this NCA is included below:

The long, curved belt of the Wealden Greensand runs across Kent, parallel to the North Downs, and on through Surrey. It moves south, alongside the Hampshire Downs, before curving back eastwards to run parallel with the South Downs in West Sussex. Around a quarter of the NCA is made up of extensive belts of woodland – both ancient mixed woods and more recent conifer plantations. In contrast, the area also features more open areas of heath on acidic soils, river valleys and mixed farming, including areas of fruit growing... The south-western part of the area remains essentially rural, with only small market towns such as Petworth and Petersfield, but eastwards from Dorking the character becomes considerably more urbanised, with many towns including Maidstone, Reigate, Ashford and Folkestone. The area forms a major transport corridor, with the M25, M20 and M26 motorways and other major road and rail routes all running through it... A short coastal stretch extends from Folkestone to Hythe, with a heavily developed hinterland: as a result, most of the coastline is protected by coastal defences. The exception is Copt Point, where the eroding cliffs are designated for their wildlife and geological interest. This part of the coastline is also part of the defined Dover–Folkestone Heritage Coast. The coastline offers a contrasting recreational experience from that associated with the heathlands, wetlands and woodlands of the wider NCA.

County Landscape Character Areas

10.26 The following character areas are present within the broad study area, as set out in the Landscape Assessment of Kent (2004):

- Romney Coast LCA, which includes the site, at the north-eastern extremity of the character area; and
- Saltwood: Postling Vale LCA, to the north-west of the site.

Romney Coast LCA: Characteristic Features

10.27 A full summarised description of the Romney Coast LCA is included within the LVIA. Its characteristic features, as assessed by the Landscape Assessment of Kent, are as follows:

- Sheltered linear 20th century holiday development behind sea wall.
- Many temporary structures. Heritage structures such as Martello Towers.
- Dominant sea wall.
- Sand dunes and dune grasses. Mudflats and timber groynes on seaward side.

Local Landscape Character Areas

10.28 A specific landscape character assessment of the study area was undertaken by Lloyd Bore. The Local LCAs are fully described with accompanying photographs and shown on Figure 14 of the LVIA, and are summarised below:

A. RMC & Imperial Hythe Coastal Strip

B. Princes Parade Coastline

C. South Road Residential

D. Sandgate Esplanade Coastline

E. Seabrook Road Residential

F. Cliff Road Residential

G. Sene Valley Golf Club

H. Dibgate Upland

I. Naildown Road Residential

J. Horn Street Residential

K. Hospital Hill

L. Hospital Hill Residential

M. Shorncliffe Camp & Risborough Barracks

10.29 The Local LCAs relevant to the assessment of significant landscape and visual effects are described below.

Local LCA A. RMC & Imperial Hythe Coastal Strip

10.30 This comprises a strip of low-lying land situated between the main coastline (Princes Parade and promenade) and the RMC. Beyond the RMC to the north, land rises rapidly

away from Seabrook Road, forming an inland backdrop to this character area, consisting of woodland with scattered residential development. The wooded landform at Hospital Hill also forms part of the visual setting to the area, containing views inland to the east and north-east. Views are partially framed at the western end of the coastal strip by the Imperial Hotel and recent residential development to the north of the Hotel, known as Imperial Green.

10.31 The area contains the Hythe Imperial golf course to the west and land given over to scrubby vegetation (the proposal site) to the east. Similar scrubby vegetation with occasional trees also occupies most of the parts of the sides of the RMC. Levels have been raised within the eastern part of this character area since Napoleonic times and this has contributed to disconnecting the visual link between the RMC sidings and the coastal land to the south. This also contributes to a sense of intimacy within the landscape running alongside the canal. Land to the south of the canal within the golf course and along the southern edges of the eastern area, borrow visual character from the extensive views of the promenade and English Channel beyond, to the south of the character area.

10.32 No built development is present within the character area which allows views east / west, although restricted in some areas by scrubby vegetation along the footpaths running north / south across the golf course. Taller vegetation is windblown in places, with tree cover confined to small, scattered groups. The area forms part of a broad swathe of leisure uses along the inland coastal area, in the form of the public open space and leisure centres along South Road to the west and the Seapoint Canoe Centre and adjoining play area to the east.

Local LCA B. Princes Parade Coastline

10.33 This is described as a long, narrow coastal strip forming the promenade to the coastline between Hythe and Sandgate. This runs alongside the adjoining 'RMC & Imperial Coastal Strip' character area to the north to form a broad, flat area of undeveloped land running alongside the coast. The area has deep shingle beaches set at lower level to the promenade and coastal road, separated by a concrete sea wall with occasional flights of steps and railings providing access between the two levels, with benches placed at regular intervals facing the sea.

10.34 There is a dominant use of hardstanding in the form of red and black coloured tarmac on the promenade and road respectively and concrete / exposed aggregate sea walls. This is a defining feature of the area, whilst also a detracting feature through its monotony, and in some places through its state of disrepair and lack of maintenance. There are occasional small, disused shelters inland from the road, and turning areas, which attract sporadic car parking. Hot snack / refreshment vans find opportunities to park on the southern edge of the coastal road. Grassy edges north of the road recede informally into scrubby vegetation in the eastern part of the LCA and the golf course landscape to the west. Otherwise there is virtually no vegetation within the character area at all, leaving the area exposed and open to the elements.

10.35 The promenade is well used by walkers, dog walkers, cyclists and joggers. The beach is well used for fishing from the shoreline. There are wide and open views of the sea and the sky. Inland, the visual setting is defined by the rising landform north of Seabrook Road and at Hospital Hill, as described opposite for Area A. There are distant views along the coastline towards Sandgate and Folkestone to the east and towards Palmarsh and Dymchurch to the west, beyond the locally iconic Imperial Hythe Hotel.

Views

Zone of Theoretical Visibility (ZTV)

10.36 The visual baseline studies for informed by producing several 'Zone of Theoretical Visibility' (ZTV) diagrams, using specialist software packages and survey data for the broad study area (a 2.5km radius circle centred on the site). The ZTV and subsequent commentary in the LVIA identified a number of locations within the study area from where the proposed development would, theoretically, be visible from. This process informed a further scoping exercise to establish assessment viewpoints, which were subsequently agreed with the local planning authority.

Visual Context and Accessibility

10.37 The arrangement and composition of views within the 1.5m radius study area is strongly influenced by the linear landscape compartments running parallel to the coastline, intersected by sub character areas defined mainly by land use, architectural style and age. The steep wooded landform overlooking the coast forms a backdrop to views along the shoreline and allows views out towards the coast. These are filtered in some areas by intervening buildings and trees. In contrast, there are more open views inland to the north across the flatter agricultural landscape south of the M20/A20 corridor.

Visual Receptors

10.38 The type and locations of visual receptors likely to be affected by views of the proposed development are identified below, and classified according to their sensitivity into primary, secondary and tertiary views, depending on the sensitivity of the location, the nature of the activity being undertaken and the existing visual amenity associated with the view.

Primary Receptors

- Local Residents: Properties to the north of the site, including Seabrook Road, Cliff Road and Naildown Road; the eastern edge of Imperial Green, a recently constructed residential development to the north of the Imperial Hotel; properties to the east of the site located between Sandgate Esplanade and Hospital Hill; and properties at the eastern edge of Princes Parade and to the north of Seabrook Road close to the eastern terminus of the canal (wharf).

- Users of public bridleway Ref. HB83, to the north of the site and south of the RMC; public footpath Ref. HB56, to the north of the RMC; and public bridleway Ref. HB65, to the north of HB56.

- Visitors to/users of Princes Parade and the coastline south of the site (mainly motorists, pedestrians and cyclists); the area of public open space close to the wharf, at the eastern terminus of the canal (together with pedestrians on the adjoining pavement on Seabrook Road); and the play area to the east of the site and adjoining public car park.

- Users of Hythe Imperial Golf Club (the golf course west of the site) and the Seapoint Canoe Centre, who also canoe along the RMC.

Secondary Receptors

- Users of the local PRoW network, such as long-distance cyclists on Princes Parade (National Cycle Route No. 2). These might be considered primary receptors, but would be considered secondary receptors if unfamiliar with the baseline conditions and / or attention is focused on the activity of cycling, rather than being singularly focused on the proposed development.

- Users of the local road network, i.e. the western end of Sandgate Esplanade and Hospital Hill.

- Visitors to/users of the Imperial Hotel to the west of the site and the public car park at the eastern end of Sandgate Esplanade, at the junction with Princes Parade and Seabrook Road.

Assessment Views

10.39 Based on the baseline study and the nature of the proposed development, a series of assessment views were selected. Baseline assessment photography was taken by Lloyd Bore during a site visit on the 5th December 2016. The viewpoint locations are indicated on Figure 23 of the LVIA, and are as follows:

- View 1: East from Imperial Hotel Hythe on Princes Parade.
- View 2: North-east from Princes Parade.
- View 3: West from Sandgate Esplanade, near Princes Parade junction.
- View 4: West from the wharf at the eastern terminus to the RMC.
- View 5: South from RMC, close to Seaview Footbridge (PRoW HB56).
- View 6: South from Naildown Road.
- View 7: South-west from Hospital Hill.

10.40 The LVIA includes an annotated panoramic photograph of each assessment view, together with viewpoints, primary receptors and a description of the existing view, including key components and detracting features.

Predicted Effects during Construction

10.41 Detailed construction methods are not known at the time of assessment and would require further site investigations. However, the construction processes involved are expected to be routine and not out of the ordinary for the nature and type of development proposed. It is assumed that the groundworks and construction of the proposed development will require the use of cranes, piling rigs and scissor lifts, excavators, bulldozers, site trucks, concrete mixer lorries with extender arms to pour concrete and material delivery lorries. Groundworks and remediation works are likely to require the temporary on-site storage of topsoil and sub-soil.

Topography

10.42 The land remediation strategy will involve the levelling and regrading (mainly raising slightly) of site levels to create a platform for new development which addresses the need

for vehicular and pedestrian access, drainage and flooding considerations and proximity to the RMC and associated features. This is considered to be a construction phase impact, until the point of completion of each phase, when the new site levels within each respective phase will be detectable in the landscape as they are intended to be, within the context of the operational phase of the site as a whole. The changes to topography relating to the completed development are therefore described under the operational effects section of the report, as they are considered not significant in the context of the proposed demolition and construction phase.

Land Use

10.43 The land use character of the site will be altered during Phase 1, from an area of informal open space to an intensive construction site, resulting in an adverse change in a single operation lasting approximately one year and five months. As construction would be phased, changes in land use character of subsequent phases would occur sequentially, with the first activity being the proposed remediation works. This would change the land use character of the whole site.

10.44 Mitigation during the construction phase also includes a commitment to (where possible) retaining areas of land for usable public open space, while other construction phases continue. This would minimise the effects of the construction process upon land use, whilst allowing parts of the future Phase 3 and 4 to retain an open landscape and visual character.

10.45 The construction works would be short-term in duration, causing a temporary change in land use with mitigation measures incorporated into the proposals to minimise adverse effects where possible. The construction phase would be noticeable, but sporadic in occurrence. While in principle the change in land use character as a result of the demolition and construction phases would be adverse, it is assessed that all measures possible have been incorporated into the indicative construction strategy, so that the magnitude of change would remain low and overall the effect on land use would be not significant.

Vegetation

10.46 The remediation strategy (Phase 1) will require all vegetation to be removed. It is understood that the band of vegetation along the southern embankment of the RMC in the vicinity of PRoW HB83 would be retained, as it is outside the red line planning application boundary shown on the Parameter Plans.

10.47 Whilst all site vegetation would be removed, some vegetation would be returned to the newly formed surface of the site in Phases 3 and 4. In comparison to the existing site vegetation, the new amenity grass would be different, but it would mean that there would not be a total loss of vegetation and a corresponding use connected to public open space during the construction phase. It would also bring about a more gradual change over time.

10.48 The effect on vegetation is assessed to be adverse and of medium - high magnitude. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the demolition and construction phase would have a Major - Moderate, Adverse, Direct, Permanent and Long-Term effect on vegetation as a landscape resource.

Visual Amenity

10.49 The following section summarises the anticipated significant visual effects on the LVIA assessment viewpoints (Views 1-7). Existing panoramic views are shown in the baseline section of the LVIA. Existing single-frame photography is included within Appendix 2 of the LVIA.

View 1: East from Imperial Hotel Hythe on Princes Parade

10.50 Following the remediation Phase 1, construction activities would generally migrate from east to west. Following the completion of Phase 3, View 1 would be affected during Phase 4, when the western character area and western open space would be constructed. The construction activities would be short-term and temporary in nature and would move around the site during different phases of the overall demolition and construction process. It is assessed that they would be of low magnitude generally and not significant.

View 2: North-east from Princes Parade

10.51 Phase 1 would change the view by replacing the main part of the site with site hoarding whilst it is remediated. Following this, construction activities would gradually move towards the eastern end of the site, after which they would progressively make their way west again. The proposed mitigation strategy of allowing land within Phases 3 and 4 to become temporary open space would reduce the overall effects on visual amenity during these latter construction phases.

10.52 Whilst the effect on this view would be adverse in nature, the proposed construction works would be short-term, temporary and occasional in occurrence, due to the phases of development proposed and provision of temporary open space in some areas in the west of the site, whilst others are completed. In all, therefore, the effect on visual amenity as a result of the proposed demolition and construction works on View 2 is assessed to be not significant.

View 3: West from Sandgate Esplanade, near Princes Parade junction

10.53 Following completion of the Phase 1 remediation works, construction activities would remain a feature of the view during Phase 2 in the eastern part of the site. From this particular viewpoint, views of remediation and construction activities would be partially interrupted by existing built development. At the time the assessment photography was taken, there was evidence of construction activity associated with on-going sea defence / coastal management (evident in the parts of the single frame and panoramic views).

10.54 The character of the existing view is one of a developed and urban landscape. The presence of everyday activity (including temporary construction works and traffic movements) is already a feature of the view. The magnitude of change resulting from the proposed demolition and construction phase is assessed to be low (at worst) and adverse, but not significant.

View 4: West from the wharf at the eastern terminus of the RMC

10.55 As with View 3, remediation and subsequent construction activities required for Phases 1 and 2 would be the most immediate visual effect on View 4. After this time, the view would shift to being the operational phase of the development in the eastern part of the site, with the implementation of the embankment planting along the northern side of the development then becoming apparent.

10.56 While these effects on visual amenity on View 4 would be adverse in nature and of medium magnitude, they would be temporary and short-term. The latter phases of the construction phase (Phases 3 and 4) would be far less apparent in the view; noticeable in the distance, but not prominent or dominant beyond the completed development in the foreground. The effect overall is assessed to be not significant.

View 5: South from RMC, close to Seaview Footbridge (public footpath HB56)

10.57 The representative view for View 5 takes in the central part of the site from the area close to Seaview footbridge. The extent of the Phase 1 remediation works, however, would extend across the entire panorama. It would not be until the commencement of Phase 3 that construction activities would become visible in the left of the panoramic view and begin to enter the single frame view. Following that, Phase 4 construction activities would be visible to the right of the panoramic and single frame views (as included above). Views of the temporary open space would be a feature of the view for some time, whilst the remainder of the site is progressively developed from east to west.

10.58 The construction phase would have an adverse effect on visual amenity, but this would be minimised by the above mitigation measures, combined with the early implementation of the embankment planting and new linear park. With the above factors considered, the overall effect of demolition and construction on the amenity value of View 5 is considered adverse, but of low-medium magnitude and short-term and temporary in nature, so as to be not significant.

View 6: South from Naildown Road

10.59 The effects of the demolition and construction phase on View 6 would be similar to those described above for View 5, as the viewpoint is taken from a similar location relative to the central part of the site, although further north and from a more elevated vantage point. In comparison to View 5, whilst being further away from construction activities within the site, the elevated vantage point would probably reveal more of the construction activities in Phases 3 and 4. Overall, the effect on View 6 is assessed to be low - medium adverse, but short-term and temporary and therefore, not significant.

View 7: South-west from Hospital Hill

10.60 Following the site remediation works, Phase 2 and most of Phase 3 of the construction process would not be visible by users of Hospital Hill Road travelling west. Views of these construction phases would be obstructed by the existing built development on the southern side of Hospital Hill. Residents south of Hospital Hill would have a comparatively unrestricted view of the eastern part of the site and would therefore experience predominantly open views of Phases 2 to 4 inclusive.

10.61 The mitigation included within the proposed construction phase plan would allow Phases 3 and 4 within the western part of the site to remain green, whilst the preceding construction phases are completed. The demolition and construction works for Views 7 for residents of properties immediately south of Hospital Hill would be adverse, but short-term and temporary. They would migrate around the site, so as to be not significant. Similarly, the view for users of Hospital Hill road would be of a nature where the visual effects of the proposed demolition / construction phases would not have a significant effect.

Landscape Character

10.62 The demolition and construction activities will affect the character of the site and visual character/setting of a small number of local LCAs nearby. Due to the scale, nature and

duration of the proposed demolition and construction activities and limited visibility, it is concluded that there would be no significant effects on the Romney Coast County LCA or the Wealden Greensand NCA. Th only local LCAs to be affected are: A. RMC and Imperial Hythe Coastal Strip; and B. Princes Parade Coastline.

10.63 The demolition and construction phase would affect a high proportion of the eastern part of the RMC and Imperial Hythe Coastal Strip, lasting approximately 4 years. It would also affect the setting of the Princes Parade Coastline which lies to the south. The construction works would, however, be short-term and site/local in extent. By its nature, the construction phase would change much of the landscape character of the site and the inland setting of the coastal promenade to the south, but the change would be phased and take place gradually, with parts of the site given over to open space uses, during the construction phase.

10.64 Construction works and their effect on the character of the landscape are not uncommon along this part of the coastline. Construction activities have been prevalent close to the western end of these LCAs for several years at the Imperial Hotel / Imperial Green development and within the past 5 years (approx.) at the eastern end of Princes Parade to construct new residential development. Temporary coastal management construction works is also not uncommon. The overall effect on local landscape character within these LCAs is assessed to be not significant.

Summary of Demolition and Construction Effects

10.65 Due to the short-term and temporary nature of the demolition and construction phase, combined with its phased nature and the mitigation incorporated into the scheme, the effects on landscape and visual amenity are considered to be generally of low magnitude. In summary, with the exception of vegetation (as a landscape resource), where a Major - Moderate, Adverse, Direct, Permanent and Long-Term effect is concluded, it is assessed that the demolition and construction effects of the proposed development on landscape and visual character would not be significant and therefore require no further assessment.

Predicted Effects of the Completed Development: Visual Amenity

10.66 The following section summarises the anticipated significant visual effects on the LVIA assessment views (Views 1-7), in relation to the completed development. Existing panoramic views are shown in the baseline section of the LVIA. Existing single-frame photography and proposed CGIs are included within Appendix 2 of the LVIA.

View 1: East from Imperial Hotel Hythe on Princes Parade

10.67 There are two receptor types considered in relation to this view: Users of Princes Parade, travelling east along the Promenade; and residents at Imperial Green, mainly along its eastern edge with views east across Hythe Imperial golf course.

Users of Princes Parade

10.68 A block of new development would be introduced in the view at the far end of Princes Parade. This would be partially interrupted by intervening vegetation and to a lesser extent by intermittent signage on the northern side of the road. The new built development would obstruct views of existing residential development at Battery Point and in the vicinity of Lower Corniche and Hospital Hill, effectively replacing one component of the view with another of a similar type and size.

10.69 The new built development would not block views of the vegetation and topography of Hospital Hill and it would not penetrate the horizon of the view. From this location, the new built development would occupy a small proportion of the single-frame view. The proposed development would not appear inconsistent with the type, scale and massing of existing development which is already a feature of the view.

10.70 As the receptor travels progressively east from this location, the western open space and western car park would enter the view. There would be beneficial visual effects for some, of introducing the new accessible area of open space in this part of the site. Car parking is already a feature of the view along Princes Parade.

10.71 It is anticipated that the overall nature and composition of the view and amenity from this viewpoint would not be significantly adversely affected by the introduction of new built development. There are also some beneficial and neutral aspects introduced at the western end of the site. Overall, the effect on visual amenity for View 1 is concluded to be neutral in nature, and therefore not significant for users of Princes Parade.

Residents along eastern edge of Imperial Green:

10.72 Views of the proposed development would be experienced mainly from upper floor, two and three storey windows. New built development appearing in the far distance at the eastern end of Princes Parade would be similar in nature to those described above, experienced from Princes Parade. These views would be comparatively open as a result of their elevated position, but the built development would be so far away in the distance that it would not result in a significant effect on visual amenity.

10.73 The development would not have an over-bearing influence on the views of Sandgate and Folkestone beyond and the overall visual relationship between land and sea, would not be significantly altered. Views out towards the channel would also remain unchanged. The wooded backdrop which contains occasional development along Seabrook Road and Cliff Road to the north / north-east and Hospital Hill to the east would remain unaffected. Views of the western part of the site where semi-natural open space would be created would be similar in character to the existing situation.

10.74 Overall there would be short-term adverse effects associated with the introduction of the built development, but it is assessed that these would largely relate to the initial 'shock of the new' and overall, the adverse effect on residential visual amenity would be of low magnitude (at worst), so as not to have a long-lasting significant effect.

<u>View 2: North-east from Princes Parade</u>

10.75 The principal receptors to the view represented by View 2 would be users of Princes Parade to the south of the site. The foreground of the view would feature the proposed western car park and beyond that, the western area of the western open space that is designed to be semi-natural in character. This would appear visible as a new area of open space, but the new vegetation would require a long-term period to mature in the landscape (11+ years). The new diverted road would be visible entering the site and, beyond the western car park and area of open space, heading gradually towards the RMC in front of the western residential area.

10.76 The new built development would occupy the central, right part of the view. In the proposed CGI, the block model does not show the intricacy of detail that would be created by changes in the roofline of buildings throughout the development, which would soften its appearance and massing overall. As with View 1, the new built development would be

visible in front of existing development at Battery Point and in the vicinity of Lower Corniche and Hospital Hill. Parts of the undeveloped areas of woodland on Hospital Hill would be replaced in the view and some parts of the new development would penetrate part of the skyline above the horizon beyond Sandgate.

10.77 As the receptor moves eastwards through the development along Princes Parade, views of parts of the wooded backdrop formed by land at Seabrook would be blocked by new buildings. However, in places there would be gaps in built development, which would allow views to filter through. Public realm improvements to the promenade would also be visible. A combination of adverse and beneficial effects is anticipated for this representative view. Adverse visual effects would result from the introduction of built form where it does not currently exist, blocking some views of the landscape beyond which forms a backdrop to the coast. There would also be beneficial effects resulting from the provision of new accessible open space areas and public realm improvements to the promenade.

10.78 The beneficial effects do not necessarily fully outweigh the main adverse effect of the introduction of new built development on a currently undeveloped site. However, the mitigation measures embodied within the proposed development layout (in terms of size, scale and general massing) would reduce adverse visual effects to a medium level. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 2.

View 3: West from Sandgate Esplanade, near Princes Parade junction

10.79 This assessment view considers the primary receptor group as being users of the promenade between Sandgate Esplanade and Princes Parade, such as pedestrians, cyclists and joggers. The proposed development would introduce new built form into the central part of the view, replacing boundary vegetation south of the existing Seapoint Canoe Centre area and part of the sky above the site.

10.80 New built form would be introduced in part of the view where it currently does not exist, but the scale and massing of the development would be generally consistent with existing structures along the seafront to the east and west of the site. Primary mitigation is noted here, in terms of overall building heights, scale and massing. The promenade would benefit from the proposed public realm improvements.

10.81 The development would be noticeable from this viewpoint, but it would be introduced gradually over time within a surrounding context (in and out of the shot) which already contains built development and a developed promenade. Taking into account the maximum storey heights proposed within the development, magnitude is assessed overall to be low (not significant). The elements that would be lost in the view would not fundamentally alter the overall composition and visual amenity gained from this particular location and there would be beneficial effects associated with the introduction of the new promenade.

View 4: West from the wharf at the eastern terminus of the RMC

10.82 Primary receptors in relation to this representative view are users of the open space area at the eastern terminus of the RMC. The development would introduce built form in the central, left part of the view. Views would be partially interrupted by some of the bankside vegetation that would be retained between the canal and the red line boundary. In the long-term, vegetation in the form of high planting on an embankment would develop (as

shown the Land Use Parameter Plan). This vegetation would eventually soften and filter views of the lower parts of the built development (as considered in the residual effects section).

10.83 Primary mitigation in the form of building siting, size and massing incorporated into the project design, means that the skyline above the site will be largely unhindered. Larger buildings are generally located in the eastern part of the site, where they are closer to existing built development. The overall height of built development has been considered within the eastern part of the site, to maintain a contiguous relationship with existing development at the eastern end of Princes Parade.

10.84 Whilst there is currently some small-scale existing development in the periphery of the view (Seapoint Canoe Centre and along Seabrook Road), the view along the RMC from this area of open space is at present characterised by an undeveloped and vegetated landscape. Introduction of built form and the removal of vegetation (albeit being replaced in the long-term) in this view is assessed to have an adverse effect on visual amenity in the short-term. The magnitude of change is assessed to be medium. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Moderate, Adverse, Direct and Permanent and Long-term effect on the visual amenity in relation to View 4.

View 5: South from RMC, close to Seaview Footbridge (PRoW HB56)

10.85 The primary receptor group in relation to this view would be users of public footpath HB56, immediately to the north of the RMC. A large block of built development would be introduced into the view beyond the canal and Seaview Footbridge. The CGI model does not show full architectural detailing. This additional level of information would be the subject of a detailed planning application, although the PDAS gives a good indication of the likely appearance of roof profiles and building materials. The proposed buildings would be attractive and appropriate to their setting, but their introduction into the landscape would affect what could be seen from the footpaths running along the RMC.

10.86 The CGI shows that the finished floor level of the built development would be raised slightly higher than existing ground levels. The roofline would generally occupy part of the skyline which is currently viewed beyond the existing vegetated mounds within the site, although these effects would be mitigated as planting in the foreground develops. Vegetation within the site would be removed and planting of taller species implemented on an embankment. These would become mature in the long-term. This change would be visible in the foreground beyond the RMC and public bridleway HB83 on the southern side of the canal. To the right of the single frame view, the proposed linear park would be visible, with a slightly wider gap in the western part of the site between the canal and the access road.

10.87 Viewed in combination with the broader panoramic context, the CGI confirms that while there would be a gap between the eastern and western blocks formed by the centrally located area of proposed open space, built development would spread along much of the field of view towards the coastline. The introduction of the proposed built development when viewed from locations along PRoW HB56 to the north of the canal is assessed to have an adverse visual impact. It would introduce built development in an area where it does not currently exist, between an area of high amenity value and the coast.

10.88 While direct views of the sea are largely prevented by the existing vegetated mounds within the site, the visual relationship with the coastline would be altered. In some views however, there would be gaps which would allow views through the development in a north

/south direction, for example across the centrally located area of proposed open space. These are views which would be improved over time while new planting establishes and matures in the landscape.

10.89 The magnitude of change is assessed to be medium, in the 'Day 1' scenario. Primary mitigation included within the design has involved consideration of the height of new buildings and allowed for gaps in built development so that views can filter through towards the coastline in some locations and allow views of the sky to remain. The amount of built development that would occupy the view would be larger in some views than others, depending on the viewing location along public footpath HB56 (note this is a representative view from the land north of the RMC, which covers approximately 500m).

10.90 The effect on the visual amenity for View 5 is considered of medium magnitude. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Major - Moderate, Adverse, Direct Permanent and Long-term effect on the visual amenity in relation to View 5.

View 6: South from Naildown Road.

10.91 The principal group of receptors which are assessed in relation to this view are those residents with south facing views towards the coastline and channel beyond the site. As these views would be private, View 6 has been taken from a publicly accessible location where an opening in development allows an indicative vantage-point towards the proposed development site. Publicly accessible views of this nature are infrequent in the landscape. Where private views south over the site are available, they vary in nature. Some will be more open than others, as a result of varying degrees of intervening built form and vegetation.

10.92 Built development would be introduced into part of the view where currently land meets sea, interrupting views of Princes Parade, but it would not completely obstruct views of the channel. Views of the horizon would be retained, but the proposed development would introduce built form in an area where it does not currently exist, and would change the visual relationship that these receptors have between land and sea by introducing an additional band of built form along the coastline.

10.93 For these reasons, the introduction of the proposed development on south-facing, private residential views towards the channel and coastline, is assessed to be adverse in nature. The magnitude of change is assessed to be medium. Although a similar view from the RMC (View 5) was considered to be of a high magnitude, View 6 b is at a greater distance from the proposed development, which would therefore be less prominent. The view towards the coastline and channel would be changed, but views of the sea and distant horizon would not be completely blocked. View 6 is from a higher elevation than View 5 and less connected to the immediate context and visual amenity offered by the RMC at close proximity.

10.94 The primary mitigation measures incorporated into the design, such as limiting the overall height of built development within the site and creating north / south openings through it, are more effective from this elevated viewpoint, compared to views from the lower lying parts of the RMC. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Major - Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 6.

View 7: South-west from Hospital Hill.

10.95 This viewpoint is associated with two different receptor groups: Pedestrians, cyclists and motorists travelling south-west along Hospital Hill; and a small number of residents with upper floor windows overlooking the site (some of these are visible in the left of View 7). In relation to this receptor group, the assessment has also taken account of the illustrative photography taken from Martello Tower No.8 (HE View 3) and photography of the eastern part of the site, taken from Hospital Hill woodland in relation to HE View 4 (Appendix 2).

Users of Hospital Hill Road

10.96 For users of Hospital Hill Road, the proposed development would introduce a block of development within the lower, central part of the view with the new relocated Princes Parade road running in front of the proposed buildings at ground level. The new road and built development would be set back from the RMC, separated by planting on the embankment and within the linear park and centrally located open space.

10.97 The Hythe Imperial golf course and the proposed western area of public open space would form a noticeable area of undeveloped land between the proposed built development and the Imperial Hotel. Distant views of the coastline south of the Hotel and beyond to the west and south-west of Hythe would be retained. Views of the majority of the proposed built development in the eastern part of the site, including the proposed leisure centre building would be prevented by intervening development on Hospital Hill.

10.98 Travelling along Hospital Hill, the anticipated change to a relatively undeveloped baseline view, which currently features uninterrupted views of vegetation and the coast, that would be brought about by the proposed development, is assessed to be adverse. However, when considering the nature of activity (mainly a transient, short duration view), the limited amenity value associated with it, and the small amount of the proposed development that would occupy the view, it is assessed that any adverse effect would be of low magnitude and not significant. For many receptors gaining this view whilst travelling in a single direction along this road, visual effects would be neutral. It is concluded that the visual effects in relation to this particular receptor group, does not require further assessment.

Residents South of Hospital Hill

10.99 The nature of change for these receptors is assessed to be similar to that described above. Views of new development in the eastern portion of the site are anticipated to open up to a greater extent, although filtered and obscured by further intervening built form and vegetation on the lower parts of the sloping ground between Seabrook Road and Hospital Hill. For these receptors, it is assessed that the introduction of built form within the site would represent an adverse impact, mainly as it would introduce built development where it does not currently exist, and it would replace an area of vegetated land and views of parts of the shoreline south of the site.

10.100 This is considered to be of borderline low - medium magnitude. In comparison to View 5, which would be experienced from a broadly similar elevation and distance, the introduction of the proposed development would not change the visual relationship with the channel to the same degree and would occupy less of the overall view. The generally open view of the site would be likely to affect a smaller number of receptors, who would have the site in part of their peripheral vision.

10.101 The effect on the visual amenity of View 6 (for residential receptors only) is considered to be of low-medium magnitude. Based on the supporting methodology and Tables A-I, set

out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 7.

Predicted Effects of the Completed Development: Site and Landscape Character

Topography

10.102 Operational effects on topography (experienced post construction) would be on a site scale only. They would be created as a result of the completed remediation and surface water strategy for the site. It is noted that careful consideration has been given throughout the design process to minimise finished floor levels (FFLs) to reduce the overall height of built development within the site, with the intention of mitigating landscape and visual impacts.

10.103 The Parameter Plans indicate a proposed FFL of +7.8m AOD. This is generally consistent with site levels as a whole, although slightly higher by around 500mm compared with existing ground levels. The FFL for the proposed leisure centre building would be +8.44m, which is approximately 1.3m higher than existing levels in this part of the site.

10.104 The embankment along the southern edge of the canal path (PRoW HB83) is not fully detailed on the Parameter Plans, but the height difference between the path (at +3.6m AOD) and the road (between +6.65m AOD in the eastern part of the built site and +6.75m AOD in the western part of the built development site) would be approximately 3m. The width of the embankment is estimated to be around 8m judged from the Parameter Plan cross sections, which would mean the gradient of the embankment would be around 1:2.5, topped with planting.

10.105 Levels along the new promenade would be consistent with existing, set at +6.8m AOD (compared approximately +7m AOD). There would be a step / sea wall created between the Promenade and the main FFL of 1m (FFL +7.8m AOD). The development seeks to create a predominantly level platform upon which to site new buildings and landscape treatment, above a capping layer of clean fill. Whilst the site is generally flat, with uneven areas and higher mounds, the topographical relationship with the promenade and RMC would remain largely consistent with existing conditions, although slightly higher.

10.106 Whilst there are potential cumulative adverse effects of vegetation removal as part of the construction phase and raising slightly the FFL of the proposed built development (which in turn have corresponding landscape and visual impacts), the effects on site topography when experienced on completion and throughout the operational phase is assessed to be neutral and not significant.

Land Use

10.107 The land use within the site would change from an area of undeveloped open space to a site developed for predominantly residential and leisure uses, including new areas of formal open and informal semi-natural open space. The promenade would remain in its existing location and pedestrianised, with the vehicular element of the road diverted through the site. Car parking areas will be introduced in the main residential sites and around the proposed leisure centre. In terms of accessibility, the existing open space within the main part of the site is not open to formal public access, although there are publicly accessible routes through and around it and a small number of informal routes through it in some areas. The new open spaces within the site would improve access and permeability over existing conditions.

10.108 There are beneficial outcomes associated with improving recreation and access opportunities to the open space areas within the site. These come with adverse effects associated with the loss of existing open space areas within the site to a developed land use, but the new open space areas will be of demonstrable value. The fact that the site is currently given over to an undeveloped land use and open space, offers corresponding qualities in terms of visual amenity and landscape character. These would be adversely affected by the introduction of the developed land use, but not all of the site would be completely affected and some areas of informal semi-natural open space would be recreated.

10.109 The overall effect on land use is assessed to be of medium magnitude. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Moderate, Adverse, Direct, Permanent and Long-term effect on the land use as a landscape resource.

Local Landscape Character

LLCA A. RMC & Imperial Hythe Coastal Strip

10.110 The proposed development would occur in the eastern half of this LCA. New built development would be introduced on areas which are currently undeveloped and semi-natural in character. Land in the western part of the site would remain free from built development, with semi-natural green space recreated. Elsewhere within the site, a new formal open space area and a linear park would be created. Part of the unique character of this LCA is that it is undeveloped, albeit with a golf course at its western end. The proposed development would change this character, and the numbers of people using and visiting the area would increase, together with vehicle movements diverted into the site. This in turn would affect the tranquillity and intimacy experienced along the canal.

10.111 The overall nature of change is assessed to be of medium – high magnitude. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Major - Moderate, Adverse, Direct, Permanent and Long-term effect on the landscape character of Local LCA A. RMC & Imperial Coastal Strip.

B. Princes Parade Coastline

10.112 In terms of physical change within the Princes Parade Coastline LCA, the proposed development would introduce new surfacing and public realm improvements to the new promenade. Viewed in isolation, this would be a beneficial effect as it would replace detracting features and create an improved public realm space for the general public. It would enhance the character of this area to create a vibrant and attractive coastal promenade.

10.113 The adverse effect upon landscape character of the Princes Parade Coastline LCA would occur as a result of the introduction of new built development within the site and adjoining RMC & Imperial Hythe Coastal Strip LCA. This would have an adverse effect in terms of visual character and the landscape relationship between the coast and the area of rising landform at Seabrook Road and Hospital Hill.

10.114 There would also be parts of the Princes Parade Coastline LCA which are less affected in terms of changes to landscape character arising from the completed development. The western end of the character area would not be as affected in terms of changes to visual

character, compared with the eastern end. This is due to the siting of semi-natural greenspace in the western part of the site and a concentration of taller buildings generally towards the eastern part of the site (both primary mitigation features included within the design).

10.115 Landscape character would change through an increase in pedestrian and vehicular activity in and around the character area. The change overall to the Princes Parade Coastline LCA is considered to be adverse. There would be beneficial effects to character in terms of landscape improvements to the promenade, although the built development would change the relationship between land and sea, bringing built development closer to the promenade than it already exists within a site that does not currently contain any built development.

10.116 Overall the magnitude of change is assessed to range from low – medium. Based on the supporting methodology and Tables A-I, set out in Appendix 1 of the LVIA, and the combination of assessed sensitivity and magnitude, it is concluded that the proposed development would have a Moderate - Minor, Adverse, Direct, Permanent and Long-term effect on the landscape character of Local LCA B. Princes Parade Coastline.

Summary of Operational Effects

10.117 The operational effects considered to be significant are summarised in **Table 10.1**.

Table 10.1: Summary of Significant Operational Effects

Name / Description	Receptor Type / Notes	Nature of Change	Significance
Visual Amenity:			
Assessment View 2: North-east from Princes Parade	Users of Princes Parade	Adverse	Moderate
Assessment View 4: West from the wharf at the eastern terminus of the RMC	Users of open space at eastern terminus of RMC	Adverse	Moderate
Assessment View 5: South from RMC, close to Seaview Footbridge (public footpath HB56)	Users of public footpath HB56	Adverse	Major - Moderate
Assessment View 6: South from Naildown Road	Residents in the Seabrook Road / Cliff Road and Naildown Road area with south facing views towards the coastline	Adverse	Major - Moderate
Assessment View 7: South-west from Hospital Hill	Residents south of Hospital Hill Road	Adverse	Moderate
Landscape Resources:			

Land Use	-	Adverse	Moderate
Local Landscape Character (Study Area Specific LCAs):			
A. RMC & Imperial Hythe Coastal Strip	-	Adverse	Major - Moderate
B. Princes Parade Coastline	-	Adverse	Moderate - Minor

Residual Effects

10.118 The development incorporates a number of integrated (or primary) mitigation measures designed to avoid, reduce or manage identified potential adverse impacts. The assessment of operational effects has commented generally on the 'Day 1' of the proposed development. Primary mitigation in terms of landscape planting would have some further residual effects (in the long term, defined as 11+ years) in mitigating the assessed landscape and visual effects of the proposed development. The following section describes these residual effects which are anticipated to occur once the primary mitigation planting has matured in the landscape. It should be noted that only the significant effects are considered.

Visual Amenity

View 2: North-east from Princes Parade

10.119 It was concluded that the development would have a Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 2. Planting installed within the western open space at construction Phase 4 would have begun to mature after 11 years. This would have the effect of softening views of the proposed development from the west and generally integrating it within the visual landscape, when viewed from the south-west. Also, the new landscape public realm improvements to the promenade would have become a part of the established visual landscape.

10.120 In general, by the time the operational phase of the proposed development reaches 11+ years (long-term), the overall effects in relation to View 2 would be likely to have gradually reduced to medium - low magnitude. Therefore, the residual effects of the proposed development on View 2 when considering the proposed landscape planting in maturity would be Moderate - Minor, Adverse, Long-term Direct and Permanent.

View 4: West from the wharf at the eastern terminus of the RMC

10.121 It was concluded that the development would have a Moderate, Adverse, Direct and Permanent and Long-term effect on the visual amenity in relation to View 4. Planting installed along the north-eastern boundary and within the leisure centre development during construction Phase 2 of the would have begun to mature after 11 years at the end of the latter part of the mid-term period and into the long-term. This would have the effect of softening views of the proposed development from the wharf and eastern terminus of the RMC and integrating it with the surrounding visual landscape.

10.122 In general, by the time the operational phase of the proposed development reaches 11+ years (long-term), the overall adverse visual effects in relation to View 2 would be likely to gradually have reduced to medium - low magnitude. Therefore, the residual effects of the

development on View 4 when considering the proposed landscape planting at maturity would be Moderate - Minor, Adverse, Long-term Direct and Permanent.

View 5: South from RMC, close to Seaview Footbridge (PRoW HB56)

10.123 It was concluded that the development would have a Major - Moderate, Adverse, Direct Permanent and Long-term effect on the visual amenity in relation to View 5. Planting installed along the northern boundary of the site and along the linear park in construction Phase 2 would have matured after 11 years at the end of the latter part of the mid-term period and into the long-term. This would have the effect of softening views of the proposed development, when viewed from the RMC.

10.124 By the time the operational phase of the proposed development reaches 11+ years (long-term), the overall adverse visual effects in relation to View 2 would be likely to have gradually reduced to medium - low magnitude. Therefore, the residual effects of the proposed development on View 5 when considering the proposed landscape planting at maturity would be Moderate, Adverse, Long-term Direct and Permanent.

View 6: South from Naildown Road

10.125 It was concluded that the development would have a Major - Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 6. The proposed mitigation planting along the northern side of the proposed development installed in construction Phase 2 would have matured after 11+ years at the end of the latter part of the mid-term period and into the long-term. This would have the effect of softening views of the proposed development, when viewed from the north, thereby gradually reducing the magnitude slightly to medium - low. Therefore, the residual effects of the proposed development on View 6 when considering the proposed landscape planting at maturity would be Moderate, Adverse, Long-term Direct and Permanent.

View 7: South-west from Hospital Hill - residential receptors

10.126 It was concluded that the development would have a Moderate, Adverse, Direct, Permanent and Long-term effect on the visual amenity in relation to View 7. From the elevated viewpoint of View 7, there would be some overall softening and integration into the visual landscape setting of the proposed development provided by the proposed development, so as to reduce magnitude to low. Therefore, the residual effects of the proposed development on View 7 when considering the proposed landscape planting at maturity would be Moderate-Minor, Adverse, Long-term Direct and Permanent.

Site and Landscape Character

Land Use

10.127 The main effect on land use as a result would occur immediately as each phase of the development were to become operational. The general effects of landscape treatment in this process have been factored into the operational phase of the development and therefore, there would be no significant change to the assessment of the operational phase on land use, as a result of the proposed planting reaching maturity.

Local LCA A. RMC & Imperial Hythe Coastal Strip

10.128 It was concluded that the development would have a Major - Moderate, Adverse, Direct, Permanent and Long-term effect on the landscape character of Local LCA A. RMC & Imperial Coastal Strip. In terms of landscape character, the future establishment of new

planting and assimilation that new landscape treatment would provide is assessed to gradually reduce magnitude to medium. Therefore, the residual effects of the proposed development on Local LCA A RMC & Imperial Hythe Coastal Strip when considering the proposed landscape planting at maturity would be Moderate, Adverse, Long-term Direct and Permanent.

Local LCA B. Princes Parade Coastline

10.129 It was concluded that the development would have a Moderate - Minor, Adverse, Direct, Permanent and Long-term effect on the landscape character of Local LCA B. Princes Parade Coastline. The long-term integration of the proposed development into this LCA would be aided by mature planting within adjoining open spaces and the general visual and demonstrable use of the new development when experienced from the new promenade. This would have the effect of gradually reducing magnitude to low. Therefore, the residual effects of the proposed development on Local LCA B Princes Parade Coastline when considering the proposed landscape planting at maturity would be Minor, Adverse, Long-term Direct and Permanent.

Summary of Residual Effects

10.130 The significant residual effects are summarised in **Table 10.2**.

Table 10.4: Summary of Residual Effects

Name / Description	Nature of Change	Operational Significance	Residual Significance
Visual Amenity:			
Assessment View 2: North-east from Princes Parade	Adverse	Moderate	Moderate - Minor
Assessment View 4: West from the wharf at the eastern terminus of the RMC	Adverse	Moderate	Moderate - Minor
Assessment View 5: South from RMC, close to Seaview Footbridge (public footpath HB56)	Adverse	Major - Moderate	Moderate
Assessment View 6: South from Naildown Road	Adverse	Major - Moderate	Moderate
Assessment View 7: South-west from Hospital Hill	Adverse	Moderate	Moderate - Minor
Landscape Resources:			
Land Use	Adverse	Moderate	No Change
Local Landscape Character (Study Area Specific LCAs):			
A. RMC & Imperial Hythe Coastal Strip	Adverse	Major - Moderate	Moderate

B. Princes Parade Coastline	Adverse	Moderate - Minor	Minor

Cumulative Effects

Imperial Green and Shorncliffe Garrison

10.131 In terms of overall landscape character and visual amenity effects, it is assessed that all these proposals are located at sufficient distance from the site that there is no potential for significant cumulative effects to arise, either during construction or post-construction phases. The geographical and visual separation between the proposed development and the development at Shorncliffe Garrison is such that there would be no resulting cumulative landscape or visual impacts. The increase in local population arising from the Shorncliffe Garrison development would increase demand for provision of formal leisure services, offered by the proposed leisure centre.

Seapoint Canoe Centre

10.132 CGIs showing the cumulative visual impact of the proposed canoe centre in combination with the built form and general massing of the proposed development are included in Appendix 2 of the LVIA. Two assessment views were considered in relation to the proposed canoe centre, as summarised below.

Proposed Cumulative View 4 (with canoe centre): West from the wharf at the eastern terminus of the RMC

10.133 The proposed canoe centre would be visible in the left of the view. It would have the cumulative effect of spreading built development further east, requiring more vegetation removal close to and within the embankment of the RMC. Although there would be a further encroachment visually towards the open space at the eastern end of the canal, it is assessed that the magnitude of change overall would remain as medium, as the cumulative visual effects of both developments would remain site/local in extent.

10.134 Judged on its own merits, the existing canoe centre (albeit a few small temporary freight cabins) is already sited in a similar location to the proposed canoe centre, in close proximity to existing development at the eastern terminus of the canal. The canoe centre and its associated activities are already a feature of the visual landscape in this area which lowers susceptibility to the adverse effects of increased development in this area.

Proposed Cumulative View 7 (with canoe centre): South-west from Hospital Hill

10.135 For users of Hospital Hill Road, there would be no cumulative change in View 7 as a result of the introduction of the proposed canoe centre, because it would not be visible. It is assessed that for residents south of Hospital Hill, there would not be a significant adverse effect on visual amenity as a result of the introduction of the proposed canoe centre, over and above the visual effects described for the operational phase of the proposed development. It would occupy a small part of the overall view and would be set down into the embankment of the RMC.

Landscape Character

10.136 The proposed canoe centre would affect the character of a very small section of the landscape within Local LCA A (RMC & Imperial Hythe Coastal Strip), at the intersection with the following Local LCAs: B. Princes Parade Coastline; D. Sandgate Esplanade

Coastline; and E. Seabrook Road Residential. Overall, due to the size and nature of the proposed canoe centre, the development is assessed not to have a significant cumulative change over and above those described for the operational phase of the completed development. There are beneficial effects of improving the existing canoe centre facilities to promote the active use of the canal for landscape enjoyment.

11. Socio-Economics

Introduction

11.1 This chapter, written by Tibbalds Planning and Urban Design, assesses the potential socio-economic effects of the development. It should be read in conjunction with the supporting material presented in **Technical Annex 7**. The assessment considers the effects of the proposed development at Princes Parade on local employment, on Gross Value Added (GVA)3 generated as a result of new economic activity, on social infrastructure (including schools, primary healthcare, and leisure facilities), and its contribution to meeting housing targets.

11.2 This chapter summarises the key relevant development plan policies and other relevant non-statutory policies and guidance and describes the methodology used to assess impact. It also describes the baseline conditions currently existing at the Princes Parade site and the surrounding area and the potential effects of the proposed development during both the construction and operational phases, as set out in the Scoping Opinion (September 2016). Finally, this chapter also identifies mitigation measures proposed as part of the development to maximise the opportunities of the development with regard to local regeneration.

Scope and Methodology

11.3 There is no government guidance on the preferred methodology used to assess the socio-economic impacts of major developments such as that proposed at Princes Parade. The approach adopted within this chapter therefore follows general guidelines where applicable while drawing on experience of undertaking assessments of similar schemes with comparable socio-economic characteristics. This assessment considers:

- Employment and Gross Value Added (GVA) during construction;
- Employment and GVA following completion of build;
- The wider employment and GVA effects on the local economy of additional economic activity generated by new employees, residents, and visitors;
- The provision of new homes of different tenures in relation to housing policy targets;
- The demand for primary healthcare facilities, schools, and open space arising from the new residents;
- The impact on the provision of leisure facilities in the surrounding area.

11.4 This chapter establishes the potential social and economic effects of the proposed development at Princes Parade against the current ('baseline') conditions. Current socio-economic characteristics have been identified from nationally recognised research, surveys, and datasets, including:

- 2011 Census[4]

[3] GVA represents the new economic activity generated by new business activity. It is equivalent to sales less the total inputs of goods and services associated with those sales.

[4] The 2011 Census provides the most robust and comprehensive source of datasets relating to socio-economic indicators that are available at specific spatial scales. Although other survey-based datasets exist that have been published more recently than 2011, these are often not as accurate or reliable as Census data.

- 2013 Midyear ONS Population Estimates
- Shepway DC Socio-Economic & Property Analysis[5]
- 2012/2013 Department for Education School Capacity Figures[6]
- 2016 NHS Business Services Authority Patient List Size and GP Count by Practice Report[7]

Construction Employment

11.5 Construction employment has been estimated using the architect's estimates of construction cost (excluding fit-out cost) and HCA guidance (2015)[8] that £1 million worth of new housing output creates 19.9 direct construction jobs; £1 million private commercial output creates 16.6 direct construction jobs; and £1 million public non-housing output creates 10.7 direct construction jobs. In calculating the net effect of this employment, displacement effects (jobs already in the local economy which are displaced by the new development) and multiplier effects (indirect jobs created in the supply chain) have also been considered. These rely on the following assumptions:

- In the baseline scenario, there is no current on-site construction employment to displace.
- In the wider local economy, displacement of construction employment will be low to medium given the transient nature of the Shepway construction labour market. A low-to-medium displacement effect of 37.5% has been assumed.
- A multiplier effect of 1.1 based on HCA guidance on the average multiplier effect at the local level has been assumed.[9]

Permanent On-Site Employment (Direct Employment)

11.6 Direct employment has been estimated using standard job density figures applied to the proposed uses as per the HCA's Employment Density Guide (2015)[10]. These figures supplied by the guide have demonstrated the potential minimum and maximum employment that may be generated. In line with this, the following densities have been used:

- For Hotels (C1), an employment density range of 3 beds per employment position (if the hotel is classified as "midscale") and 2 beds per employment position (if the hotel is classified as "upscale");
- For Retail (A1), an employment density range of between 15- 20sqm per employment position;
- For Restaurants/Cafés (A3), an employment density range of between 15-20sqm per employment position; and

[5] Shepway District Council (2015) *Shepway in Context: A Socio-Economic and Property Analysis*

[6] Department for Education (2013) *School Capacity: Academic Year 2012 to 2013*

[7] National Health Service (2016) *NHS Business Services Authority Patient List Size and GP Count by Practice Report*

[8] Homes and Communities Agency (2015) *Calculating Cost Per Job: Best Practice Note [3rd edition]*

[9] Homes and Communities Agency (2014) *Additionality Guide 2014*

[10] Homes and Communities Agency (2015) *Employment Density Guide [3rd edition]*

- For Leisure Centre (D2), an employment density range of 65sqm per employment position for a leisure centre categorised as "family".

11.7 In calculating the net effect of this employment, it has been assumed that:

- No on-site employment is displaced against the baseline scenario;
- Not all of this employment will be directly generated by the commercial development. Some will be the result of additional demand in local services from new residents of the residential development (indirect employment).
- A multiplier effect of 1.1 will apply.

Permanent Employment in Local Consumer Services (Indirect Employment)

11.8 The new homes proposed for the Princes Parade site will lead to increased demand by the additional residents for local goods and services, generating further employment in local businesses. To estimate this effect, the person yield from the residential space has been estimated using average house sizes as outlined by the 2011 Census.

11.9 To calculate the employment created as a result of the demand for local consumer services from new residents of Princes Parade, HCA and OffPat Guidance (2010)[11] has been used. This guidance suggests that in areas outside of London an increase of 1,000 in the local resident population will lead to a rise of 150 jobs in the local area. The guidance states that this figure should only be used in purely residential developments. However, as the Princes Parade scheme is predominantly residential, this guidance will be followed.

Gross Value Added (GVA)

11.10 Gross Value Added is the new economic activity generated as a result of a development. GVA is equivalent to the value of sales within the economy less the total inputs of goods and services associated with those sales. Using figures released by the Office of National Statistics, Shepway DC[12] states that the GVA per head in the district is £16,275.

Education Provision

11.11 The pupil yield from the scheme has been calculated using Kent County Council (KCC) Pupil Product Ratios[13], using the proposed number and type of residential dwelling. This has been compared to the known capacity at existing primary and secondary schools to assess the effects on existing educational infrastructure.

11.12 Primary schools within a 3km radius and Secondary schools within a 5km radius were identified through an internet search, with catchment areas noted where applicable/available. School capacity data from Department for Education (DfE) (2012/2013) was used to identify surplus capacity by comparing the number of school places against the actual numbers of pupils.

Healthcare Provision

11.13 Primary care services in Shepway district are delivered by NHS South Kent Coast CCG. For this assessment, primary healthcare facilities within a 5km radius of the site were

[11] Homes and Communities Agency and OffPat (2010) *Employment Density Guide [2nd edition]*

[12] Shepway District Council (2015) *Shepway Economic Development Strategy*

[13] Kent County Council (2008) *KCC Guide to Development Contributions and the Provision of Community Infrastructure*

identified using a list of local practices obtained from the NHS South Kent Coast CCG website. Data on the GP numbers and patient list numbers were obtained from NHS England figures[14]. Local dentists, pharmacies, and opticians were identified through an internet search using a nearby postcode as a proxy. The capacities of the different healthcare facilities were compared to the number of new residents.

Open Space and Children's Play Space Provision

11.14 The estimated requirements for open space and children's play space has been prepared based on the proposed unit numbers for the new development. The assessment of existing open space and children's play space provision within the surrounding area has drawn on information from Shepway DC Open Space Strategy and research on the surrounding area.

Leisure Facilities Provision

11.15 Shepway DC delivers local public leisure facilities, with local private facilities provided by the various private entities. The assessment of existing leisure facilities within the surrounding area has drawn on information from Shepway DC and research on local leisure facilities.

Significance Criteria

11.16 Each impact of the proposed development, whether adverse or beneficial, is likely to have different levels of significance, which is dependent on the scale of impact and the number of people affected. The criteria set out in **Table 11.1** below were used to ensure that the assessment provides a consistent identification of socio-economic and community effects.

Table 11.1: Significance Criteria

Significance of Effect	Definition
Major	An effect that is significant at a district-wide level
Moderate	An effect that is significant at the urban (i.e. Folkstone/Hythe) level
Minor	An effect that is significant at the ward level
Negligible	An effect that is not discernible and not significant

11.17 There are currently no published technical significance criteria relating to the assessment of socio-economic effects due to new development. The assessment of these effects is carried out against the current socio-economic baseline. This baseline is derived from the data sources that are referred to throughout this chapter. As with any dataset, baseline data can alter over time. Where applicable, this assessment uses the most recently published data. However, in some cases this may well be several years old (such as Census 2011 data) but it still forms the most comprehensive and reliable dataset.

Policy and Guidance

11.18 The proposed development at Princes Parade is subject to the relevant planning policies and guidance at both national and local levels. On a national level, the main planning policy document is the National Planning Policy Framework [NPPF] (adopted 2012). On a local

[14] NHS Choices (2016) GP Surgery Database.

level, the current planning policy for the Shepway District is the Core Strategy (adopted 2013) and the saved policies of the Local Plan (2006). These saved policies are due to be replaced by the emerging Places and Policies Local Plan, which is scheduled for adoption in 2017 and is thus a material consideration. Relevant policies and guidance are set out in **Technical Annex 7**.

Baseline Conditions

11.19 This section summarises the current socio-economic characteristics at the site at present (the baseline) and its surrounding areas. This summary assesses the following topics:

- Population
- Age Profile
- Ethnicity
- Qualifications
- Local and Wider Economy
- Unemployment
- Occupation
- Housing Mix
- Housing Tenure
- Education
- Primary Healthcare
- Public Open Space
- Leisure Provision

11.20 The site is a former domestic refuse waste disposal site that is currently classified as an area of open natural green space. While the site is currently open to the public, the high level of dense vegetation across the site means that much of it remains largely inaccessible and as such amounts to an under-utilised resource. The site supports no permanent employment and does not have any residents at present. This assessment of the baseline conditions is based on data collected at the following spatial levels, where appropriate and available.

- Ward: Hythe East/ Hythe
- District: Shepway
- County: Kent
- Regional: South East
- National: England/ England and Wales

11.21 Until May 2015, the Princes Parade site was located within the Hythe East ward. Shepway underwent a revision of its ward boundaries in 2015 and subsequently Princes Parade has been located within the much larger Hythe ward. For consistency, this report has sought to use statistics for the former ward of Hythe East as there is more data for this area. Additional figures relating to the newly created Hythe ward are included where available/applicable.

Population

11.22 According to the 2011 Census data, the population for the Hythe East ward is 4,244, with the population for the wider Shepway district being 107,969. The population of Hythe East ward increased 2.5% between 2001 and 2011, compared to the population of the wider Shepway district, which increased 12.2% between 2001 and 2011. The 2013 midyear population estimates published by the Office of National Statistics[15] identified the population of the recently created Hythe ward as 11,010.

Age Profile

11.23 Based on 2011 Census datasheets, 55% of the local Hythe East ward population are of working age (16-64years). This ward level percentage was lower than the Shepway district average (61.4%) and South East regional average (63.8%). The mean age for the Hythe East 48.9, which is higher than the Shepway mean age (42.4) and South East (40).

Ethnicity

11.24 Based on the 2011 Census data, 96% of the local ward (Hythe East) level population identify as 'White'. This figure is higher than the percentage for the wider Shepway district (94.7%) and the South-East region (90.7%). The largest Black, Asian and Minority Ethnic (BAME) group at the local Hythe East ward level is 'Asian/ Asian British', which equates to 2.8% of the population. This is lower than the figures for the Shepway district (3.5%) and South-East region (5.2%).

Qualifications

11.25 The 2011 Census allowed participants to state what qualifications they held. Of those that provided information, 20.8% of the local Hythe East ward level population stated that they held no qualifications, lower than the Shepway district percentage of 24.7% but slightly higher than the South-East average of 19.1%. In terms of the highest qualification attained by those providing information, 31.7% of respondents in Hythe East held Level 4 qualifications or above. This was higher than the 21.8% of the population at a district level that held equivalent qualifications, and the South-East average of 29.9%.

Local and Wider Economy

11.26 Folkestone and Hythe form a physically continuous built-up coastal settlement by virtue of the connecting coastal neighbourhoods of Sandgate (located within Folkestone) and Seabrook (in Hythe). The Princes Parade site is located within Seabrook. Folkestone and Hythe form the main urban area of the Shepway district.

11.27 According to the 2011 Census, 23,600 people both live and work within the Shepway district, while an additional 11,000 people commute into the district and 15,000 Shepway residents commute out to work in other districts. This means that Shepway is overall a net importer of labour. The Shepway in Context: Socio-Economic and Property Analysis states the single largest employer in Folkestone and Hythe is SAGA, a financial services provider that employs around 2,500 people and occupies approximately 22% of local office space.

Economic Activity and Unemployment

11.28 Data taken from the 2011 Census shows that economic activity levels within Hythe East stand at 78.0%. This is higher than the Shepway district average of 76.2% and the England

[15] Shepway DC (2015) *Shepway Ward Profile: Hythe Ward*

and Wales national average of 76.8%. This data also shows that 5.5% of Hythe East's economically active population is unemployed. This is lower than both the Shepway district average (8.1%) and the England and Wales national average (7.6%).

Occupation

11.29 According to Census 2011 data, the three most common occupations held by residents aged 16 to 74 in employment within the local ward area (Hythe East) population are: Professional Occupations (19.7%); Associate Professional and Technical Occupations (15%), and Managers, Directors and Senior Officials (14.8%). Together, these three occupations account for 49.5% of all residents aged 16 to 74 in employment. In Shepway, the same three occupations account for 37.1% of the district's population aged 16 to 74 in employment, while the South-East average for these three occupations is 44.8%.

Housing Mix

11.30 The 2011 Census data shows that there were 1888 households in the Hythe East ward area. 38.6% of these households were 1 and 2-bedroom properties, with the remaining 61.4% 3+ bedroom properties. In the wider Shepway district, this split is 44.8% 1 and 2-bedroom properties and 54.9% 3+ bedroom properties. There are currently no houses located on the site. According to the 2011 Census data, flats/maisonettes/apartments account for 14% of the Hythe East ward's existing housing stock. This compares to 25% at the Shepway district level, and 21% at the South East regional level.

Housing Tenure

11.31 2011 Census data shows that approximately 5% of all dwellings at the local Hythe East ward level are in social rented tenure, lower than both the Shepway average (11%) and the South East regional average (14%). 79% of all dwellings in Hythe East are in private ownership, higher than the Shepway average of 65% and the South-East average of 68%.

Education

11.32 The primary schools located closest to the Princes Parade site are listed below, with their capacity, student numbers, and distance from the central point within the Princes Parade site. The closest primary school is Seabrook Church of England Primary School, located 380m from the central point[16] of Princes Parade. According to the 2012-2013 final School Capacity figures released by the Department for Education, Seabrook has 0% surplus capacity. As shown in **Table 11.2** below, no primary school within 3km of Princes Parade has a surplus capacity of greater than 8%. The average for this local area was 3% surplus capacity, lower than the average surplus capacity for Kent, which stood at 8%.

11.33 The closest secondary school to the Princes Parade site is The Folkestone School for Girls (approximately 2600m east of the site). The closest co-educational secondary schools are Pent Valley Technical College (3200m north east) and Brockhill Park (3300m north west). The following is a list of all secondary schools located within 5km of the Princes Parade site.

11.34 According to the 2012-2013 final School Capacity figures released by the Department for Education, Folkestone School for Girl's has a surplus capacity of 4%. As shown in Table 11.3 below, this is the lowest surplus capacity of all secondary schools within a 5km radius of the Princes Parade site, the highest being at Pent Valley Technical College which had a

[16] The central point of the Princes Parade site is assessed to be the access road leading to the site from Seabrook Road.

surplus capacity of 23%. The average surplus capacity at the schools within the 5km radius was 11%, slightly higher than the average figure for Kent (8%).

Table 11.2: Primary School Capacity

School	Distance*	Capacity	No. of Pupils on Roll**	Surplus Capacity
Seabrook CoE Primary School***	380m	105	105	0%
St. Martin's CoE Primary School	1700m	210	204	3%
Cheriton Primary School	2100m	406	388	5%
Hythe Bay CoE Primary School	2600m	392	362	8%
Saltwood CoE Primary School	2700m	220	219	<1%
Sandgate Primary School	2700m	420m	422	0%
All Souls Primary School	2700m	280	279	<1%
Total (within 3km radius)		2033	1979	3%
Total (Kent)		118,173	108,264	8%

*Distances taken from the central point of Princes Parade to ensure distances are consistent.
** Figures taken from 2012-2013 Department for Education School Capacity figures.
*** Princes Parade development located within catchment of Seabrook C of E Primary School.

Table 11.3: Secondary School Capacity

School	Distance*	Capacity	No. of Pupils on Roll**	Surplus Capacity
Folkestone School for Girls	2600m	1052	1012	4%
Pent valley Technical College	13200m	1483	1149	23%
Brockhill Park	3300m	1384	1217	12%
The Harvey Grammar School	3400m	980	870	11%
Folkestone Academy***	4200m	1920	1824	51%
Total (within 5km radius)		6819	6072	11%
Total (Kent)		108,333	99,827	8%

*Distances taken from the central point of Princes Parade to ensure distances are consistent.
** Figures taken from 2012-2013 Department for Education School Capacity figures.
*** Princes Parade site located outside of school's catchment area.

Primary Healthcare

11.35 The Princes Parade site falls within the NHS South Kent Coast CCG locality for primary care services. **Table 11.4** below shows the health practices located within 5km of the site's central point. The closest surgery is Sun Lane surgery, located off Hythe High Street.

Table 11.4 Health Practices in Surrounding Area

Facility	Distance*	List Size**	No. of GPs
Sun Lane Surgery	1900m	4954	3
Oaklands Health Centre	2600m	11,107	7
The White House Surgery	2800m	9846	3
Sandgate Road Surgery	3150m	11,499	9
Manor Clinic	4200m	7327	6
Central Surgery, Cheriton Road	4200m	2496	1
Guildhall Surgery	4500m	7965	6
Park Farm Surgery	4600m	2974	1
Folkestone East Family Practice	4800m	4793	3
The New Surgery	5000m	9626	6
Total (within 5km radius)		72,587	45

*Distances taken from the central point of Princes Parade to ensure distances are consistent.
*Figures taken from NHS Choices Website.
*Distances taken from the central point of Princes Parade to ensure distances are consistent.

11.36 The figures above show that the average patient list size for the surgeries within a 5km radius of the Princes Parade site is approximately 1613 patients per GP. NHS England recommends between 1750 and 1800 patients per GP, although local recommendations are likely to alter. Therefore, the current patient GP ratio within a 5km radius of the Princes Parade levels set out by NHS England. The closest pharmacies, opticians, and dental site is within the recommended practices are: Boots UK Ltd (2km to the west), Cargill's Optometrists (1.8km to the west), and Hythe Dental Care (1.75km to the west). All these services are located within Hythe.

Public Open Space

11.37 As outlined in the Draft Shepway Open Space Strategy, the Princes Parade site is located within the Royal Military Canal Open Space, classified as a natural or semi-natural green space with wildflower grassland, short amenity grassland, shrubs, and scattered trees. Seapoint Canoe Centre structures and Seapoint Play Area are also located within this open space. The Royal Military Canal open space measures approximately 7.8ha[17], with 7.65ha of this located within the site redline of the planning application.

11.38 The Princes Parade site is located adjacent to the Royal Military Canal green corridor, classified as a green corridor in the Shepway Open Space Strategy. This is located to the immediate north of the site and runs along either side of the Canal itself. Three further open spaces are located within 1km of the site; Open Space adjacent to Horn Street, Hospital Hill Escarpment, and Eversley Road Recreation Ground. The Open Space adjacent to Horn Street is classified as natural/semi-natural green space and its southern tip is located approximately 500m north west of the Princes Parade site. The Hospital Hill Escarpment is also classified as natural/semi-natural green space and is also located approximately 500m north west of the site. Eversley Road Recreation Ground is located approximately 550m north of the site. Further open space is located at South Road Playing Fields, Hythe, approximately 1.7km to the west of the site.

11.39 According to the (emerging) Shepway Open Space Strategy[18], the Folkestone/Hythe urban area currently provides 69.18ha of parks and gardens, and 209.87ha of natural and semi-natural green space. Combined, this equates to 279.05ha of these typologies of open space. The Shepway Open Space Strategy proposes a minimum standard for certain types of open space per 1,000 residents. For the provision of parks and gardens and natural and semi-natural green space combined, this proposed requirement stands at 2.89ha/1,000 residents.

11.40 Relating the minimum standard proposed in the Shepway Open Space Strategy to the Folkestone/Hythe urban area, which has a population of 66,883, Folkestone/Hythe should provide 193.29ha of parks/gardens and natural/semi-natural green space. As stated in paragraph 11.47, the Folkestone/Hythe urban area currently provides 279.05ha of these open space typologies, equating to 4.17ha per 1,000 residents. This equates to an overprovision of parks/gardens and natural/semi-natural green space of 85.76ha, equivalent to an overprovision of 1.28ha per 1,000 residents, within the Folkestone/Hythe urban area.

[17] Measurement taken from aerial photo from Google Maps.

[18] Shepway DC (2017) Open Space Strategy: Table 3.2

Children's Play Space

11.41 As detailed in the Draft Shepway Playspace Review there exists one formal children's play area on the current Princes Parade site, the Seapoint Play Area. The Seapoint Play Area is approximately 0.0275ha in size and located adjacent to the Seapoint Canoe Centre, towards the eastern end of the site. In the Draft Shepway Play Area Review, the Seapoint Play Area is classified as a "destination" play space, meaning that it attracts users from a wider area. There are no other formal children's play areas within 1km of the site, but further children's play spaces are located at various locations throughout the Hythe and Folkestone Urban Area.

11.42 The Shepway Local Plan Review (2006) outlines the districts requirements for play spaces, including minimum size and walking distances. It states that 5sqm of playspace per childbed space should be provided where developments deliver more than 20 childbed spaces. It states that Local Areas for Play (LAPs) should be at least 100sqm and located within 100m of homes; Local Equipped Areas for Play (LEAPs) should be at least 400sqm and located within 400m of homes; and Neighbourhood Equipped Areas for Play (NEAPs) should be at least 1,000sqm and located within 1,000m of homes. Using national guidelines outlined by Fields in Trust, the emerging Shepway DC Play Area Review[19] states that 0.25ha play space be provided per 1,000 residents. Applying this standard to the Hythe ward would require the provision of approximately 2.75ha of play space in the ward.

11.43 The Shepway Play Area Review states that the Hythe Ward provides 1.57ha of play space, equating to a ratio of 0.14ha play space per 1,000 residents. This equates to an under provision of approximately 1.18ha, equating to an under provision of 0.11ha play space per 1,000 residents.

Leisure Provision

11.44 Shepway DC runs a number of leisure facilities in the area. Hythe Pool, one of the main leisure facilities in Hythe, is located approximately 1.7km west of the Princes Parade site. The pool provides one 25m pool, one 9.5m x 4.5m learner pool, and a fitness suite. The Hythe Pool facility is of significantly poor quality and condition, and is regularly closed for long periods of time for repair works to take place. In 2016 alone, Hythe Pool was closed to the public on three separate occasions due to the need for emergency repair works to be undertaken, amounting to over four of closure in total. These closures significantly impact on the accessibility of leisure provision within the district, with Shepway District Council holding a longstanding wish to develop a replacement facility to rectify these issues. Two further leisure centres exist in Folkestone: Pent Valley Leisure Centre (3.2km to the northeast) and Folkestone Sports Centre (4.2km to the northeast).

11.45 In addition to these public facilities, there are several private facilities located around the Princes Parade site. Seapoint Canoe Club, a privately-run canoe and kayaking club, is located adjacent to the Princes Parade site and holds sessions on the Royal Military Canal. Imperial Golf Course is located to the immediate west of the site, while the Hythe and Saltwood Sailing Club is located 2km west of the site.

11.46 With regard to public leisure facilities, the Supplementary Report (2016) to the Shepway Leisure Needs Assessment (2012) states that based on a population of approximately 110,000, there is a demand in Shepway for 29.66 badminton courts and 1,143.14sqm of water space in swimming pools. The report states that on a district level Shepway currently

[19] Shepway DC (2017) Play Area Review

provides 37.49 badminton courts and 809sqm of water space in swimming pools. The current provision of fitness stations in Shepway was not available. These figures factor in issues of community accessibility (opening hours, etc.), but are unable to factor in unforeseen periods of closure, such as those that occur at Hythe Pool. As outlined in the report, these figures show that Shepway currently has an over-supply of sports halls equating to 7.83 badminton courts. It has an undersupply of swimming pools equating to -334.54sqm of water space.

Predicted Effects during Construction

Employment

11.47 Gross construction jobs generated by the proposed Princes Parade scheme have been calculated using the methodology set out above. These are expressed in job years (i.e. a construction job lasting a complete year) in **Table 11.5** below.

Table 11.5: Construction Job Years

Proposed Use	Total Gross Job Years
Residential (C3)	493
Public Leisure (D2)	33
Hotel (C1)/ Restaurant (A3)/ Retail (A1)	118

11.48 Under the assumptions outlined in the above methodology section, the proposed development at Princes Parade is expected to lead to 644 net job years of construction employment in comparison to the baseline scenario. The construction labour market is generally transient and flexible. Due to this, and the population size of Shepway, it is likely that some site workers for the construction phase of the Princes Parade proposal will come from outside the Shepway district. The effect of the development is assessed as minor beneficial.

GVA

11.49 Each of the construction jobs mentioned above will add value to the local economy. The Office of National Statistics estimates that GVA per head for the Shepway district is £16,275. This figure means that over the duration of the construction period these construction jobs will generate net GVA worth £10,481,100 in comparison to the baseline. As mentioned above, it is possible that residents living outside the district will take some of the construction jobs, thus the effect of the development is assessed as minor beneficial.

Predicted Effects on Completion

On-Site Employment

11.50 Based on the employment density figures in the HCA guidance outlined above, the assumptions on displacement and the multiplier effects as outlined previously, the net employment generated by the new scheme has been estimated as shown in **Table 11.6** below. Both the lower and upper ranges of employment densities are shown, to reflect employment density variations within the same Use Class category.

Table 11.6: Additional Jobs Created On-Site

Proposed Use	Proposed GIA (sqm)	Conversion to NIA (sqm)	Jobs Created
Public Leisure (D2)	2961	n/a	46
Hotel (C1)	600	n/a	4-5
Restaurant/Café (A3)/ Retail (A1)	300	261	13-17
		Total	63-68

11.51 In comparison to the baseline position, in which there is currently no employment on-site, the development will generate between 63 and 68 direct net additional jobs. It is important to note that this number will be offset by the number of FTE jobs provided at the existing Hythe Pool, which currently stands at 18. These jobs will be reallocated as part of the Princes Parade leisure centre development, and thus are subtracted from the total above, giving a total of between 45 and 50. This effect is assessed to be minor beneficial.

Indirect Employment

11.52 The new homes proposed within the Princes Parade development will lead to increased demand by the additional residents for local goods and services, which in turn will generate further jobs in local businesses. Using the average household size assumptions as per the 2011 Census figures, the new development will accommodate 354 new residents. With no residents currently living on the site, all of these 354 residents will be additional residents.

11.53 Using the assumptions laid out in the methodology, these new residents will generate approximately 53 full time equivalent (FTE) jobs over and above the on-site jobs. However, a percentage of these local service jobs are likely to be accounted for by the retail/restaurant/ café space within the scheme. It has therefore been assumed that half of the additional demand for local services generated by new residents is accounted for by the on-site retail/restaurant/café services, and that the other half generates additional demand elsewhere in the locality.

11.54 As a result of this, approximately 26 jobs will be created by demand generated by the new housing, over and above the on-site jobs. With multiplier effects, the net total becomes 29 additional jobs in comparison to the baseline. This indirect effect on employment is assessed to be minor beneficial in comparison to the baseline conditions.

Gross Value Added

11.55 With regard to both the direct and indirect employment generated by the development discussed above, it is anticipated that the proposed scheme will generate between 63 and 68 net permanent jobs when compared to the baseline, which reduces to between 45 and 50 when the number of existing jobs currently provided by Hythe Pool. As previously stated, each of these jobs can be expected to generate £16,275 worth of GVA. Consequently, the GVA effect of the development once complete (with the hotel and restaurant/café space operational) is expected to be between £1,025,325 and £1,106,700. These figures reduce slightly if the current jobs at Hythe Pool are offset from these job totals, to between £732,375 and £813,750. In terms of GVA to the local economy, the effect of the development is assessed to be minor beneficial.

Housing Provision

11.56 The proposed scheme at Princes Parade will deliver up to 150 new dwellings. When compared to the baseline conditions, these new dwellings represent an overall addition to the local housing stock. The provision of new homes meets national and local policy objectives by contributing towards housing targets. The Shepway District Core Strategy sets a housing target of approximately 8,000 additional dwellings over the plan period (2006-2026), which equates to an annual housing target of 400 new dwellings. The proposed development would therefore contribute an equivalent of approximately 37.5% of Shepway's annual housing target (if completed within a twelve-month period) or 1.8% of the total twenty-year target for the district. When compared to the baseline, the provision of new housing will represent a minor beneficial effect.

Affordable Housing Provision

11.57 Within the proposed scheme at Princes Parade, up to 45 of the new dwellings will be designated as affordable. When compared to the baseline conditions, this scheme represents an overall addition to the local affordable housing stock and meets national and local policy objectives by contributing to affordable housing needs. The Shepway Core Strategy sets an affordable housing target of approximately 2,000 new dwellings over the plan period (2006-2026), equating to an annual total of 100 new affordable homes. The proposed development would therefore contribute 45% of Shepway's annual affordable housing target (if completed within a twelve-month period), or 5% of the total twenty-year target. When compared to the baseline, the provision of new affordable housing will represent a moderate beneficial effect.

Education

11.58 Using the pupil product ratio outlined by Kent County Council and the proposed number and type of residential units within the new development at Princes Parade, it is estimated that the scheme will create demand for 22 additional primary school places. The assessment of the baseline conditions at local primary schools shows that while there are 54 surplus places across all primaries within a 3km radius of the site, there is no capacity at Seabrook Primary School (within whose catchment area Princes Parade is located).

11.59 The KCC pupil product ratio also states that the development at Princes Parade will create demand for an additional 16 secondary school places. The assessment of the baseline conditions at local schools shows that there are 747 surplus places across all secondary schools within a 5km radius of the site, at both grammar and comprehensive schools combined.

11.60 When comparing local education provision to current baseline conditions, the effects of the new development at Princes Parade are considered to be minor adverse with regard to primary school capacity, and negligible with regard to secondary facilities.

Primary Healthcare

11.61 The proposed development at Princes Parade would create an additional 354 residents in the local area. There currently exist no statutory limits on the maximum number of patients per GP in England and Wales and assuming these 354 additional residents were spread out evenly between the 58 GPs within a 5km radius of the site, this would equate to an additional 6 patients per GP. As such, the effect of the proposed development on local primary healthcare facilities is negligible when compared to the baseline conditions.

Open Space

11.62 As outlined in the baseline section, the Royal Military Canal open space measures approximately 7.8ha in size, although accessibility to the space is limited by dense vegetation and poor-quality environment. Approximately 7.65ha of this open space is located within the application site, and thus would be affected the development of Princes Parade. Of this 7.65ha, 6.5ha is currently designated in local planning policy20 as open space (designation LR9) and 1ha is currently designated for development of tourism and recreational facilities (TM8). A further 0.16ha currently forms the canoe club buildings and car park.

11.63 The Princes Parade development will re-provide 3.89ha of open space as part of the proposed scheme. The open space proposed within the scheme would signify a noteworthy qualitative improvement on the existing Royal Military Canal open space, and provide a higher quality, more accessible and usable open space. This re-provision of 3.89ha of open space means that the proposed Princes Parade scheme will result in a net loss of approximately 3.91ha of the existing open space, currently classified as natural/semi-natural green space. Of this 3.91ha, 2.98ha is currently designated in local planning policy as open space; 0.88ha is designated as site allocation TM8; and 0.16ha is undesignated as it forms part of the canoe club.

11.64 The Princes Parade development will deliver an estimated population of 354 additional residents. Using the proposed recommended standards of open space provision, set at 2.89ha per 1,000 residents as outlined in the Shepway Open Strategy, the Princes Parade scheme is required to provide 1.02ha on-site in order to meet the needs of the additional residents. As the proposed scheme will provide 3.89ha of open space, this represents an overprovision of approximately 2.87ha.

11.65 Within the wider Folkestone/Hythe urban area, the development of Princes Parade would result in the net loss of 3.91ha of open space, decreasing the existing provision of open space in the urban area from 279.05ha to 275.14ha. However, it should be noted that due to the quality and accessibility of the existing Royal Military Canal open space, the Princes Parade scheme would signify a qualitative improvement in the provision of open space within the urban area and an increase in accessible open space. The development of Princes Parade would result in an uplift of population of the urban area from 66,883 to 67,237. This increase would mean the required provision of open space (parks/gardens and natural/semi-natural green space) in the urban area would increase from 193.29ha to 194.3ha.

11.66 The increased need and decreased provision resulting from the Princes Parade would mean an over-provision in the Folkestone/Hythe urban area of 80.83ha of open space. This equates to a reduction in the over-provision of open space in the urban area by 4.93ha. The effect of the proposed Princes Parade development on the provision of open space is considered to be minor adverse.

Children's Play Space

11.67 The Princes Parade scheme will re-provide the existing 0.0275ha Seapoint Play Area currently on-site, which is categorised as a destination play space. As outlined in the previous section, the Local Plan Review (2006) sets a play space requirement for 5sqm per childbed. The Princes Parade development will have an estimated population of 354

[20] Shepway DC (2013) Adopted Core Strategy

additional residents, and an estimated provision of 208 childbed spaces. This provision equates to a play space requirement of 1.02ha in order to meet the needs of the uplift in residential population. The proposed scheme will provide a minimum of 1.02ha of play space – in addition to the re-provided 0.0275ha of destination play space – to meet the needs of the uplift in population.

11.68 Within the wider Hythe area, the development of Princes Parade would result in an uplift of the population from 11,010 to 11,364. Using the recommendations set out in the Shepway Play Area Review, this uplift in population would mean an increase in the required provision of children's play space from 2.75ha to approximately 2.88ha. As outlined in the baseline section, Hythe currently provides 1.57ha of play space, equal to a ratio of 0.14ha play space per 1,000 residents. This equates to an under-provision of approximately 1.18ha of play space, or 0.11ha per 1,000 residents.

11.69 The proposed development at Princes Parade will result in the increase of play space in Hythe by a minimum of 1.02ha, from 1.57ha to at least 2.59ha. With the play space requirement increasing to 2.88ha due to the additional 354 residents accommodated within Princes Parade, the development would mean an under-provision of up to 0.29ha. This equates to a reduction in the under-provision of play space by approximately 0.89ha. The effect on the provision of children's play space on the local and wider area is considered to be negligible.

Leisure Facilities

11.70 The proposed development at Princes Parade will deliver a new leisure centre on-site, providing a 25m pool, a 17m learning pool, a 100-station fitness suite, 3 studios/multipurpose hall spaces, and ancillary changing and café facilities. This facility would replace the existing Hythe Pool facility – equating to a 25m pool, a 10m learning pool, and a 9-station fitness suite – as part of a consolidation of Shepway's leisure provision. As noted previously, the existing Hythe Pool facility is in a poor condition and is regularly closed to the public for emergency maintenance work.

11.71 Shepway currently has an oversupply of sports halls equating to 7.83 badminton courts. It has an under-supply of swimming pools equating to -334.54sqm of water space, and an under-supply of health and fitness provision equal to -166 fitness stations. As outlined in the Supplementary Report (2016) to the Shepway Leisure Needs Assessment (2012), the new leisure centre at Princes Parade would increase the over-supply of badminton courts in the district to 9.83. It would also go some way to addressing the current under-supply of both water space and fitness stations. The new facility would reduce the identified under-supply of water space to -276.35sqm.

11.72 The Princes Parade scheme proposes the replacement of the existing Hythe Pool facility, which is in poor condition and often forced to close in order to undertake urgent repairs. In addition to going some way towards addressing the existing deficit in leisure provision within the district, the replacement of the existing facility with a new leisure centre on Princes Parade will provide Shepway with a new facility that will not be subjected to the same necessary repairs and closures as the current pool. This will vastly improve accessibility to these leisure facilities and this effect is considered to be moderate beneficial.

Mitigation and Residual Effects

Construction

11.73 Since the construction-phase effects will be beneficial, due to the creation of temporary employment and spending on goods and services, no mitigation is required. However, there may be opportunities to maximise these benefits through the implementation of a local procurement strategy, offering apprenticeships and work placements for local residents by way of local employment or training initiatives.

Completed Development

11.74 The increased demand for primary places is assessed to be minor adverse due to the local primary school currently being at capacity. A financial contribution via CIL/S106 would be made by way of mitigation, in order to fund the provision of additional school places. The increase demand for secondary places would be negligible and would not require specific mitigation.

11.75 The development will result in the net loss of 4.05ha of natural/semi-natural green space. Of this 4.05ha, 2.98ha is currently designated as open space within local planning policy. This net loss of open space results in a reduction in the provision of open space in the Folkestone/Hythe urban area. However, following the development of Princes Parade there will still an over-provision of 80.69ha of open space, and the residual effect is therefore considered to be of negligible significance.

11.76 The development will re-provide the existing 0.03ha of play space located within the site, together with at least 1.02ha to meet the needs of the new residents. As a result, the overall area of play space within Hythe would increase from 1.57ha to at least 2.59ha. This would reduce, but not eliminate, the current under-provision of play space within Hythe, amounting to a negligible effect.

11.77 The leisure provision to be included within the Princes Parade development would provide a replacement facility for the existing Hythe Pool leisure centre. This would be a modern facility that improves the quality existing leisure provision and reduces existing deficiency in the borough's leisure provision. Therefore, the scheme is assessed to have a minor beneficial residual effect.

Cumulative Effects

Employment and GVA

11.78 The three permitted or completed developments – Imperial Green, Shorncliffe Garrison and the Seapoint Canoe Centre – will cumulatively generate both direct and indirect employment, and will contribute to the GVA of the area. This will reinforce the beneficial employment and GVA effects of the Princes Parade development.

Housing

11.79 The 150 new homes to be delivered at Princes Parade, together with the 75 new homes at Imperial Green sand approximately 1,200 new homes at Shorncliffe Garrison, will amount to a significant cumulative increase in housing provision on the urban-area level. A similarly beneficial effect will be experienced in relation to affordable housing.

Education

11.80 The proposed scheme at Princes Parade will lead to a minor adverse impact on education provision at the ward level as the local primary school is at capacity. In a wider context, the new primary school proposed at Shorncliffe Garrison will deliver a new primary school, although it is assumed that this will largely cater for residents within the development itself. Thus, it is considered that the cumulative effect will be minor adverse.

Primary Healthcare

11.81 The Princes Parade scheme will deliver uplift in local population by approximately 350 new residents, while the Imperial Green development will generate approximately 180 residents. Shorncliffe Garrison will generate approximately 2,600 new residents, meaning a total of approximately 3,130 new residents across the three schemes. As part of the development mix for the outline planning application at Shorncliffe Garrison, a new GP surgery will be provided. The cumulative effect is therefore anticipated to be negligible.

Open Space

11.82 The schemes at Princes Parade, Shorncliffe Garrison, and Imperial Green all include proposals to provide open space as part of their development mix, while the Canoe Centre proposal will facilitate increased accessibility to the proposed new open space at Princes Parade. Due to the existing over-provision of open space within the Shepway district, it is considered that the cumulative effect of these schemes will be negligible.

Children's Play Space

11.83 The Princes Parade and Shorncliffe Garrison schemes provide children's play space as part of their development mix. The relevant information regarding the Imperial Green development is unavailable, while the Canoe Centre development will increase use of the Princes Parade site, increasing accessibility to the scheme's proposed play spaces. It is considered on balance that the cumulative effect of these developments on children's play space will be negligible.

Leisure Facilities

11.84 Alongside the new leisure centre proposed as part of the Princes Parade development, the Canoe Centre scheme would significantly improve leisure provision on Princes Parade and for the wider community in general. In addition to this, the Shorncliffe Garrison scheme also proposes leisure facilities. The cumulative effect of these developments is therefore seen to be moderate beneficial.

12. Transport

Introduction

12.1 This chapter, prepared by MLM Consulting engineers, assesses the potential effects of the development on traffic and transport. It should be read in conjunction with the Transport Assessment (TA) presented in **Technical Annex 8**.

12.2 The chapter describes the assessment methodology, the proposed development's policy context, baseline transport conditions and the predicted effects of the proposed development on the transport networks surrounding the site. It also identifies mitigation measures required to prevent, reduce or offset these predicted transport effects (including any residual effects).

Scope and Methodology

Scope

12.3 Consultation has taken place with Highways England, Kent County Council and Shepway District Council through the submission of an Environmental Impact Assessment (EIA) Scoping Report in July 2016. This scoping report described the EIA process, established the assessment methodology and identified potential transport effects associated with the proposed development. The scoping process has therefore guided the technical work that is presented in this chapter.

12.4 Kent County Council, acting as Highway Authority, confirmed that a Transport Assessment would be required to support a planning application for the proposed development. Kent County Council Public Rights of Way department commented that Public Right of Way HB83 which passes through the site would need to be protected as part of the proposed development. Highways England did not request an assessment of the predicted traffic impact of the proposed development on the strategic road network.

12.5 The assessment methodology is consistent with guidance contained within the document "Guidelines for the Environmental Assessment of Road Traffic" published in 1994 by the Institute of Environmental Assessment, now known as the Institute of Environmental Management and Assessment (IEMA). The IEMA Guidelines identify the following check-list of potential traffic-related impacts arising from developments in general:

- Driver severance and delay;
- Pedestrian severance and delay;
- Pedestrian amenity;
- Accidents and safety; and
- Hazardous and dangerous loads.

12.6 Hazardous and dangerous loads have not been included within the scope of this assessment since these types of traffic movements are not expected to be generated during the construction and operational phase of the proposed development.

12.7 The IEMA Guidelines set out two rules that should be used to establish whether an environmental assessment of traffic effects should be carried out. The rules are described and justified below:

- Rule 1: Include road links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%).

- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

Receptor Sensitivity

12.8 Receptors with different levels of sensitivity to changes in traffic flow are summarised in **Table 12.1** below, based on criteria set out within the IEMA Guidelines.

Table 12.1: Receptor Sensitivity Criteria

Receptor Sensitivity	Receptor Type
Substantial	Receptors of greatest sensitivity to traffic flows: schools, colleges, playgrounds, accident black spots, retirement homes, roads without footways that are used by pedestrians
Moderate	Traffic flow sensitivity receptors: congested junctions, doctors' surgeries, hospitals, shopping area with roadside frontage, roads with narrow footways, recreation facilities
Minor	Receptors with some sensitivity to traffic flow: places of worship, public open space, listed buildings, tourist attractions and residential areas with adequate footway provision
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions

12.9 In the case of sites that are not located in sensitive areas, where the increase in traffic flow is predicted to be lower than 30%, IEMA guidelines suggest the significance of the effects can be stated as 'negligible' and that no further assessment is required. It is not considered that the site of the proposed development is located within a very sensitive area - so the 30% threshold level has been taken forward within the assessment.

Significance Criteria

12.10 Impacts are considered to be 'beneficial' where they produce benefits in terms of transportation or access (e.g. a reduction in traffic or travel time). Impacts are considered to be 'adverse' where they produce disbenefits in terms of transportation or access (e.g. an increase in traffic or travel time).

12.11 Significance criteria have been established to assess the effects of the proposed development on the transport network. The criteria adhere to IEMA Guidelines and include:

- Traffic links where traffic flows increase by more than 30% in the opening year as a result of development traffic;

- Any other sensitive areas affected by a traffic increase of at least 10%; or

- An increase in HGV movements of at least 10%.

12.12 The IEMA Guidelines state that changes in traffic levels of 30%, 60% and 90% should be considered as "slight", "moderate" and "substantial" effects respectively. Taking into account the IEMA Guidelines summarised above, this assessment is based on the following significance criteria, which have been used to assess the predicted impact of the proposed development on driver severance, pedestrian severance and delay, pedestrian amenity and accidents and safety:

- Impacts which are considered 'not significant' are those where traffic levels change by less than 10%;
- 'Minor' impacts are defined as those where traffic levels change between 10% and 30%;
- 'Moderate' impacts are taken as those where traffic levels change between 30% and 60%;
- 'Major' impacts are taken as those where traffic levels change between 60% and 90%; and
- Impacts of more than 90% are classed as 'severe'.

12.13 The following significance criteria have been used to assess driver delay:

- Impacts which are considered 'not significant' are those where vehicle delay at a junction changes by less than 30 seconds;
- 'Minor' impacts are defined as those where vehicle delay at a junction changes between 30 seconds and 60 seconds;
- 'Moderate' impacts are taken as those where vehicle delay at a junction changes between 60 seconds and 120 seconds; and
- 'Major' impacts are taken as those where vehicle delay at a junction changes by more than 120 seconds.

Highway Network Assessment Study Area

12.14 An assessment has been made of the predicted increase in traffic flows at, and operational capacity of, key local junctions around the site. Assessment of the following junctions was agreed with Kent County Council (KCC) during pre-application consultation:

- A259 Seabrook Road/Princes Parade (priority);
- A259 Seabrook Road/Twiss Road (priority);
- Twiss Road/ South Road (priority); and
- East Street (A259)/Prospect Road (A259)/ High Street/Station Road (roundabout)

12.15 The methodology adopted has followed standard practice. Existing baseline conditions have been established on the transport networks serving the site. Future conditions on the transport networks have then been considered. The operation of the transport networks, with and without the proposed development, has been assessed for both these scenarios in order to establish the likely operational effect. Consideration has also been given to the likely effects associated with construction.

Assessment Scenarios

12.16 The following development scenarios have been assessed during the weekday AM peak hour (08:00 to 09:00) and PM peak hour (17:00 to 18:00) to understand the transport effects of the proposed development:

- 2016 – Existing;
- 2018 - Without Proposed Development;
- 2018 - With Proposed Development;
- 2023 - Without Proposed Development; and
- 2023 - With Proposed Development.

12.17 The 2016-year assessment was based on traffic surveys undertaken in 2016 during the neutral traffic month of September. Baseline traffic flows for 2018 and 2023 were derived by applying TEMPRO traffic growth factors to the 2016 traffic survey data. This approach was agreed with KCC during pre-application discussions. The operational capacity of the four junctions has been assessed using TRL's Junctions 9 - PICADY (for priority junctions) and ARCADY (for roundabouts).

Other Sources of Data

12.18 Other sources of data included personal injury accident statistics for the 3-year period between 2014 and 2016 provided by KCC.

Policy and Guidance

National Planning Policy Framework (NPPF)

12.19 The NPPF acknowledges the role of transport policies in facilitating sustainable development and contributing to wider sustainability and health objectives. Consequently, it advises local planning authorities to support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport. The document advises that plans and decisions should take account of whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;

- Safe and suitable access to the site can be achieved for all people;

- Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of developments are severe.

12.20 The NPPF also advises that plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. It therefore advises that developments should be located and designed where practical to:

- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;

- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones; and

- Consider the needs of people with disabilities by all modes of transport.

Shepway Local Plan - Policies Applicable from 2013

12.21 Policy TR5: The District Planning Authority will require the provision of secure and practically located facilities for cyclists in all new developments which are expected to generate a regular flow of traffic. Developers will be asked to contribute towards the provision of cycle routes or cycleways where these would be directly related to the use of the new development.

12.22 Policy TR6: New development will not be permitted unless provision is made for the needs of pedestrians. The layout and design of development should provide for safe, attractive and convenient pedestrian routes, particularly to public transport routes.

12.23 Policy TR11: Proposals which involve the formation of a new access, or would result in the intensification of the use of an existing access, will only be permitted where:

a. The access is not detrimental to the safety of vehicle traffic, cyclists and pedestrians;

b. The access can alternatively be improved to a standard acceptable to the Highway Authority; or

c. The applicant can demonstrate by means of a transport impact study that the proposal would not increase the risk of accidents or create delays.

12.24 Policy TR12: New development, redevelopment or a change of use will only be permitted if it makes provision for off street parking on or near the site in accordance with the current maximum vehicle parking standards, as set out in Appendix 6. These standards may be varied where:

a. The location is well served by public transport and there would be no adverse effect on road safety or traffic management.

b. This would allow development which would preserve or enhance the character or appearance of a conservation area, or assist the re-use of a building of architectural or historic interest.

c. A commuted sum payment is made for improvements to or measures to assist the use of public transport, cycling or walking.

Shepway Places and Policies Local Plan 2016

12.25 Policy T1 Street hierarchy and site layout: Planning permission for new major development will be granted if the Design and Access Statement submitted as part of the application demonstrates attention has been paid to street design. An application should demonstrate the following:

- Street hierarchy considering pedestrians first and private motor vehicles last.

- Permeability through and beyond the site for all users.
- The creation of an environment that is safe for all street users, which encourages walking, cycling and use of public transport.
- A range of street types creating legibility throughout the development, meeting the needs of all users, and not allowing vehicles to dominate.
- Active frontages only, throughout the development, for the purposes of natural surveillance and creating characterful places.
- Excessive street furniture and signage is included only when necessary for reasons of safety and comfort of the population.

12.26 Developers should ensure, with the support of Kent County Council as Highways Authority, active travel routes are a priority, both within developments and linking sites to other services, community facilities and transport hubs.

12.27 Policy T2 Residential parking: Planning permission will be granted for schemes providing residential parking where the resident and visitor parking is sufficient and well-integrated so that it does not dominate the street. Applicants should demonstrate that:

1. Priority has been given to on-street parking in well-designed streets.
2. There is sufficient parking for residents and visitors, with a preference for unallocated parking.
3. Parking is positioned close to people's homes.
4. Parking courtyards are small in size, with no more than five properties using each courtyard, and they are well overlooked.
5. Any roofed parking structures are proportionate, so that they do not dominate the street-scene, and are well-integrated into the overall design of the development.
6. A variety of parking treatments on a single site of more than 5 dwellings.
7. A preference for tandem on-plot parking if more than one space is provided.
8. Spaces are of sufficient size to comfortably host a larger car, and on-plot spaces have sufficient space for the movement of wheeled waste bins to a collection point (as required).
9. A charging point for electric vehicles is included in every private car parking space.
10. Covered cycling facilities have been integrated into the residential parking offer.

12.28 Rear serviced parking layouts are to be discouraged, and will be permitted only where alternatives are not feasible. A Transport Assessment (TA) will be expected at both pre-application and application stages to give a clear indication of how the proposed scheme impacts upon any existing adjoining on-street residential parking.

12.29 Policy T3 Residential garages: Application for residential development or conversion will be approved if:

1. Free-standing or integral garages have not been included in the number of parking spaces in suburban or rural areas; and

2. Integral garages are 'oversized' in town centre or edge of centre locations to allow for use both for car and sundry storage.

12.30 Policy T5 Cycle parking: Planning permission will be granted for residential development subject to the provision of cycle parking at the following quanta:

- Individual residential developments: 1 space per bedroom; and
- Sheltered accommodation: 1 space per 5 units

12.31 Parking should be provided either within the curtilage of a residential dwelling, or a secure communal facility where a suitable alternative is not available. Any external residential cycle parking should be secure, covered, and preferably constructed from the same materials as the main structure. Any planning application involving cycle parking should demonstrate how the proposal accords with the aspirations and guidance set out in Building for Life 12 with regard to the provision of cycling facilities. Cycle parking requirements for non-residential uses will be provided in agreement with the Council.

Baseline Conditions

12.32 This section provides a summary of the multi-modal site accessibility audit that is presented within the TA.

Local Highway Network

12.33 Princes Parade runs along the southern boundary of the site adjacent to the seafront. The road is approximately 7.5m wide with a 40mph speed limit along the main section of the road and a 30mph speed limit at the junctions of the connecting roads at each end. There are double yellow lines along the northern side of the carriageway. There are no parking restrictions on the southern side of the carriageway adjacent to the promenade.

12.34 Seabrook Road (A259) is to the north of the site and connects with Princes Parade. It provides a link to Sandgate and Folkestone to the east and the centre of Hythe, New Romney and Hastings to the west. The road width ranges from 7.5m to 10m in the vicinity of the site and has a 30mph speed limit. There majority of the road in vicinity of the site has no parking control measures however on street parking does not affect the flow of traffic on the carriageway due to the width of the road.

12.35 Twiss Road is situated to the west of the site and connects Princes Parade with Seabrook Road. The speed limit is 30mph. The road width ranges from 6.2m to 7m wide. Excluding double yellow lines around junctions, there are no parking restrictions along the road, and cars tend to line each side of the carriageway.

12.36 South Road is used, along with Princes Parade and Stade Street, as an alternative to the A259 to access Hythe Town Centre. The road is approximately 9m wide and there are no parking restrictions. The road has been traffic calmed by a give way to oncoming vehicles arrangement to discourage ‘rat running’. At the junction with Twiss Road, the carriageway has been narrowed to slow traffic and improve crossing facilities for pedestrians.

12.37 The junction of Princes Parade and Seabrook Road lies to the east of the site. There is one-way arrangement at this junction, surrounding a site on which a petrol station and restaurant are situated. There is ghosted right facility for vehicles egressing on Princes Parade from the west. There are two lanes forming the westbound carriageway of Princes Parade at this junction. The right lane of which gives way to the eastbound carriageway of Princes Parade to 'loop' back to Seabrook Road.

12.38 The junction of Twiss Road and Seabrook Road is situated to the north-west of the site. The junction has a ghosted right facility for vehicles turning onto Twiss Road. Egressing from Twiss Road onto Seabrook Road, vehicles can turn left only. There is stop line at the junction.

12.39 The roundabout junction of East Street (A259) / Station Road/ Prospect Road (A259) / High Street (entrance only) is situated to the north-west of the site. Observations highlighted a high number of U-turns on the East Street and Prospect Road arms, which are likely to be attributed to drivers accessing Waitrose and the left only restriction at the Twiss Road junction.

Public Transport Network

Bus Services

12.40 The nearest bus stops to the site are located to the north of the site on Seabrook Road (A259). There are 6 stops that are accessible from the site by footpaths over Royal Military Canal, therefore no area of the site is further than a 300m walk to a bus stop. The bus operator for the area is Stagecoach. The main bus routes that serve these stops are the 10/10A and 100/101/102 which provide connections to Hythe Town Centre, Lydd and Ashford to the west and Folkestone and Dover to the east.

Rail Services

12.41 The site is located approximately 4km from Folkestone West and 4.6km from Folkestone Central railway stations. The stations are operated by Southeastern and both offer direct services to Ashford, Dover and London (including London St. Pancras via HS1).

Pedestrian and Cycle Network

12.42 There are several public rights of way in the vicinity of the site and one that runs through the north of the site itself. These routes run adjacent to Royal Military Canal which extends 45km to the west. There are two footpath bridges crossing the canal adjacent to the site, one at the western boundary and another 540m to the east of this (approximately in the centre of the site). These crossings over the canal provide footpath links to Seabrook Road.

12.43 Princes Parade has a footway on the north side of the carriageway. The promenade runs along the south side of the road. There are no formal crossing facilities for pedestrians and cyclists along Princes Parade. Footways run along both sides of Seabrook Road. A signal crossing is located near the junction with Horn Street. National Cycle Route 2 (Dover to Cornwall) runs adjacent to the site along Princes Parade. This route provides a primarily traffic-free cycle route to Hythe to the west and Sandgate to the east.

Accident Data

12.44 Personal injury accident data has been obtained from Kent County Council for the latest available 3-year period for the area surrounding the site and key junctions. Analysis of this data is presented in the Transport Assessment and this has shown that there are no particular safety issues on the surrounding highway network.

Predicted Effects

Construction Traffic

12.45 The construction phasing will dictate the precise volume, routing and access arrangements for construction traffic. The A259 Seabrook Road and Horn Street provide the main vehicular access towards the site from the M20 for construction traffic. Construction traffic movements on residential roads will be avoided. The transport effects associated with construction traffic could be considered minor adverse but will be only temporary.

Completed Development

Highways

12.46 **Table 12.2** below shows the predicted increase in traffic flow at the junctions in 2023 as a result of the proposed leisure centre.

Table 12.2: Traffic Flow Increase at Junctions (2023) - Leisure Centre Scenario

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Total Demand	Development Demand	(%)	Total Demand	Development Demand	(%)
Seabrook Road/ Battery Point/ Princes Parade In	1,340	13	1.0%	1,470	34	2.3%
Seabrook Road/ Princes Parade Out	1,212	11	0.9%	1,390	29	2.1%
Twiss Road/ Seabrook Road	1,441	13	0.9%	1,540	35	2.3%
Twiss Road/ South Road	533	21	4.0%	702	56	7.9%
East Street/ Prospect Road/ High Street/ Station Road	1,955	13	0.7%	2,091	35	1.7%

12.47 **Table 12.3** below shows the predicted increase in traffic flow at the junctions in 2023 as a result of the proposed residential development, boutique hotel and restaurant/café/retail space.

Table 12.3: Traffic Flow Increase at Junctions (2023) - Residential + Hotel + Restaurant/Café/Retail Space Centre Scenario

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Total Demand	Development Demand	(%)	Total Demand	Development Demand	(%)
Seabrook Road/ Battery Point/ Princes Parade In	1,340	28	2.1%	1,470	36	2.5%
Seabrook Road/ Princes	1,212	31	2.5%	1,390	23	1.7%

Parade Out						
Twiss Road/ Seabrook Road	1,441	31	2.2%	1,540	34	2.2%
Twiss Road/ South Road	533	49	9.3%	702	54	7.7%
East Street/ Prospect Road/ High Street/ Station Road	1,955	31	1.6%	2,091	34	1.6%

12.48 **Table 12.4** below shows the predicted increase in traffic flow at the junctions in 2023 as a result of the proposed development.

Table 12.4: Traffic Flow Increase at Junctions (2023) - Total Development

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Total Demand	Development Demand	(%)	Total Demand	Development Demand	(%)
Seabrook Road/ Battery Point/ Princes Parade In	1,340	41	3.0%	1,470	71	4.8%
Seabrook Road/ Princes Parade Out	1,212	42	3.5%	1,390	52	3.8%
Twiss Road/ Seabrook Road	1,441	45	3.1%	1,540	70	4.5%
Twiss Road/ South Road	533	71	13.2%	702	110	15.7%
East Street/ Prospect Road/ High Street/ Station Road	1,955	45	2.3%	2,091	70	3.3%

12.49 Tables 12.2 to 12.4 quantify the predicted increase in traffic throughput at each junction in 2023 as a result of the proposed development. The greatest predicted increase in traffic flow at any junction is 15.7% (Twiss Road/South Road during the PM peak hour). The increase in traffic flow at each junction as a result of the proposed development is predicted to be insignificant.

12.50 The Transport Assessment demonstrates that all of the junctions included within the assessment are predicted to operate within capacity during all of the assessment years. The effect of the proposed development on the junctions surrounding the site would therefore be insignificant.

12.51 **Table 12.5** below quantifies the predicted increase in vehicle delay (in seconds) at each junction in 2023 as a result of the proposed development. The greatest increase in delay at any junction is 3.38 seconds (Seabrook Road/Princes Parade during the AM peak hour). The proposed development is therefore predicted to have an insignificant impact on vehicle delay.

Table 12.5: Increase in Delay (Seconds) at Junctions (2023) - Total Development

Junction	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Without Dev	With Dev	Net Change	Without Dev	With Dev	Net Change
Seabrook Road/ Battery Point/ Princes Parade In	39.31	40.04	+0.73	32.14	33.2	+1.06
Seabrook Road/ Princes Parade Out	17.04	20.42	+3.38	27.98	28.70	+0.72
Twiss Road/ Seabrook Road	22.87	23.99	+1.12	22.07	24.58	+2.51
Twiss Road/ South Road	19.64	20.55	+0.91	21.09	23.38	+2.29

East Street/ Prospect Road/ High Street/ Station Road	26.11	27.4	+1.29	27.08	29.85	+2.77

Public Transport

12.52 The proposed development is expected to generate limited additional demand for local public transport services. It is likely that this additional demand will have an insignificant effect on the existing bus and rail network.

Walking and Cycling Network

12.53 The proposed development will increase the level of demand on existing pedestrian and cycle networks surrounding the site. In particular, there will be increased movements between the proposed development and surrounding key destinations. The proposed development will significantly enhance the quality of the existing pedestrian and cycle networks in the surrounding area:

- The proposed re-alignment of Princes Parade would enable the existing promenade to be widened along the entire east-west length of the development – improving pedestrian amenity.
- The existing posted speed limit on Princes Parade would be reduced from 40mph to 30mph as part of the proposed development which will improve road safety.
- New formal pedestrian and cycle crossings will be provided on Princes Parade to assist pedestrian and cycle movements between the proposed development and the walking route alongside Royal Military Canal.
- The proposed footway along the northern side of Princes Parade would provide a connection to the walking route alongside Royal Military Canal.

12.54 The impacts associated with the predicted additional pedestrian and cycle journeys are expected to be insignificant.

Proposed Mitigation

Construction

12.55 A Code of Construction Practice (CoCP) will be agreed in advance with both Kent County Council and Shepway District Council. This CoCP will include issues relating to construction traffic such as traffic volumes, routing, site operations, effect on roads, footpaths and safety. Any adverse effects associated with the construction phase will then be identified and minimised. The exact form of the CoCP will need to be reviewed once the construction techniques and methodologies to be employed in the various stages of the project are confirmed.

Completed Development

12.56 Measures to be incorporated within the development include:

- Re-aligning Princes Parade, thereby enabling the existing promenade to be widened along the entire east-west length of the site.

- Reducing the posted speed limit on Princes Parade to 30mph to improve safety for all users.

- Providing traffic calming features along the section of Princes Parade adjacent to the site to reduce vehicle speeds and improve safety for pedestrian and cyclists.

- Providing new pedestrian and cycle crossing infrastructure on Princes Parade to assist pedestrian and cycle movements between the walking route alongside the Royal Military Canal and the proposed development.

- Maximising pedestrian and cycle access to Royal Military Canal.

Residual and Cumulative Effects

Residual Effects

12.57 The predicted residual effects arising from the proposed development may be summarised as follows:

- HGV movements associated with the construction phase of the development: These could be minor adverse, but short-term, and would be closely controlled through the development of a management strategy to ensure that any adverse effects were minimised.

- Increased traffic flows on the local highway network surrounding the site: This will not have a significant impact on the operation of local junctions.

- Increased traffic flows along Princes Parade: This effect is predicted to be insignificant.

- Increased pedestrian and cycle journeys within the site and surrounding area: This effect is predicted to be insignificant.

- Improved accessibility for pedestrians and cyclists through the provision of new pedestrian and cycle infrastructure within and around the proposed development: This effect will be major beneficial.

- Increased demand for local public transport services: This effect is predicted to be insignificant.

Cumulative Effects

12.58 The highway assessment has been undertaken based on traffic conditions in 2023, which assume that the three cumulative schemes – Imperial Green, Shorncliffe Garrison and the Seapoint Canoe Centre – have been completed. The traffic flow and junction capacity analysis summarised in this chapter therefore allows for changes in background traffic flows associated with these developments, and demonstrates that the cumulative effect would insignificant.

13. Summary of Mitigation and Effects

Cultural Heritage

Royal Military Canal (RMC)

13.1 The RMC is of national significance, to which its setting makes an important contribution, since it allows the defensive role of the canal to be appreciated. The application site adjoins the canal and forms part of its immediate setting. Harm has already been caused to the setting of the canal by land-raising within the site and by the construction of Princes Parade and the associated sea-wall, since these changes have obstructed the original line of sight from the canal to the sea.

13.2 The proposed development would introduce built development onto the site, thereby reducing its openness. This would further compromise the visual relationship between the canal and the foreshore, and would alter the perceived contrast between the built-up and elevated area to the north of the canal and the open area of former beach to the south. Whilst this is considered to be harmful, the fabric and role of the canal would remain intact and readily understood, such that the degree of harm to its illustrative and aesthetic value is considered to be "less than substantial" in NPPF terms.

13.3 In addition, the development would provide enhanced public access to the site (much of which is currently overgrown) and its canal frontage. Opportunities would be provided for installing interpretation panels, heritage trails and associated facilities to improve public appreciation of the canal. Funding from the development would contribute to the restoration and repair of the drawbridge redoubt, wharf and canal banks. Pre-construction investigations would take place within the site to confirm whether any buried features associated with the canal (a former seawall and ditch) still remain. These initiatives would provide a degree of mitigation for the harm to the canal's setting, such that the impact on its communal value is also considered to be less than substantial.

13.4 The categorization of heritage harm set out in the NPPF does not relate precisely to the concept of EIA significance. It has therefore been assumed for the purposes of this assessment that any harm is potentially significant, with the NPPF categorization than used to qualify the degree of harm. In this case, the degree of harm is considered to be moderate (i.e. somewhere in the middle of the less than substantial bracket).

Other Assets

13.5 The development lies within the setting of other 19thC defensive works that would have had a visual and functional relationship with the canal, and are scheduled monuments, namely the Shorncliffe (drawbridge) Redoubt, Shorncliffe Battery, and Martello Towers 8 and 9. These assets are not readily accessible to the public (Martello Tower 8 is a private dwelling), and the visual relationship between the site and the martello towers in particular has been compromised by the growth of vegetation and built development. The impact of the development would be most apparent from the redoubt, from which there is currently an open view towards the sea. The degree of harm to the setting of these assets is considered to be less than substantial.

13.6 Princes Parade is an undesignated heritage asset, comprising a Victorian seawall, esplanade and former tramway. The modern road would be re-directed through the site, allowing the parade to be remodelled as a pedestrian promenade, and its sea defences upgraded. This

would amount to a less than substantial impact on its significance. The route of the former Sandgate branch railway, also undesignated, would be unaffected by the proposals.

Ecology

Construction

13.7 During construction, the site would experience extensive clearance and disturbance. Whilst most of the site is of limited habitat value, the area of grassland adjoining Princes Parade is of local importance, particularly as a habitat for invertebrates. In the absence of mitigation, the loss of this area would amount to a moderate adverse effect.

13.8 The site is used by several protected species, including common toad, reptiles (slow-worm, grass snake and common lizard), bats, and birds such as Cetti's warbler, house sparrow and reed bunting. In the absence of mitigation, the effects due to physical disturbance and habitat loss would be minor adverse for common toad and birds, and moderate adverse for reptiles and bats. Temporary lighting could also deter foraging bats. Any accidental killing of individual animals would be categorised as a major adverse effect.

13.9 Work such as vegetation clearance, remediation and landscaping will take place in close proximity to the canal, which is of county-level importance as eutrophic standing water habitat and a Local Wildlife Site. In the absence of mitigation, there is a risk that accidental spillages or uncontrolled disposal of wastes could contaminate runoff into the canal, resulting in moderate or major adverse effects on the canal.

13.10 A range of protective measures will be implemented as part of the CEMP. These are anticipated to include:

- Pollution prevention (e.g. waste disposal protocols and temporary drainage);
- Demarcation of fenced no-go areas;
- Creation of compensatory grassland and scrub habitats as permitted by phasing;
- Supervised clearance and erection of "herptile" fencing;
- Trapping and translocation of reptiles to created or enhanced off-site habitats;
- Nesting bird surveys or clearance of nesting habitat outside the breeding season; and
- Controls on temporary lighting.

13.11 On the assumption that these measures are effectively implemented and monitored, the residual effects are predicted to be negligible in all cases except for those relating to breeding reed bunting and the loss of on-site grassland/invertebrate habitat, which would be minor adverse.

Completed Development

13.12 The completed development will represent a fundamental change to the habitat status of the site, as well as introducing potential sources of impact such as physical barriers to movement, lighting, human disturbance, inappropriate management, traffic and predation by

pets. In the absence of mitigation, the effects on the numbers of common toad and reptiles are anticipated to be minor to major adverse, and moderate to major adverse respectively. The potential effect on foraging bats due to the introduction of lighting is predicted to be moderate adverse.

13.13 Compensatory habitat for a range of species will be created within the substantial areas of green space to be retained and re-provided within the development. A Landscape and Ecological Management Plan will protect the long-term value of these habitats, including foraging, shelter and breeding opportunities (e.g. house sparrow boxes and reptile hibernacula). Selected mitigation measures will be incorporated by design, e.g. the location and specification of lighting to avoid light spill onto the canal or adjoining habitats.

13.14 With the adoption of such measures, the residual long-term effects on protected species are predicted to become negligible in all cases, except for a minor adverse effect on reptiles (due to cat predation) and a major adverse effect on common toad (if individual animals are accidentally killed on the road).

Flood Risk and Drainage

13.15 The site adjoins both the foreshore and the Royal Military Canal. The latter is classified as a "main river" and receives flow from the Seabrook Stream and other catchments to the north. The EA Flood Map locates the site within Flood Zone 3a, which denotes a "high probability" of flooding. However, most of the site has been raised about 3m above the level of the canal, and as a result the risk of fluvial flooding is considered to be low. A similar level of risk has been identified for other non-tidal sources (e.g. groundwater and sewers).

13.16 The main flooding risk relates to possible over-topping of the sea defences under storm surge conditions. Redevelopment of the site would introduce a substantial number of "more vulnerable" receptors (i.e. residents), creating a potential for a substantial adverse effect. However, ground-floor levels would be set at a minimum agreed with the EA, and the nearest properties would be set back behind a secondary seawall, to be constructed to the rear of the remodelled promenade. As a result, the residual effect would be reduced to moderate adverse. The potential effects associated with other flooding sources are anticipated to be moderate adverse, reducing to minor adverse with the incorporated mitigation.

13.17 The proposals would represent a fundamental change to the runoff characteristics of the site, which in combination with an assumed high level of sensitivity for the canal could in the absence of mitigation give rise to a major adverse effect. However, runoff would be discharged to the foreshore, ensuring that there would be virtually no change in runoff to the canal, and that the residual effect would be negligible.

13.18 The extent of site disturbance, together with the known presence of contamination and the high sensitivity of the canal, creates a potential for a major adverse effect if polluted runoff occurs during construction. However, the remediation of contamination, together with adherence to best practice during activities such as dewatering and waste disposal, would reduce the residual effect to moderate adverse. With incorporated mitigation, including the use of oil interceptors on drainage from trafficked areas, the residual effect of pollution from the completed development is predicted to be minor adverse.

13.19 The foul drainage network will be upgraded to accommodate the discharge from the development, such that any effects due to surcharging would be avoided.

Geo-Environment

13.20 Site investigations and monitoring have indicated the widespread presence of contamination within made ground across the site, including elevated concentrations of polycyclic aromatic hydrocarbons (PAH), lead, arsenic (one recorded exceedance) and asbestos (but at non-hazardous concentrations). The concentrations of hydrocarbons are present at levels sufficient to pose a risk to human health, whilst phytotoxic metals are present at levels sufficient to affect plant growth. Ground gas is also present at levels that could pose a risk if allowed to collect in unventilated spaces.

13.21 However, there is no evidence that this contamination is causing environmental harm or poses a risk to current users of the site. The hydrocarbons, for example, are relatively immobile, whilst the canal is separated hydraulically from the site (probably by a clay lining installed during its construction). In addition, the site is well vegetated, providing little opportunity for individuals to come into contact with contaminated material.

13.22 Uncontrolled disturbance of the site during construction could mobilize contaminants (e.g. in dust emissions and runoff, or during piling), giving rise to a potential for moderate adverse effects associated with the following:

- Disposal of excavated material (some of which is likely to be classified as hazardous waste);
- Risk to site workers (due to contact, ingestion or inhalation, or exposure to ground gas);
- Contamination of controlled waters (groundwater and the canal);
- Accidental spillage (e.g. of oils or cement slurry); and
- Damage to polymeric services.

13.23 A potential for minor adverse effects has been identified in relation to the risk of contaminated dust emissions or mobilization of contaminants within groundwater or runoff, affecting off-site habitats such as the canal.

13.24 Any sources of ground contamination or gas that may remain at completion of the development could pose a residual risk to the surrounding environment and to occupants or users of the site. The associated effects would be negligible adverse for users of the leisure centre (since significant excavation would be required and users would be separated from any contaminated soil by the building structure), minor adverse for new residents without gardens and moderate adverse for new residents with gardens and for users of public open space. The potential effects on off-site receptors would be negligible, except for the effect on controlled waters, which would be minor.

13.25 In practice, mitigation in accordance with the regulatory regime would ensure that an acceptable level of residual risk would be achieved. The principal measures during construction would include:

- Further gas and groundwater monitoring;
- Analysis and remediation of contaminated soils and groundwater;

- Protocols for the handling and off-site disposal of hazardous wastes;
- Health and safety procedures to protect on-site workers; and
- Monitoring and control of activities capable of spreading contamination (e.g. dust suppression, piling and dewatering);

13.26 The engineering and design of the development would incorporate a range of measures to minimize the residual risk from any remaining contamination. These would include:

- Gas protection for potentially vulnerable spaces (e.g. basements);
- Use of contaminant-resistant materials for utilities and foundations; and
- Use of clean cover, break-layers and imported topsoil for all areas of soft landscaping.

13.27 As a result, the residual effects during construction would be negligible. The residual long-term effects would be minor beneficial, since the remediation and containment of site contamination would neutralize the environmental and health risks it currently represents.

Landscape and Views

13.28 The construction works would substantially alter the character of the site, as vegetation is removed, earthmoving takes place and the built development takes shape. However, the works would be phased, with later phases grassed temporarily following initial remediation work, and the impacts during any one phase would be temporary. The effects on views and character are therefore not anticipated to be significant, except for the permanent loss of vegetation, which would amount to a major to moderate effect.

13.29 The completed development would at Year 1 give rise to a moderate adverse effect on site character, a major to moderate adverse effect on the RMC and Imperial Hythe local landscape character area (LLCA) and a moderate to minor adverse effect on the Princes Parade Coastline LLCA, due to the increase in built development and loss of openness. As a result, three of the assessment views would experience moderate adverse effects, relating to users of Princes Parade and the public open space at the eastern end of the canal, and to residents south of Hospital Hill; whilst two of the views would experience major to moderate adverse effects, relating to users of the Seaview Footbridge and associated PROW, and residents to the north of the canal who enjoy seaward views across the site.

13.30 Once landscaping has become established, the moderate adverse effect on site character would remain, due to the net increase in built development, but the effects on the RMC and Imperial Hythe Coastal Strip LLCA and the Princes Parade Coastline LLCA would decrease to moderate adverse and minor adverse respectively. In addition, the adverse effects on the assessment views and receptors would decrease to moderate to minor in three cases and moderate in two cases.

Socio-Economics

13.31 During construction, the development would provide 644 net job years of temporary employment, contributing more than £10 million in gross value added (GVA) to the local economy. These would amount to minor beneficial effects.

13.32 The completed development would give rise to the following beneficial effects:

- Direct, on-site employment of 45-50 jobs (excluding those transferred from Hythe Pool);
- Indirect employment generated by additional spending by the 354 new residents
- Additional GVA of >£750,000 generated by the overall increase in employment;
- Provision of up to 150 new homes, representing 37.5% of the district's annual housing target (or 1.8% spread over the 20-year plan period); and
- Provision of up to 45 affordable homes, representing 45% of the district's annual target (or 5% spread over the 20-year plan period).

13.33 Each of these effects is considered to be of minor significance. In addition, the leisure centre will replace Hythe Pool, which is subject to significant constraints on availability due to repeated closure for repairs. The centre will also address the under-supply of swimming pools and health/fitness facilities within the district. This is considered to amount to a beneficial effect of moderate significance.

13.34 The only potentially adverse effects relate to the following:

- Additional demand for primary healthcare, amounting to an extra six patients per GP if spread across the 58 GPs within a 5km radius, which amounts to a negligible effect;
- The development will re-provide the Seabrook play area as part of a total of 1.02ha of children's play space. This will not only meet the needs of the new residents, but will partly address the current under-supply of play facilities within Hythe, amounting to a negligible effect.
- Additional demand for education, amounting to 22 primary school places and 16 secondary school places. Since there is no spare capacity at the nearest primary school (Seabrook), this is regarded as a minor adverse effect, although there are 54 surplus primary places with a 3km radius). In addition, there are 747 surplus secondary school places within a 5km radius, such that the additional demand represents a negligible effect.
- The development would result in a net loss of 3.91ha of semi-natural green space, which amounts to a minor adverse effect. However, 3.89ha of green space would be re-provided within the scheme, which is more than is required to meet the needs of the new residents. Furthermore, the re-provided space would be more accessible and of higher quality than the existing site, whilst the Folkestone/Hythe area currently has an over-provision of green space.

13.35 Overall, the beneficial effects would demonstratively outweigh the adverse effects. It is anticipated that additional capacity at Seabrook Primary School would be provided through CIL contributions, thereby mitigating the adverse effect on education and reducing it to negligible significance.

Transport

13.36 During the construction phase, additional traffic (notably HGVs) and highway/utility works would cause a degree of delay and inconvenience, amounting to a minor adverse effect. However, this would be temporary, and would be minimized by traffic management measures as part of the CEMP.

13.37 Traffic generated by the completed development would lead to a reduction in capacity at key junctions in peak periods, and would cause driver delay. The greatest increase in traffic flows would occur at Twiss Road/South Road, averaging 14.5%, whilst the longest delay would be at Seabrook Road/Princes Parade, at 3.38 seconds. These impacts are not considered to be significant. Increased demand for public transport, particularly bus services, is also not anticipated to be significant.

13.38 The development includes a range of measures to improve pedestrian/cycle access. These include the remodelling of Princes Parade to provide a promenade with pedestrian/cycle priority, a reduction in speed limit on the diverted road, the provision of formal crossing points, and the provision of enhanced links to the existing network along the canal and seawall. These measures amount to a major beneficial effect, and would readily accommodate the increased demand from the development.

Cumulative Effects

13.39 The potential for interaction between the impacts of this development and the impacts of the identified cumulative schemes – Imperial Green, Shorncliffe Garrison and Seapoint Canoe Centre - so as to give rise to cumulative effects, is summarised below for each topic.

Cultural Heritage

13.40 The canoe centre would also affect the immediate setting of the canal, but is of insufficient scale to alter the predicted effects. The Imperial Green development occupies a similar location in relation to the canal, and has affected its open outlook. However, it is separated from the application site by the golf course, which would retain this outlook. The Shorncliffe Garrison development is unlikely to affect the setting of the canal, and therefore would not give rise to any cumulative effects on this asset.

Ecology

13.41 The Shorncliffe Garrison and Imperial Green developments are sufficiently separated from the site as to be unlikely to give rise to any cumulative effects. Whilst the Seapoint Canoe Centre adjoins the site, it is of very modest scale, and provided that appropriate precautions are taken during its construction to avoid any impacts on the canal, cumulative effects are unlikely to occur.

Flood Risk and Drainage

13.42 No change to the predicted effects is anticipated. The canoe centre is of insignificant scale, whilst the adoption of sustainable drainage measures as part of the Shorncliffe Garrison redevelopment would ensure no net increase in runoff into the Seabrook Stream catchment (which flows into the RMC). Imperial Green is located within a similar hydrological context to the application site (between the canal and the foreshore), but is sufficiently distant as to be unlikely to give rise to any cumulative effects.

Geo-Environment

13.43 No change to the predicted effects, since the canoe centre is of insignificant scale and the other two developments are sufficiently distant from the site to provide no risk of interaction (e.g. through the groundwater regime). If construction of Princes Parade overlaps with that of Shorncliffe Garrison, arisings of excavated material could coincide, resulting in a cumulative impact on disposal capacity. However, any adverse effects could be avoided by proactive management of disposal.

Landscape and Views

13.44 There would be no significant cumulative effects in relation to the Shorncliffe Garrison and Imperial Green developments, due to their degree of visual separation from the site. Whilst the new canoe centre would be seen in some of the same views as the development, its modest scale is insufficient to give rise to any change to the significance of the predicted effects.

Socio-Economics

13.45 The employment, housing supply and uplift in GVA achieved by the other developments would reinforce the beneficial effects of the development. In addition to the new leisure centre, the improved facilities for the canoe club, together with recreation facilities to be provided at Shorncliffe Garrison, would amount to a moderate beneficial effect.

13.46 The other two residential schemes include their own open space and play facilities, resulting in a negligible cumulative effect. The Shorncliffe Garrison development includes a new GP surgery and primary school, such that the cumulative effects on primary healthcare provision and education capacity would be negligible and minor adverse respectably.

Transport

13.47 The transport assessment considers the 2023 scenario, when the cumulative schemes are assumed to be complete. The predicted effects are therefore already cumulative and would be insignificant.