RiverOak Investment Corp LLC

Manston Airport DCO

Scoping Report

June 2016

Amec Foster Wheeler Environment
& Infrastructure UK Limited

Report for

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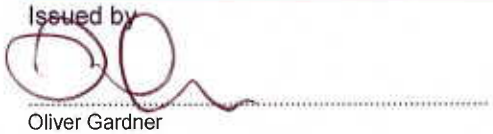

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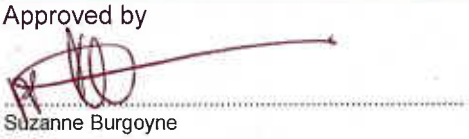

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Document revisions

No.	Details	Date
1	Issued for comment	08/06/2016
2	2nd issue for comment	20/06/2016
3	Final issue for use	27/06/2016

Executive summary

Purpose of this report

This report has been produced for the purpose of obtaining a Scoping Opinion from the Planning Inspectorate on behalf of the Secretary of State in relation to the Environmental Impact Assessment being undertaken as part of the application for Development Consent under the Planning Act 2008 ('the 2008 Act') to authorise the redevelopment of Manston Airport principally as a freight airport.

This project will be a Nationally Significant Infrastructure Project under the terms of the 2008 Act and will provide much needed additional air freight capacity to the UK and also serve to relieve pressure from the other, already heavily congested London and South East airports.

In producing this scoping report consideration has been given to the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, and relevant Planning Inspectorate Advice Notes.

Structure of the scoping report

The report is structured as follows:

- **Chapter 1** provides an introduction to the proposed development including an overview of the current UK national airport infrastructure and of the need for an Environmental Impact Assessment.
- **Chapter 2** outlines information on the proposed development including its need and the alternatives considered as well as a more detailed description of the proposals.
- **Chapter 3** outlines the planning policies that have informed the scope of the assessment and other authorisations that may be required for the Project.
- **Chapter 4** summarises the approach to identifying the scope of the assessment.
- **Chapters 5 to 13** outline the scope of the assessment for each of the topics considered in the assessment.
- **Chapter 14** summarises those effects that, on the basis of the information in Chapters 5-13, are scoped out of the EIA.
- **Chapter 15** sets out the proposed contents for the ES.

A glossary of abbreviations used in this report is provided in Appendix A.

Cumulative Effects Assessment 'Long List' of other development is provided in Appendix B.

Figures not within the text are included at the end of this report as Appendix C.

Contents

1. Introduction

This scoping report has been prepared for the purpose of obtaining a scoping opinion from the Planning Inspectorate in accordance with Regulation 8 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009.

1.1 Background to the proposals

1.1.1 RiverOak Investment Corp LLC (RiverOak) is planning to reopen Manston Airport as a new air freight and cargo hub for the South East. This site is located within the district of Thanet in the county of Kent; the site location is provided in **Figure 1.1.**

1.1.2 There has been an operational airport at the site since 1916. Until 1998 it was operated by the Royal Air Force as RAF Manston, and for a period in the 1950s was also a base for the United States Air Force (USAF). From 1998 it was operated as a private commercial airport with a range of services including scheduled passenger flights, charter flights, air freight and cargo, a flight training school, flight crew training and aircraft testing; in the most recent years it was operating as a specialist air freight and cargo hub servicing a range of operators. Although the airport was closed in May 2014 much of the airport infrastructure, including the runway, taxiways, aprons, cargo facilities and passenger terminal remain (**Figure 1.3**).

1.1.3 The proposed Manston Airport development involves the development of an air freight and cargo facility with the capacity to handle more than 10,000 air transport movements (ATMs) of cargo aircraft per year as part of the provision of air cargo transport services. This Nationally Significant Infrastructure Project (NSIP) will help to provide much needed additional air freight and cargo handling facilities in the south-east of England in accordance with the government's stated aim to maintain the UK's status as a global hub for aviation by allowing for increased aviation capacity in the South East[1]

1.2 The national airport infrastructure

1.2.1 London's six airports, Heathrow, Gatwick, Stansted, Luton, London City and Southend facilitate around 76% of the UK's air cargo. By weight, the UK imports (57% or around 1.3 million tonnes) more than it exports (43% or approximately 1 million tonnes)[2]. The busiest airport for air freight is Heathrow, where most freight is carried in the hold of passenger aircraft. For freight-only aircraft, Stansted and East Midlands currently dominate. Aircraft-to-aircraft movements account for around 15% of air freight traffic in the UK, mainly through Heathrow.

[1] Airports Commission Final Report, July 2015
[2] Department for Transport (2009), The Air Freight End-to-End Journey: An analysis of the end-to-end journey of air freight through UK international gateways, p. 9. Available from http://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/about/strategy/transportstrategy/tasts/userexperience/endtoendjourney.pdf (accessed 20 March, 2016).

1.2.2 The UK's handling of flown freight, around 2.3 million tonnes, compares to France and is considerably more than Italy, at 600,000 tonnes, and Spain at around 500,000 tonnes. However, the UK lags Germany and the Low Countries, who play a major role as freight centres in Western Europe. Between them, the German and Benelux freight airports handled around 7.2 million tonnes of airfreight in 2012. This freight is trucked all over Europe (including the UK), to and from these freight hubs.

1.2.3 In terms of the UK, Oxford Economics[3] forecasts suggest that, "by 2050, the value of air cargo lost to London due to capacity constraints would equate to £106 billion per annum". They also calculate that in the same timeframe, "net national losses due to airfreight capacity constraints could equate to £3.9 billion per annum." This diversion of the UK's air freight to other European airports equates to some 2.1 million tonnes and 80,000 freighter movements by 2050 without additional UK airport infrastructure[4].

1.3 Nationally Significant Infrastructure Projects

1.3.1 The Planning Act 2008[5] defines what projects constitute Nationally Significant Infrastructure Projects (NSIPs). Under Part 3, Section 14(1)(i) of the Act, an NSIP includes 'airport-related development'. Paragraph 23(3)(b) of the Act states that the 'airport-related development' mentioned within Section 14(1)(i) includes 'the alteration of an airport in a case within subsection (4)'. The case within subsection 23(4) states that an airport is within this subsection only if '(a) the airport is in England, or in English waters' and '(b) the alteration is expected to have the effect specified in subsection (5)'. One of the thresholds in subsection 23(5) is 'to increase by at least 10,000 per year the number of air transport movements of cargo aircraft for which the airport is capable of providing air cargo transport services'.

1.3.2 Accordingly, the Manston Airport project is a NSIP as it involves an alteration of an airport that is located within England with an effect to increase the airport capacity by at least 10,000 per year the number of air transport movements of cargo aircraft that the airport is capable of providing given that its current capacity is zero movements.

1.4 The need for an Environmental Impact Assessment

1.4.1 Environmental Impact Assessment (EIA) is a process required by European law which brings together information about any likely significant environmental effects of a proposed development. It provides decision-makers and the public with the environmental information needed to make sustainable decisions when determining applications for certain developments. The legal basis for EIA was

[3] Oxford Economics (2013), Impacts on the Air Freight Industry, Customers and Associated Business Sectors, p. 5. Available from http://content.tfl.gov.uk/impacts-of-a-new-hub-airport-on-air-freight-industry.pdf (accessed 11th March 2016).
[4] York Aviation for the Freight Transport Association and Transport for London (2015), Implications for the Air Freight Sector of Different Airport Capacity Options, p. 19.
[5] Planning Act 2008, Chapter 29.

originally through European Community Directive 85/337/EEC[6] (as amended by Directives 97/11/EC[7] and 2003/35/EC[8]), the amended directive being consolidated as Directive 2011/92/EU[9]. The directive has been substantially amended by Directive 2014/52/EU[10], but these amendments are not expected to apply in the UK until May 2017 and therefore will not apply to this project.

1.4.2 Environmental Impact Assessment (EIA) is required for certain developments under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009[11] (the EIA Regulations). Some NSIPs always require EIA (the EIA Regulations define these under Schedule 1), others only require EIA if they are likely to have significant effects on the environment by virtue of their nature, size or location (the EIA Regulations define these in Schedule 2).

1.4.3 In this instance, RiverOak is undertaking an EIA (in accordance with the EIA Regulations) under paragraph 10(e) of Schedule 2 because of the characteristics, location and potential impact of reopening Manston Airport, to ensure that any potentially significant effects of the development on the environment are considered and where appropriate, mitigated. Therefore in accordance with Regulation 6(1) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, RiverOak have written to the Secretary of State, via the Planning Inspectorate (PINS), to provide notification that they intend to undertake an Environmental Impact Assessment as part of the Development Consent Order application for Manston Airport.

1.5 Purpose of the scoping report

1.5.1 The purpose of this report is to provide information relating to the EIA for the Manston Airport scheme to PINS (and other stakeholders) and to seek its scoping opinion under Regulation 8(1) of the EIA Regulations on the information that should be supplied in an Environmental Statement (ES). The EIA will be completed in accordance with the EIA Regulations.

1.5.2 This scoping report has been prepared to meet the requirements of Regulation 8(3) of the EIA Regulations and as such provides a description of the proposed development, including plans of sufficient detail to identify the site, it identifies the potential likely significant effects of the development that need to be considered in depth as part of the EIA and the proposed assessment methodologies to be adopted in order to identify those effects (insofar as the scope can be determined at this early stage in the EIA process). It is hoped that this information will help to engage stakeholders in the development process and assist PINS in reaching its scoping opinion.

[6] Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment
[7] Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment
[8] Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC
[9] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification)
[10] Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment
[11] SI 2009 No. 2263 as amended by SI 2011 No. 2741 and SI 2012 No. 787

1.6 Developer and the project team

1.6.1 The developer RiverOak has engaged Amec Foster Wheeler Environment and Infrastructure Limited (Amec Foster Wheeler) to produce the documentation associated with the EIA for the proposed Manston Airport redevelopment. The details of the project team are provided in **Table 1.1**:

Table 1.1 Project Team

Task	Project Team
Developer / Applicant	RiverOak Investment Corp LLC
Legal Advisors	Bircham Dyson Bell LLP
EIA Consultants	Amec Foster Wheeler
Planning Consultants	RPS
Masterplanning Architects	RPS
Airspace Design	Osprey Consulting Services
Land Referencing	Mouchel
Air Traffic Forecasting	Azimuth Consulting

1.7 Structure of the scoping report

1.7.1 The report is structured as follows:

- **Chapter 2** outlines information on the proposed development including its need and the alternatives considered as well as a more detailed description of the proposals.
- **Chapter 3** outlines the planning policies that have informed the scope of the assessment and other authorisations that may be required for the Project.
- **Chapter 4** summarises the approach to identifying the scope of the assessment.
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- **Chapter 15** sets out the proposed contents for the ES.

1.7.2 A glossary of abbreviations used in this report is provided in Appendix A.

1.7.3 Cumulative Effects Assessment ‘Long List’ of other development is provided in Appendix B.

1.7.4 Figures not within the text are included as the end of this report as Appendix C.

2. The Proposed Development

2.1 The need for the proposed development

2.1.1 The contribution of aviation to the continued and future success of the UK economy has been recognised by successive UK governments, and the setting up of the independent Airports Commission in 2012, with the aim of finding an effective and deliverable solution to increase aviation capacity in the south east, is likely to be key to delivering continued growth.

2.1.2 The Airports Commission reported in July 2015 that a third runway at Heathrow should be developed to increase airport capacity in the UK although the Government are yet to make a final decision. Whatever decision the Government makes however, will be based on the need to increase airport capacity for passengers, so whilst this will also increase the capacity for belly hold cargo (i.e. cargo carried in the hold of passenger aircraft rather than dedicated cargo aircraft), the primary ambition will not be to fundamentally increase the quantum of air cargo capacity provision that is not belly hold freight.

2.1.3 It is therefore the view of RiverOak that a revived and successful Manston Airport operating as an airfreight hub, with complimentary engineering services, can provide nationally significant airport infrastructure that will support the UK government in its stated aim of finding increased aviation capacity in the south east.

2.1.4 The current UK air cargo[12] market is fragmented, the market divided between belly hold cargo airports and dedicated freighter airports with a split of roughly 70/30 in favour of belly hold. Globally, including in Europe, the split is 60/40 in favour of dedicated air freight; the reasons for the UK split are likely to include a combination of factors chief among them being a shortage of runway capacity in the south east.

2.1.5 Currently the airports in the southeast that handle a significant proportion of dedicated airfreight are Stansted and Luton airports, but neither of these airports is in a position to expand to meet an increase in airfreight demand. Stansted airport is already affected by a shortage of time slots and night noise quota limits, and Luton is constrained by space for airside development.

2.1.6 The only airport in England with significant dedicated airfreight and the capacity to expand is East Midlands Airport, however this is located at a significant distance from London and the main markets in the South East, and would be less able to capitalise on opportunities to recapture market share from other European air freight airports.

2.1.7 The proposal for Manston Airport is to develop a specialised airfreight and logistics gateway to serve the main UK air freight markets in London and the South East. The concept of a dedicated air cargo hub airport is well established across Europe and North America with similar business models in operation at airports in Liege,

[12] Air cargo is the combination of all forms of air freight (belly hold, express, dedicated freighter) and mail flow from an airport

Belgium, Cologne-Bonn and Leipzig, Germany, Charles De Gaulle, France, Alliance Fort-Worth, USA, Mirabel and JC Munro International both in Canada.

2.1.8 To complement the freight services, Manston Airport will also contain facilities for other aviation related development, such as an aircraft maintenance repair and overhaul (MRO) facility, aircraft recycling facility, flight training school, limited passenger operations, and land allocated for other aviation related businesses.

2.2 Main alternatives considered

2.2.1 The EIA Regulations set out within Schedule 4, Part 1 the need to outline the main alternatives considered as part of the EIA process.

2.2.2 In preparing the Environmental Statement for Manston Airport consideration will be given to the following main alternatives:

- the 'do nothing' scenario;
- differently scaled air cargo operations at Manston Airport; and
- strategic alternatives to Manston Airport.

2.3 Characteristics of the proposed development

Project description

2.3.1 The stated aim of the project is to revive Manston Airport as a successful airfreight hub, of national significance, with complementary passenger and engineering services. The focus, which will be unique for the United Kingdom, would be to provide a dedicated airfreight facility capable of handling in excess of 10,000 air traffic movements of air freight cargo per year that is compliant with European Aviation Safety Agency (EASA) standards, a glossary of airport terms is presented in **Box 2.1** below. The proposed zoning of different areas within the airport is shown in **Figure 2.1**.

2.3.2 The proposed layout general arrangement overall plan is shown in **Figure 2.2**, detail of the proposed cargo area in **Figure 2.3**, and detail of the proposed passenger area and maintenance repair and overhaul (MRO) facilities in **Figure 2.4**.

2.3.3 The existing 2748m east-west aligned runway will be retained for the reopened airport. An assessment of the runway condition will be undertaken but it is likely that it will require rehabilitating to improve the load bearing capacity for future aircraft operations. The likely rehabilitation method will be an overlay using bituminous materials.

2.3.4 The existing taxiway network will need modifications in order to be compliant with EASA in order to allow Manston Airport to attract the widest range of operators. This will include a new taxiway parallel to the runway, new taxiways linking the aprons and stands and modifications to existing taxiways to ensure the gradient of the slope is compliant with EASA guidelines (**Figure 2.2**).

2.3.5 The existing passenger apron to the west of the terminal building will be retained. Two new areas of apron covering approximately 208,000m^2 to provide sufficient areas for the parking of up to 18 aircraft will be constructed between the runway and B2050 Manston Road. These facilities will be able to accommodate the larger types of aircraft, classified as Codes E & F, which many air freight operators currently use. The apron areas will incorporate 'slot drains' to collect surface water runoff. Mast lights 25m high located around the aprons will provide the required lighting for safe aircraft operations.

Box 2.1 Glossary of Airport Terms

- Runway – defined rectangular area prepared for the landing and takeoff of aircraft, typically constructed of asphalt, concrete or a mixture of both;
- Apron – area of the airport where aircraft are parked, loaded, unloaded, refuelled and boarded, typically constructed of concrete;
- Taxiway – a path for connecting runways with aprons, hangars, terminals and other facilities, typically constructed of concrete, for reference named alpha, bravo, charlie, echo etc.;
- Aeroplane Design Code – alphabetic code for defining aircraft size based on wingspan from A (smallest) to F (largest);
- Aircraft Classification Number (ACN) – number expressing the relative effect of an aircraft on the runway pavement for a specified standard subgrade category;
- Pavement Classification Number (PCN) – used in combination with the aircraft classification number (ACN) to indicate the strength of a runway, taxiway or airport apron;
- Air Traffic Control (ATC) – service provided by ground-based controllers who direct aircraft on the ground and through controlled airspace, can be used to refer to the building from where the ATC operate;
- Navigation Aids – variety of equipment such as such as automatic direction finder (ADF) and VHF omnidirectional radio range (VOR) that will be installed at an airport to aid pilots in navigation;
- Fuel Farm – dedicated area within the airport for the storage of aviation fuel (Jet A or 100LL) prior to being discharged into aircraft fuel tanks;
- Perimeter – the secure area around the airport which forms the barrier between landside and airside operations, access across and through the perimeter is tightly controlled;
- Landside – the part of the airport directly accessed from 'outside' the perimeter;
- Airside – the part of the airport accessiable to aircraft, access to airside from landside controlled by one or all of security, passport and customs checks

2.3.6 The existing cargo facilities located in the north east of the site will be relocated; new airside cargo facilities, car park and storage areas will be constructed immediately to the north of the new cargo aprons with direct access onto a new aircraft apron area. The new cargo facilities will cover approximately 66,000m^2 with a height of 15m with a storage and parking area of approximately 120,000m^2 (**Figure 2.3**). Due to the existing topography and the requirement for compliant taxiway and apron gradients this area will require regrading to provide a building platform for the buildings and apron (**Figure 2.6**).

2.3.7 The focus for Manston Airport will be air freight and cargo operations; but facilities for secondary supporting aviation uses, including aircraft maintenance repair and overhaul (MRO) and limited passenger services will also be provided (**Figure 2.4**). The passenger facilities will use the existing terminal and passenger apron, with sufficient space for up to four additional aircraft stands if required. The existing MRO facility will be replaced with a new facility capable of accommodating two of the largest types of aircraft.

2.3.8 The existing air traffic control building located immediately to the north of the runway will be retained (number 5 on **Figure 2.1**). All navigational aid equipment

that has been removed from the airport will be replaced to allow the airport to operate in all weather conditions (numbers 4, 10 and 11 on **Figure 2.1**). A new radar facility will be located in the original position in the northwest of the site, on the Northern Grass, to replace the former airport radar (number 1 on **Figure 2.1**).

2.3.9 A new fuel farm facility, incorporating best practice in the design and management of fuel storage such as above ground and bunded fuel tanks, will be constructed (**Figure 2.2**). For ease of access the facility will be located airside within the new areas of development.

2.3.10 In order to support the increased level of activity and development on the site additional services will be required; this is likely to include additional internal sub-stations, communication networks, and foul and surface water connections. The surface water network will include interception, attenuation (winter and summer ponds) and pollution control facilities designed in accordance with industry best practice and agreed with the key stakeholders. Where appropriate Sustainable Drainage Systems (SuDS) will be utilised for the discharge to ground, use of the existing connections to the public drainage system, or existing water permitted discharge to Pegwell Bay will be utilised. An outline drainage layout is shown in **Figure 2.7**.

2.3.11 A new airport access for the cargo/aircraft maintenance facility is proposed on the B2190 (Spitfire Way) to the west of the existing access (**Figure 2.5**). This will link in with other existing proposals for highways improvements that are being prepared by the Kent County Council Highways Department. RiverOak will work with them to provide improved access in and around the airport, for example to deliver improvements to the junction of Manston Road and Spitfire Way. A landscaping zone between the new internal access road and the public highway will be provided to screen the development.

2.3.12 The two existing museums on the site, the RAF Manston Museum and the Spitfire and Hurricane Memorial Museum, will remain and be located in a new museum area. The old Air Traffic Control Tower building, located to the east of the Spitfire and Hurricane Memorial Museum will be converted to provide a new café and observation area (**Figure 2.2**).

2.3.13 The area north of Manston Road, referred to as the ‘Northern Grass’ will be utilised for other aviation related purposes such as warehousing, hangars, offices and airport related business units, but will have no direct access for aircraft (**Figure 2.1**). The requirements for facilities airside mean that there will be limited available space within the main site for any expansion of aviation related businesses, and any activities that can be located landside will be located here. Initial proposals for this area indicated that it could support multiple business units of various sizes and layouts with an approximate total floor spaces of 1,400,000m^2. The DCO application will include proposals based on outline design parameters. A safeguarding zone around the airport radar installation will be retained. The size of this area will be dependent on the type and specifications of the radar.

2.4 Airport construction phase

2.4.1 The initial phase of construction, which will commence following the grant of the DCO, will focus on returning the airport to operation and reusing as much of the remaining original airport infrastructure as possible. As the airport has not been operational since May 2014, and is unlikely to have been subject to regular maintenance since that date it is likely that this phase will require a period of 6-12 months during which time the essential airport equipment and infrastructure will be maintained where it still exists or installed to bring it back to full use. During this time an application for an Aerodrome licence will be submitted.

2.4.2 The remaining phases of development will be undertaken in accordance with the emerging and developing business case for the airport. Initially, the airport will operate using the existing infrastructure and cargo building facilities. An outline phased development is likely to comprise the following stages:

- relocate existing facilities located within new development area
- install new airside infrastructure (relocate taxiway alpha, new fuel farm)
- provide new site location access
- upgrade site services (electricity, surface water drainage and treatment)
- improve community facilities (museums and café/observation centre)
- development, in phases, of new aircraft stands, aprons and cargo facilities as required
- development of Northern Grass area for aviation related businesses

2.5 Airport operational phase

2.5.1 The air freight operations, which will be the main focus for the airport, are expected to start shortly after reopening. From this initial base the airport would seek to attract additional customers and clients including offering the facilities as the base for one or more freight forwarding and handling companies.

2.5.2 The forecasting of the air traffic for the reopened Manston, including an assessment of the current UK air cargo market, of trends in the UK, European and global air freight markets, and of any long term opportunities, is currently being undertaken as part of the preparation of the application for development consent and the business and needs case for the project.

2.5.3 Based on the initial assessments undertaken of the current UK air cargo market it is estimated that a reopened and developed Manston Airport, with a focus on air freight and cargo, could capture in the region of 500,000 to 600,000 tonnes of air freight by 2035. This would be from a combination of business returning to Manston Airport, the capturing of market share from other airports (either because of better facilities at Manston Airport, shorter trucking distances from airports outside the UK or pressure for slots at these other airports) and from general market growth.

2.5.4 Depending on the type of freight and the fleet-mix operating from the airport, a total of 500,000 tonnes would equate to 10,000 to 20,000 air traffic movements per year. The full details of the types of aircraft that will operate, the timings of the flights (including the spread of flights per day or week) and the types of cargo (which will dictate the type of freight handling facilities) are not fully known at this stage of the assessment. Details of all of this information will be provided for the DCO application and used within the assessment.

2.5.5 The main operating hours for the core airport staff will be normal office hours Monday to Friday, with essential management staff working weekends and holidays. In line with the operational requirements the airport will maintain 24hour air traffic control, firefighting, border control, security and other essential services.

2.6 Airport masterplan design evolution and mitigation

2.6.1 The development of mitigation measures to avoid, reduce or compensate for any significant adverse effects of a project is an intrinsic part of the Masterplan design and EIA process, and the approach that has been adopted for this project is to work with the wider project team at the design stage in order to avoid or minimise any effects through the process of design evolution.

2.6.2 As part of this design evolution a number of workshops and meetings have already been held between members of the technical team to identify key constraints and opportunities arising from the proposed development, and to look at ways to reduce or remove any effects by designing them out. These have addressed a range of issues and topics including:

- Measures to reduce and manage noise;
- Surface water treatment and management;
- Landscape and visual impact of proposed development; and
- Improvements to site access, including effects upon local road network.

2.6.3 This will be an ongoing process throughout the development of the master plan and environmental assessment. As effects are identified and assessed potential mitigation measures will be considered and, where possible, will be incorporated into the ongoing design and development of the airport masterplan. These measures relate to both the construction and improvement, and operational phases.

3. Policy and Authorisations Overview

This section sets out the relevant national, regional and strategic local planning policies in order to establish the policy context against which the proposals for the reopening of Manston Airport need to be considered.

3.1 National Planning and Aviation Policy

3.1.1 The following sections provide a summary of the national planning and aviation policy relevant to the reopening and development of Manston Airport.

National Planning Practice Guidance (NPPG)

3.1.2 On 6th March 2014, the Department for Communities and Local Government (DCLG) launched the planning practice guidance web-based resource. This was accompanied by a Written Ministerial Statement which includes a list of the previous planning practice guidance documents cancelled when the site was launched. The idea is that the planning practice guidance will be updated as needed. The web-based resource was developed following the recommendations of the External Review of Planning Practice Guidance which the Government previously consulted on. The purpose of publishing the web-based resource is to bring together planning practice guidance for England in an accessible and useable way.

3.1.3 In terms of planning practice guidance when it relates to aviation and airport planning, the NPPG does not introduce any additional guidance beyond that which is already captured by the National Planning Policy Framework (see below).

National Planning Policy Framework (NPPF)

3.1.4 The NPPF was published in March 2012 and sets out the Government's planning policies for England and how these are expected to be applied (paragraph 1). It states that planning law requires that planning applications must be determined in accordance with the Development Plan, unless material considerations indicate otherwise, and that the NPPF must be taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions (paragraph 2).

3.1.5 Paragraph 3 specifically states that the NPPF does not contain specific policies for nationally significant infrastructure projects for which particular considerations apply. These are determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant National Policy Statements (NPS) for major infrastructure, as well as any other matters that are considered both important and relevant (which may include the National Planning Policy Framework). It continues to state that National Policy Statements form part of the overall framework of national planning policy, and are a material consideration in decisions on planning applications (see following section on National Policy Statement on Airports).

3.1.6 However, because there is not yet a National Policy Statement for airports, and even if one is published it may only be concerned with a new runway at either Heathrow or Gatwick, this project will have to rely on existing planning and other policies. In that context, the NPPF is likely to be considered 'important and relevant' by the Secretary of State for Transport when a decision on the application is made. This document proceeds on that basis.

3.1.7 At the heart of the NPPF is a presumption in favour of sustainable development which in terms of decision-taking, means approving development proposals that accord with the Development Plan without delay or where the Development Plan is absent, silent or relevant policies are out-of-date, granting planning permission unless any adverse effects of doing so would significantly and demonstrably outweigh the benefits when assessed against the policies in the NPPF taken as a whole or if specific policies in the NPPF indicate that development should be restricted (paragraph 14).

3.1.8 Paragraph 17 specifically addresses the role that the planning system should play and sets out a core list of land use planning principles which should underpin the plan-making and decision-taking process. These include that planning should:

- **"…proactively drive and support sustainable economic development to deliver… infrastructure that the country needs, making every effort to objectively identify and then meet development needs of an area, and respond positively to wider opportunities for growth…**
- **... support the transition to a low carbon future in a changing climate…**
- **… actively manage patterns of growth to make the fullest use of public transport…"**

3.1.9 Paragraph 33 of the NPPF specifically relates to the planning of airports and airfields and states:

> **"When planning for ports, airports and airfields that are not subject to a separate national policy statement, plans should take account of their growth and role in serving business, leisure, training and emergency service needs. Plans should take account of this Framework as well as the principles set out in the relevant national policy statements and the Government Framework for UK Aviation."**

3.1.10 Part 11 of the NPPF relates to the need to conserve and enhance the natural environment and the need for the planning system to contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils; minimising effects on biodiversity and providing net gains in biodiversity where possible and preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.

3.1.11 Paragraph 118 states that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying certain principles. These include refusing planning permission if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful effects), adequately mitigated, or, as a last resort, compensated for;

not normally permitting 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) unless the benefits of the development can clearly outweigh the effects and refusing planning permission 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.

3.1.12 Part 12 of the NPPF deals with the need to conserve and enhance the historic environment. Paragraph 133 states that where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss. Paragraph 134 states that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal.

3.1.13 Within the NPPF, there are various references to the need for Local Authorities to work with other authorities and providers to:

"identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice; (Paragraph 41)

to assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; (Paragraph 162) and

to take account of the need for strategic infrastructure including nationally significant infrastructure within their areas." (Paragraph 162)

3.1.14 The NPPF Technical Guidance was archived on 7th March 2013 and replaced by the new planning practice guidance launched on 6th March 2014 (see preceding section).

Airports National Policy Statement

3.1.15 The Airports National Policy Statement (NPS) has not yet been published in draft for consultation. It will be produced by the Department for Transport.

3.1.16 During a Transport Select Committee examination held on 8th February 2016 the Secretary of State for Transport, Patrick McLoughlin advised that a draft NPS for aviation would be published after the Government had given its decision on a preferred location for a new runway in the South East following the recommendation of the Airports Commission (July 2015). NPS are of primary importance to the decision making process when Development Consent Order (DCO) applications are under consideration. Section 104 of the Planning Act states:

In deciding the application the Panel or Council must have regard to—

(a) any national policy statement which has effect in relation to development of the description to which the application relates (a "relevant national policy statement")

3.1.17 If the NPS is not published in time for the DCO application for Manston or does not cover air cargo beyond the chosen airport for a new runway, then the Manston project will have to rely on existing airport policy. This is primarily contained in an 'Aviation Policy Framework' published in March 2013. References to this framework are included in later sections where appropriate.

Aviation Policy Framework (March 2013)

3.1.18 The Aviation Policy Framework (APF) sets out the Government's policy on aviation, although it is silent on specific policies either in support of or against further airport expansion in the South East.

3.1.19 In the absence of any specific commentary on regional airport expansion in the South East or Manston Airport itself, the Aviation Policy Framework does state that the Government recognises the very important role airports across the UK play in providing domestic and international connections and the vital contribution they can make to the growth of regional economies. It is acknowledged that for more remote parts of the UK, aviation is not a luxury, but provides vital connectivity. It states that many airports act as focal points for business development and employment by providing rapid delivery of products by air and convenient access to international markets and cites the success of East Midlands Airport which acts as a hub for freight.

3.1.20 In terms of air freight, the APF recognises its importance for supporting export-led growth in sectors where the goods are of high value or time critical. It goes on to state that air freight is a key element of the supply chain in the advanced manufacturing sector in which the UK is looking to build competitive strength. Goods worth £116 billion are shipped by air between the UK and non-EU countries, representing 35% of the UK's extra-EU trade by value. The express air freight sector alone contributed £2.3 billion to UK GDP in 2010, and facilitates £11 billion of UK exports a year. Over 38,000 people are directly employed in the express industry, which supports more than 43,000 jobs in other sectors of the economy. The APF further states that a successful and diverse economy will drive a need for quicker air freight. Key components to keep factories working are often brought in from specialist companies in North America and the Far East. To keep production lines rolling this often has to be done at short notice. Access to such services is crucial to keeping UK manufacturing competitive in the global marketplace.

3.2 Regional Planning Policy

3.2.1 This section looks to summarise the regional planning policy that is relevant in the consideration of any future development at Manston Airport.

3.2.2 It should be noted that the strategic planning functions of County Councils that were prominent historically are now much reduced following the Planning and Compulsory Purchase Act 2004. Further to the commentary provided below, it can

be concluded that there are no significant residual planning functions of Kent County Council.

Local Transport Plan for Kent 2011-2016

3.2.3 The current Local Transport Plan for Kent, covering the five year period between 2011 and 2016 sets out the future transport strategy for the County based on current and expected transport demand. This is then used as both part of the evidence base when preparing local planning development plan documents and also in the determination of planning applications.

3.2.4 The Local Transport Plan for Kent states that Manston Airport (referred to as one of Kent's airports) has plans to expand and is an essential catalyst for regeneration of the local areas.

3.2.5 It recognises the significant impact that Manston Airport has on the County's residents, both positive (such as the employment opportunities generated) and negative (including the traffic congestion, noise and environmental pollution). Kent County Council is keen to work with airport operators and Central Government to ensure that these negative impacts are minimised whilst supporting managed expansion where it aligns with the County Council's economic growth and regeneration objectives.

3.2.6 The Local Transport Plan for Kent states that Manston Airport has significant potential to develop into a regional airport and become one of the largest single generators of economic activity in the County.

3.3 Local Planning Policy

3.3.1 Although an application for an Order granting Development Consent is not subject to Section 38(6) of the Planning and Compulsory Purchase Act 2004, the Secretary of State must take development plans into consideration if they are thought 'both important and relevant' to the decision.

3.3.2 The application area for the development is entirely within Thanet District Council who are the Local Planning Authority, and in this section, summaries of the relevant planning policies contained within the statutory Development Plan of Thanet District Council are provided:

3.3.3 A review of the planning policies for the two neighbouring local authorities, Dover District Council and Canterbury City Council, has not identified any planning policy of relevance to the reopening of Manston Airport.

3.3.4 Reforms to the production of local planning policy were set out in the Planning and Compulsory Purchase Act 2004, with detailed guidance contained in Planning Policy Statement 12 (PPS12) – Local Spatial Planning. The Planning and Compulsory Purchase Act 2004 Schedule 8 sets out a period of three years for the transition of old policy to a new policy that replaces it (when it is published, adopted or approved). Where local authorities had not produced the required new policy, the Secretary of State for Communities and Local Government provided direction that the transition period as set out in the Planning and Compulsory Purchase Act 2004 would not apply, and in effect adopted planning policies would be in effect 'saved' until replacement planning policy was adopted.

3.3.5 For the purposes of decision-taking, saved Local Plan policies should not be considered out of date simply because they were adopted prior to the publication of the NPPF. However, from March 2013, due weight should be given to saved policies in existing plans according to their degree of consistency with the NPPF (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given).

Thanet District Council Local Plan

3.3.6 The Manston Airport site is located entirely within the administrative authority of Thanet District Council.

3.3.7 The statutory Development Plan for Thanet District Council comprises:

- Thanet Local Plan (2006) (Saved Policies)
- Cliftonville Development Plan Document (February 2010) (part of Margate and not relevant to this project)
- Local Plan Proposals Map

Saved Policies of the adopted Thanet Local Plan (2006) and Proposals Map

3.3.8 The key planning policy designations that affect the Manston Airport site and the area adjoining it as shown on the Local Plan Proposals Map are as follows:

- The airport boundary is defined on the Proposals Map (Policy EC2 – Kent International Airport)
- Policy EC4 – Airside Development Area
- Policy EP13 – Groundwater Protection Zone
- Policy CC1 – Development in the Countryside
- Policy CC2 – Central Chalk Plateau
- The land to the east is designated for terminal related purposes (Policy EC5 – Land at, and east of the Airport Terminal)
- The land to the west is designated for economic development (Policy EC1 – Manston Park, Manston)

Land Designations

3.3.9 Policy EC2 (Kent International Airport) refers to the boundary for the airport site as shown on the Proposals Map. Policy EC2 states that:

"Proposals that would support the development, expansion and diversification of Kent international airport will only be permitted subject to the following requirements:

- Demonstrable compliance with the terms of the current agreement under section 106 of the town and country planning act 1990 or subsequent equivalent legislation;
- New built development is to be designed to minimise visual impact on the open landscape of the central island. particular attention must be given to roofscape

and to minimising the mass of the buildings at the skyline when viewed from the south;

- Appropriate landscaping schemes, to be designed and implemented as an integral part of the development:
- Any application for development for the purpose of increasing aircraft movements in the air or on the ground, auxiliary power or engine testing, must be supported by an assessment of the cumulative noise impact and the effectiveness of mitigation measures to be implemented in order to minimise pollution and disturbance. the acceptability of proposals will be judged in relation to any identified and cumulative noise impact, the effectiveness of mitigation and the social and economic benefits of the proposals;
- An air quality assessment in compliance with policy ep5, to demonstrate that the development will not lead to a harmful deterioration in air quality. permission will not be given for development that would result in national air quality objectives being exceeded;
- Development will not be permitted within the airport complex to the south of the airside development site identified in policy ec4, unless it has been demonstrated that the development is necessary for the purpose of air traffic management;
- Any new development which would generate significant surface traffic must meet requirements for surface travel demand in compliance with policy ec3.
- It must be demonstrated that new development cannot contaminate groundwater sources or that appropriate mitigation measures will be incorporated in the development to prevent contamination."

3.3.10 Policy EC4 (Airside Development Area) refers to land within the boundary of the airport site excluding the runway as shown on the Proposals Map. Policy EC4 states that:

"Land at the airport, as identified on the proposals map, is reserved for airside development. Development proposals will require specific justification to demonstrate that an airside location is essential to the development proposed. Development will be required to retain sufficient land to permit access by aircraft of up to 65m (217ft) wingspan to all parts of the site."

3.3.11 The land north of the runway and including the land north of the B2050 is safeguarded for airside development purposes. This is defined as uses with an operational requirement for direct access to aircraft and therefore dependent on a location immediately adjacent to the runway or capable of direct access to it via taxiways. This includes uses based on:

- Operation of passenger handling services
- Air cargo operations related to the site
- Operation of aircraft maintenance and manufacturing
- Services ancillary to the maintenance and operation of the airport

3.3.12 Policy CC1 (Development in the Countryside) covers all land within the airport boundary as shown on the Proposals Map. Policy CC1 states:

"The Thanet Countryside is defined as those areas of the District outside the identified urban and village confines.

Within the countryside, new development will not be permitted unless there is a need for the development that overrides the need to protect the countryside."

3.3.13 Policy CC2 (Landscape Character Areas) covers all land within and adjacent to the boundary of the airport site as shown on the Proposals Map. Policy CC2 states that:

"Within the landscape character areas identified on the proposals map, the following policy principles will be applied:

- **On the central chalk plateau, a number of sites are identified for various development purposes. Where development is permitted by other policies in this plan, particular care should be taken to avoid skyline intrusion and the loss or interruption of long views of the coast and the sea;**

Development proposals that conflict with the above principles will only be permitted where it can be demonstrated that they are essential for the economic or social well-being of the area.

In the event of a real and specific threat to the landscape character of these areas from permitted development, the use of article 4 directions will be considered, and secretary of state approval for the direction sought."

3.3.14 Policy EC5 (Land at, and East of, the Airport Terminal) covers s relatively small parcel of land to the east of the terminal and north of the runway which is safeguarded for terminal operational requirements, as shown on the Proposals Map. Policy EC5 states that:

"Until such time as a new airport terminal is built, land at, and east of, the existing airport terminal is identified on the proposals map for airport terminal-related purposes. Uses will be restricted to those which directly support or complement the operational requirements of the existing airport terminal. Should a new terminal be built, other airport-related development will be permitted on this allocated site. Planning conditions or planning agreements will be applied to limit any development granted planning consent to uses conforming to this policy."

3.3.15 Policy EC5 recognises that some airport terminal-related activities need to be located adjacent to the existing terminal building. This could include, for example, car parking or the physical expansion of the terminal. In order to cater for such uses, this site is identified on the Proposals Map including the existing airport terminal facilities and land immediately to the east of the terminal. This site is also acknowledged to provide a reasonable gap between the terminal area and Manston Village.

3.3.16 Policy EC1 (Land Allocated for Economic Development) covers the employment area west of the airport and north of the western extent of the runway, as shown on the Proposals Map. Policy EC1 states that:

"At the following sites, as shown on the proposals map, land is allocated for business purposes:

- **Manston Park, Manston**

Use will be restricted to classes B1 (business), B2 (general industry) and B8 (storage and distribution). On all sites a landscaping scheme appropriate to the scale, location and character of the site will be required to provide an attractive environment.

On these sites planning applications should be accompanied by traffic impact studies and green travel plans, unless the development is considered too small to have a significant travel impact."

Economic Development & Regeneration

3.3.17 In terms of the economic development and regeneration, Chapter 2 of the adopted Local Plan 2006 states that:

"The development of Kent International Airport as an important regional hub and business location, and its proximity to the business parks ensures a key role for the airport in the economic regeneration of the area."

3.3.18 The adopted Local Plan 2006 recognises the political decisions that need to be made regarding the major London airports and the subsequent effects this will have on regional airports such as Kent International Airport.

3.3.19 It is outlined that where there is higher investment by the owners of Manston Airport in improving handling facilities, better passenger facilities and new or improved terminals, it is more likely the airport will attract substantial growth by attracting aircraft operators.

3.3.20 Chapter 2 of the adopted Local Plan 2006 highlights the operational importance of Kent International Airport due to the length of runway, together with the substantial areas of surrounding land available for employment purposes. The Council are clear in their support for the future development of Kent International Airport.

Housing

3.3.21 The expansion of activity at Kent International Airport is quoted as one of four main sources of employment growth that will result in additional housing requirements in the district.

Transport

3.3.22 The adopted Local Plan 2006 outlines that Thanet Council and adjoining District Councils wish to see Kent International Airport develop as a regional airport. It is acknowledged that the airport offers very significant economic and employment benefits for Thanet and East Kent. Its development will also have significant transport implications arising from passengers, freight and employees.

3.3.23 In addition to the airport itself, additional transport infrastructure works are also set out:

- Bus priority and cycle facilities on the A256 and from urban Thanet to Kent International Airport and the Central Island Business Parks
- Medium and long term proposals for rail access to Kent International Airport

Draft New Thanet Local Plan to 2031 Preferred Options Consultation (January 2015)

3.3.24 Within the Draft Local Plan, Strategic Priority 1 looks to create additional employment and training opportunities, to strengthen and diversify the local economy and improve local earning power and employability. With regards to Manston Airport it states that:

"Support the sustainable development and regeneration of Manston Airport to enable it to function as a local regional airport, providing for significant new employment opportunities, other supporting development and improved surface access subject to environmental safeguards or as an opportunity site promoting mixed-use development that will deliver high quality employment and a quality environment."

3.3.25 The Council recognises that various options are available with regards to the future use of the Manston Airport site, as an airport operation and aviation activities, as well as for other developments. It is acknowledged that these need to be explored and assessed for the wider area of the airport and its environ through the development plan making process. The Council are therefore seeking to designate the area as an "opportunity area" for which the District Council will prepare an Area Action Plan (AAP) Development Plan Document. The AAP for Manston Airport will set out the development framework for the development and regeneration of the area. A consideration of the AAP should be the promotion, retention, development and expansion of the airport and aviation related operations. This should be supported by a feasibility study and a viable business plan.

3.3.26 The alternative option for the AAP should be to assess mixed-use development that will deliver significant new high quality skilled and semi-skilled employment opportunities, residential development, sustainable transport and community facilities.

3.3.27 Policy SP04 states that the council should:

"Safeguard local distinctiveness and promote awareness, responsible enjoyment, protection and enhancement of Thanet's environment, including the coast, countryside, rich seaside heritage, historic environment, diverse townscapes and landscape, biodiversity and water environment.

3.3.28 This includes the following objectives in support of this policy which are relevant to the proposals for Manston Airport:

- Accommodate the development needed to optimise access to jobs, key services and facilities required to promote the physical and mental well-being, independence and quality of life of all sections of the community, and retain young people.
- Preserve and enhance Thanet's exceptional built historic environment and ancient monuments and their settings.

- Safeguard and enhance the geological and scenic value of the coast and countryside, and facilitate its responsible enjoyment as a recreational and educational resource.
- Retain the separation between Thanet's towns and villages as well as their physical identity and character.
- Protect, maintain and enhance the district's biodiversity and natural environment, including open and recreational space to create a coherent network of green infrastructure that can better support wildlife and human health.
- Mitigate and adapt to the forecast impacts of climate change (including the water environment, air quality, biodiversity and flooding).
- Use natural resources more efficiently, increase energy efficiency, the use of renewable and low carbon energy sources, to reduce the district's carbon footprint.

3.3.29 Policy SP05 (Manston Airport) states that:

"The site of Manston Airport and the adjoining area will be designated as an "Opportunity Area" for the purposes of preparing the Manston Airport Area Action Plan" Development Plan Document. The Manston Airport AAP will explore through the development plan process the future development options for the site of the airport and the adjoining area. A consideration of the AAP should be the retention, development and expansion of the airport and aviation operations where supported by a feasibility study and a viable Business Plan, while exploring alternative options for the future development of the area for mixed-use development.

While the Manston Airport Area Action Plan is being prepared and until adopted by the Council as a development plan for the Manston Airport area, the following policy for the Manston Airport will apply.

Proposals at the airport, that would support the development, expansion and diversification of Manston Airport, will be permitted subject to all of the following requirements.

- That there be demonstrable compliance by the applicants with the terms of the current agreement under section 106 of the Town and Country Planning Act 1990 as amended or subsequent equivalent legislation.
- That new built development is to be designed to minimise visual impact on the open landscape of the central island. Particular attention must be given to roofscape for the purposes of minimising the mass of the buildings at the skyline when viewed from the south.
- The provision of an appropriate landscaping scheme, to be designed and implemented as an integral part of the development.
- That any application for development for the purpose of increasing aircraft movements in the air or on the ground, auxiliary power or engine testing, be supported by an assessment of cumulative noise impact and the effectiveness of mitigation measures to be implemented in order to minimise pollution and

disturbance. The acceptability of proposals will be judged in relation to any identified and cumulative noise impact, the effectiveness of mitigation and the social and economic benefits of the proposals.

- The provision of an air quality assessment in compliance with the Air Quality Management Plan to demonstrate that the development will not lead to a harmful deterioration in air quality. Permission will not be given for development that would result in national air quality objectives being exceeded.
- That any new development which would generate significant surface traffic must meet requirements for surface travel demand.
- That it must be demonstrated both that new development cannot contaminate groundwater sources and that appropriate mitigation measures will be incorporated in the development to prevent contamination.
- There will be no significant harm to Thanet's SSSI/SAC/SPA/Ramsar sites. A Habitats Regulations Assessment will be required."

3.4 Other Consents Needed

3.4.1 As outlined beforehand, the principal legislation under which permission is required to enable the development to go ahead is the Planning Act 2008 and a Development Consent Order (DCO) application will be submitted to PINS.

3.4.2 The proposed Manston Airport Development will also require other consents, licences, permits, etc. to enable it to be constructed and / or operated, and for which PINS is not the authorising body. These will be identified during the course of the EIA and appropriate consultations will take place with organisations such as the local planning and highway authorities, Civil Aviation Authority, Natural England, the Environment Agency and others as appropriate.

3.5 Habitats Regulations Assessment

3.5.1 One Natura 2000 (European wildlife) site is located within 10km of the proposed development:

- Thanet Coast & Sandwich Bay Special Protection Area and Ramsar Site.

3.5.2 In addition to the assessment of potential effects on this site that will need to be addressed in the ES, there is a requirement under The Conservation of Habitats and Species Regulations 2010 (SI 2010 No. 490) (the 'Habitats Regulations') to undertake a screening exercise to determine whether this (or any other) site is likely to be significantly affected by the proposed development, either alone or in combination with other plans and projects. If significant effects are likely, there will be a need for an Appropriate Assessment to be carried out. The screening, any Appropriate Assessment and subsequent assessment form part of what is known as the Habitats Regulations Assessment (HRA) process.

3.5.3 Screening and any subsequent Appropriate Assessment will be undertaken by PINS (the 'competent authority'), drawing upon information about the likely effects of the proposed development on European sites that will be provided by RiverOak. In undertaking its assessment, PINS is required to consult with Natural England

(NE). To facilitate the HRA process, Amec Foster Wheeler will also liaise with NE, and other interested parties as appropriate in the preparation of an Evidence Plan for the HRA.

4. Approach to Scoping the EIA

4.1 Approach to the scope of the assessment

4.1.1 Schedule 4, Part 1 of the 2009 EIA Regulations, provides a checklist of topics to include in EIA derived from the relevant European Directives setting out those aspects of the environment which are considered likely to be significantly affected by the proposed development. The aspects of the environment and how these have been considered in this scoping report are shown in **Table 4.1**.

Table 4.1 Environmental topics to be addressed in the ES

Topics in the EIA Regulations	Topics in this scoping report
Population	Landscape and visual [Chapter 10]; Traffic and Transport [Chapter 13]; Noise [Chapter 11]; Air Quality [Chapter 5]; and Socio-economics [Chapter 12].
Fauna	Biodiversity [Chapter 6].
Flora	Biodiversity [Chapter 6].
Soil	Land Quality [Chapter 9]
Water	Ground & Surface Water Environment [Chapter 7].
Air	Traffic and Transport [Chapter 13]; Air Quality [Chapter 5].
Climatic factors	Ground & Surface Water Environment [Chapter 7].
Material assets, including the architectural and archaeological heritage	Historic Environment [Chapter 8].
Landscape	Landscape and Visual [Chapter 10]
The inter-relationship between the above factors	These are discussed within each section as relevant.

4.1.2 The amended Directive 2014/52/EU includes a revised checklist of topics to be addressed within an EIA, but as discussed in Section 1.4 The need for an Environmental Impact Assessment above, these changes will not be transposed into UK law until May 2017 and therefore will not apply to this project.

4.1.3 The approach taken in this scoping report accords with PINS Advice Note Seven[13]. In addition, the 2009 EIA Regulations[8] state that an ES should not cover every aspect of the proposed development's environmental impacts, but should focus on the aspects likely to have significant environmental effects. Government

[13] Advice note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping, Version 5 March 2015.

guidance contained in DCLG EIA Planning Practice Guidance[14] (which as of 6th March 2014 has superseded the previous guidance contained within DETR Circular 02/99 EIA[15]), states that:

"Whilst every Environmental Statement should provide a full factual description of the development, the emphasis of Schedule 4 is on the "main" or "significant" environmental effects to which a development is likely to give rise. The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects. Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on that issue only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered".

4.1.4 The preparation of this scoping report is informed by information about the legislative and policy context relevant to the Manston Airport project. For each environmental topic listed in column 2 of **Table 4.1**, an outline is provided of the baseline conditions (where these are known at this stage), together with information about factors influencing future baseline conditions. This information is followed by an outline of the scope of the assessment (i.e. those effects scoped in or out of the assessment). This report identifies:

- potential effects for which further assessment work is required and which will be reported in the ES; and
- effects that, having regard to the work already carried out and on the basis of the available information, are considered to be so minimal that they are unlikely to be significant and do not require further assessment (i.e. they are scoped out). A summary of the scoped-out effects is given in **Chapter 14**.

4.1.5 Reasons are stated for potential effects that are assessed as being unlikely to be significant and that do not therefore require further assessment (i.e. they are scoped-out).

4.1.6 Decisions about the likely significant effects of the proposed development and therefore the scope of the assessment have been based upon professional judgement, with reference to the project description, and using information about:

- the receptors (people and environmental resources) that could be affected by the proposed development;
- the activities involved in constructing and operating the proposed development;
- changes that could result from these activities (e.g. changes in traffic flows or land cover as a result of the proposed development);
- the expected magnitude and other characteristics of the environmental changes that could result from these activities and that could affect important receptors;

[14] Department for Communities and Local Government (2014), Environmental Impact Assessment Planning Practice Guidance.
[15] Department of the Environment, Transport and The Regions (1999), Circular 02/99: Environmental Impact Assessment.

- the susceptibility of important receptors to exposure to these changes e.g. how biodiversity receptors might be affected by changes in land cover); and
- the extent to which the design of the proposed development avoids or reduces any potential effects.

4.1.7 If the information that is available at the scoping report stage does not enable a robust conclusion to be reached that a potential effect is not likely to be significant, the effect is then taken forward for further assessment.

4.1.8 As the proposed development is refined, such as the design and location of new airport infrastructure, and then finalised, and as new environmental information is received, decisions about the scope of the assessment may change, necessitating modifications to the scope of the EIA. These changes may be made at any time during the course of the assessment process. Given the progressive refinement in scope that is likely to take place, this scoping report will not be revised and reissued. However, the revised scope will be documented in the ES.

Box 4.1 Key Steps in the EIA Process

- Defining the project, including consideration of the need for the project and alternatives for meeting this need;
- Deciding on the likely significant environmental effects that need to be assessed and how the necessary assessments will be carried out;
- Using the Scoping Report as a basis for consulting over the scope of the assessment that is reported in the ES and refining the scope in response to the comments that are received (with this refinement process continuing as the proposals for the proposed development and the understanding of its environmental effects evolve);
- Assembling further information about the baseline environmental conditions that relate to the likely significant environmental effects;
- Determining whether this baseline is relevant to the assessment or whether it is more appropriate to predict how the baseline will have changed by the time that the development is constructed or operated;
- Identifying measures to avoid, reduce or compensate for adverse effects, or to increase the environmental benefits of the scheme, and liaising with the project design team to incorporate these (where possible) into the proposals, ensuring that the development proposals as amended are environmentally assessed;
- Ongoing consultation with statutory consultees and other interested parties, as appropriate;
- Assessing the magnitude and other characteristics of the environmental effects being assessed;
- Assessing the sensitivity (and where relevant, value) of identified receptors to changes resulting from the development;
- Evaluating the significance of the predicted effects;
- Collating the findings in an ES and summarising the findings in a Non-Technical Summary (NTS);
- Submission of the ES to the relevant competent authority;
- Decision-making, which may involve inter alia ongoing negotiation and requests for further information;
- Informing stakeholders of the decision on whether or not the development is to be permitted; and
- Ongoing environmental monitoring, assessment and other work, as required, including screening for the need for a further ES to be prepared in relation to the reserved matters development.

4.2 Baseline for the assessment

4.2.1 The assessment of potentially significant effects requires a comparison to be made between the current environmental and physical conditions at the site, termed ‘the baseline’ and the presence and operation of a commercial freight airport, the development. Construction of the proposed development would commence in 2018. Once completed, the equipment would then be operated indefinitely. However, it cannot be assumed that the baseline conditions in the absence of the proposed development would be the same as at present (2016). This reflects changes resulting from human influences, such as new development

or increased traffic which have the potential to modify the current environmental conditions.

4.2.2 The assessment of potentially significant effects arising from the decommissioning of the airport have been scoped out of this assessment as it is considered that the airport will be operational long into the future, and that therefore there will be no requirement for decommissioning of the airport.

4.2.3 It is therefore necessary to undertake the assessment in relation to the baseline conditions that are likely to occur in the years that are selected for assessment, in undertaking this assessment it has been assumed that if this development proceeds then there will be no other development on the site and that the baseline is therefore an empty former airport site.

4.3 Site Visits and Surveys

4.3.1 The Manston Airport site is not currently owned by RiverOak and access to the site, to undertake site visits, walkover surveys, and collect baseline data, as part of the scoping for the EIA has been limited. A request for access to undertake these surveys has been made to the landowner and an ongoing dialogue to obtain access consensually is ongoing. It is possible, in the absence of agreement between RiverOak and the landowner that an application for access under s.53 of the Planning Act 2008 may be made by RiverOak in order to obtain access.

4.3.2 Visits to view the site and surrounding area from public rights of way and highways have been undertaken; more details of these specific visits can be found within the technical chapters. However the assessment of the baseline conditions found within the technical chapters has therefore been desk based.

4.4 Combined and Cumulative Effects

4.4.1 The EIA process includes a requirement to give consideration to 'any indirect, secondary, **cumulative**, short, medium and long-term, permanent and temporary, positive and negative effects of the development'[16]; within EIA the approach most normally taken, and the one that will be adopted for this EIA, is to distinguish between combined effects, and cumulative effects, see **Box 4.2** below. This approach is consistent with the advice contained within PINS Advice Note 9[17].

Box 4.2 Combined Effects and Cumulative Effects
Combined effects are defined as the inter-relationships between topics which occur where a number of separate effects, eg. noise and air quality, affect a single receptor such as fauna. Cumulative effects are defined as the interaction of the proposed development and other 'major' developments (as defined by PINS Advice Note 9: Rochdale Envelope) where there is the potential for combined environmental effects. Within the Manston Airport Environmental Statement both combined and cumultavie cffects will be assessed within a separate Combined and Cumulative Effects chapter. The approach adopted for Cumulatvie Effects Assessment is that presented within PINS Advice Note 17: Cumulative Effects Assessment.

[16] Schedule 4, Part 1, Paragraph 20 EIA Regulations
[17] Advice Note Nine, Rochdale Envelope (version 2). Planning Inspectorate, April 2012.

Combined Effects

4.4.2 Typically, **combined effects** occur when different activities associated with a project act upon the same environmental receptor (e.g. the additive effect of noise from different sources upon local residents for example noise from piling activities may occur at the same time as transport related noise and may act upon the same receptor(s) during the construction phase). In determining such effects, consideration would be given to the sensitivity of the receptor and the magnitude of environmental change. Combined effects are assessed in relation to a specific receptor, but here the effect could be caused by the interactions of different effects from project activities even if individually these are insignificant (e.g. the interaction of noise disturbance and light pollution on bat foraging). Where appropriate, interactive combined effects across topic areas will be assessed, where the nature of the effect allows professional judgment to be applied.

4.4.3 The approach most normally taken within EIA and that will be adopted for this combined assessment, is that effects such as increased noise or effects on visual receptors are assessed individually, against topic-specific criteria that are well established within standard EIA. Threshold limits for effects such as noise and air pollution are, for the purposes of establishing effects on human receptors, set at levels that, if exceeded, can have health or nuisance implications for the receptor. Therefore, if effects are concluded as 'acceptable' (i.e. noise levels at residential receptors meet acceptable noise criteria) and are therefore considered to be not significant, then the significance of the effect will not change when considered collectively with other non-significant effects. This is because such effects do not together, for the most part, actually cause combined effects. For example increases in noise do not make the effects caused by an adverse effect on views worse for a human receptor.

Cumulative Effects

4.4.4 The EIA will consider the potential for **cumulative effects** associated with other development, i.e. whether the effects from the proposed Manston Airport project could be combined with similar effects from other schemes to result in significant cumulative effects. It is important to recognise that the baseline assessments in the EIA will include existing development. In EIA terms, it is good practice to consider the future baseline situation which includes other schemes that are likely to be constructed or have not yet commenced but have a valid planning permission. In addition, proposed schemes which are the subject of a planning application (at the time of preparing the EIA) will also be considered.

4.4.5 The process for undertaking a Cumulative Effects Assessment (CEA) for a NSIP has been defined by the PINS and is set out within PINS Advice Note 17[18]. The guidance defines a four stage process for a CEA:

- Stage 1: establish the NSIP Zone of Influence (ZOI) and identify long list of 'other development';
- Stage 2: Identify short list of 'other development' for CEA;
- Stage 3: Information gathering; and

[18] Advice Note Seventeen, Cumulative Effects Assessment (version 1). Planning Inspectorate, December 2015.

- Stage 4: Assessment.

4.4.6 Stage 1 of the CEA has been completed as part of the production of this scoping report; the results of this are presented below.

Cumulative Effects Assessment: Stage 1

4.4.7 As part of stage 1 of undertaking a CEA a draft ZOI for each of the EIA topics has been established and will be agreed through consultation with statutory stakeholders and through reference to accepted industry guidance and standards relevant to the environmental topic. A summary of the draft ZOI are shown in **Table 4.2**.

Table 4.2 Environmental topics CEA ZOI

Environmental Topics	Zone of Influence	Spatial ZOI
Air Quality	Construction related air quality effects	All developments within 5km
	Operational related air quality effects	All developments within 5km
Ecology	Noise effects on ecological receptors	All developments within 5km
	Air quality effects on ecological receptors	All developments within 5km
Ground & Surface Water	Groundwater effects on the underlying Thanet Aquifer, ZOI defined by the Southern Water Drinking Water Safeguarding Zone	Extent of Thanet Aquifer Source Protection Zone
	Surface water effects on the water quality in Sandwich and Pegwell Bays	Any development resulting in discharges to River Stour catchment up to Plucks Gutter
Historic Environment	Physical effects on buried archaeological remains	All developments within 5km
	Effects on the setting of designated heritage assets	Any development that is within the project Zone of Theoretical Visibility (ZTV)
Land Quality	Effects on controlled waters: principle aquifer in bedrock	Extent of Thanet Aquifer Source Protection Zone
	Effects on controlled waters: surface water drains	Any development resulting in discharges to River Stour catchment up to Plucks Gutter
Landscape and Visual Impact	Effects on landscape and visual receptors	Any development that is within the project Zone of Theoretical Visibility (ZTV)
Noise	Construction related noise effects	All developments within 5km
	Operational related noise effects	All developments within 5km

Environmental Topics	Zone of Influence	Spatial ZOI
Socio-Economic	Effects of businesses, local and sub-regional economy, and local receptors	All of Thanet District
	Employment creation	All of Thanet District
Traffic & Transport	Construction vehicle effects	All developments using the same local road network
	Increases in vehicles during operational phase	All developments using the same local road network

4.4.8 Having established the ZOI for each environmental topic a long-list of 'other developments' to be considered as part of the CEA was produced. In considering the inclusion of developments in the long-list, reference was made to PINS Advice Note 9 and 17 which advise that the types of other development to be included in the CEA should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

Box 4.3 'Other Development' for inclusion in Cumulative Effects Assessment

Tier 1	▶ under construction;	Decreasing level of detail likely to be available ↓
	▶ permitted application(s), but not yet implemented;	
	▶ submitted application(s) not yet determined;	
Tier 2	▶ projects on the PINS Programme of Projects where a scoping report has been submitted;	
Tier 3	▶ projects on the PINS Programme of Projects where a scoping report has not been submitted;	
	▶ identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited;	
	▶ identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.	

4.4.9 The long list of present consented, and proposed major developments which have been identified within the agreed CEA ZOI study area are presented in Appendix B and shown on **Figure 4.1**. The consented developments include developments currently under construction, whilst the proposed developments are those which have not yet gained planning consent but are considered likely to proceed.

Cumulative Effects Assessment: Stage 2

4.4.10 The long list of other development presented in Appendix B will be assessed against a proportionate a series of criteria in order to compile the short list of other development as part of the Stage 2 CEA giving consideration to the following aspects of the other developments:

- The temporal scope of other development

- The scale and nature of other development; and
- Any other relevant factors

4.4.11 In the context of the scale and nature of other developments the criteria for developments to be included on the short list are those considered to be major developments as defined in Regulation 2 of the Town and Country Planning (Development Management Procedure) (England) Order 2010 (i.e. development of 10 or more dwellings, over 1ha in area, buildings of more than 1,000m^2, waste development or development which involves the winning and working of minerals or the use of land for mineral working deposits).

4.4.12 The temporal scope of other developments will be considered in relation to both the construction and operational phases of redevelopment of Manston Airport. The construction phase is likely to commence following the granting of the DCO in mid-2018 with an initial period of 6-12 months of activity to prepare the airport for reopening, this will be followed by further phased developments over the next 6-18 months.

4.4.13 The temporal scope for the operational phase will commence following the construction phase which is likely to be the end of 2018, the emerging airport master plan has been designed to meet the operational requirements of the airport until 2035 (16 years from the reopening at end of 2018).

4.5 Consultation

4.5.1 In preparing this scoping report RiverOak and Amec Foster Wheeler have undertaken non-statutory (informal) consultation and engaged with statutory consultees and, interested parties of the Manston Airport project and have held meetings with PINS and the Department for Transport.

4.5.2 Engagement at an early stage has been undertaken with the main Local Planning Authorities (LPAs); Thanet District Council (TDC) and Kent County Council (KCC), and key statutory consultees; the Civil Aviation Authority (CAA), Environment Agency (EA), Historic England (HE), Natural England (NE) and Southern Water. Initially this involved meeting representatives to provide an introduction to the project; an explanation of the Need Case and why the project will constitute a Nationally Significant Infrastructure Project; inviting comments on the proposed scope for the environmental impact assessment; and establishing an outline plan for future consultation throughout the pre-application process.

4.5.3 A summary of the meetings held to date is presented in **Table 4.1** below; further details of the discussions can be found within the topic chapters.

Table 4.3 Pre-Scoping Consultation

Consultee	Date	Topic Discussed
Environment Agency	11 April 2016	Ground & Surface Water, Land Quality
Kent County Council (KCC)	20 April 2016	All
Natural England	26 April 2016	Biodiversity, Ground & Surface Water, Landscape & Visual Impact
Southern Water	29 April 2016	Ground & Surface Water, Land Quality
Historic England	05 May 2016	Historic Environment, Landscape & Visual Impact
KCC Heritage Conservation Group (HCG)	05 May 2016	Historic Environment, Landscape & Visual Impact
Thanet District Council	01 June 2016	All

4.5.4 As part of the DCO process RiverOak will produce a Statement of Community Consultation (SoCC) which will set out details of how the local community will be consulted over the proposals, including information about the EIA.

4.5.5 A period of non-statutory engagement is planned to commence in July 2016 in advance of the statutory consultation required under the Planning Act 2008. The non-statutory engagement will include a series of presentations to local communities and other interested parties to introduce the scheme and the DCO process, the draft airport master plan, the environmental context and the programme for the scheme. The consultation period for this non-statutory engagement will run until early September.

4.5.6 The formal pre-application consultation required under the provisions of the Planning Act 2008, will be carried out later in 2016. This consultation will include the presentation of preliminary environmental information (PEI). The level of detail provided in the PEI Report will be dependent on the availability of site access to undertake the surveys for the assessments.

4.5.7 Details of the future planned technical consultation is presented within the topic chapters of this scoping report.

4.6 Transboundary Effects

4.6.1 The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context, which was adopted in 1991 as the ‘Espoo Convention’, was negotiated in order to enhance the cooperation between European Economic Area (EEA) States in assessing environmental impact in a transboundary context. The Espoo Convention has been implemented by EU Directive 85/337/EEC (as amended) (the EIA Directive) and transposed into UK law for NSIPs by way of the EIA Regulations, specifically under Regulation 24.

4.6.2 As set out in PINS Advice Note 12[19], the role of PINS, where an NSIP has been identified as an EIA development, includes the screening for likely significant

[19] Advice Note Twelve: Regulation 24 of the EIA Regulations (Version 4). Planning Inspectorate, December 2015.

effects on the environment of another EEA State; the screening may take place at any time when new relevant information becomes available. Further to this where a likely significant effect is identified the role of PINS includes the identification of EEA State(s) to be notified, notification of these states, consultation with EEA states, and the notification of DCO decision.

4.6.3 There is no formal role for the applicant under the Regulation 24 process, and there is no statutory requirement for an applicant to include consultation with governmental divisions and interest groups within other EEA States as part of their application under the Planning Act 2008. However the decision as to whether or not a development will have a transboundary effect will be based upon the information provided by the applicant.

4.6.4 Applicants are advised to undertake consultation giving consideration to any potential issues and concerns, and to seek to resolve any transboundary effects, before the application for development consent is submitted in order to ensure that they do not become an issue during examination.

4.6.5 Therefore in accordance with the advice, we will give consideration to any potential transboundary effects arising from the development of Manston Airport within the EIA in order to enable PINS, in fulfilling their obligations under Regulation 8 of the EIA Regulations, to reach a view as to whether the development is likely to have significant transboundary effects on other EEA States.

5. Air Quality

This section presents the proposed scope of work for the Air Quality assessment.

5.1 Introduction

5.1.1 Air quality effects from airports arise from the following principal sources:

- Aircraft engines, including auxiliary power units (APUs);
- Aircraft brake and tyre wear (for releases of particulate matter);
- Other on-airport activity, such as ground support equipment and vehicles, heating plant, etc.;
- Road traffic; and
- Construction activities.

5.1.2 Defra guidance on local air quality management[20] offers the following screening criteria to help local authorities decide whether they need to perform a detailed assessment of the effect of an airport on local air quality:

- Is the existing background concentration of oxides of nitrogen (NO_x) above 25 µg m^{-3}?
- Is the total equivalent passenger throughput more than 10 million passengers per annum (mppa), where 100,000 tonnes of freight is equivalent to 1 mppa?
- If the answer to either question is Yes, then a detailed assessment for nitrogen dioxide (NO_2) is necessary.

5.1.3 The annual mean NO_x concentration measured at the Thanet Airport monitor in 2014 was 17.8 µg m^{-3}, below the criterion, and the proposed airport activity level of 10,000 movements per year is well below the second criterion, allowing for up to 500,000 tonnes of freight throughput per annum, giving 5.01 mppa, This suggests that the proposal is below the threshold at which local air quality effects may be observed.

5.1.4 Thanet District Council has declared an Air Quality Management Area (AQMA) covering the whole urban area of the Ramsgate/Broadstairs/Margate conurbation. Although the reasons for the AQMA are primarily associated with the urban area (congested traffic etc.), the boundary of the AQMA abuts the boundary of the airport and is just 180 m from the centre of the runway. It is therefore likely that airport operations will have some level of effect on the AQMA.

5.1.5 For these reasons, it is not possible to completely scope out air quality from the need for detailed assessment.

[20] Defra, Local Air Quality Management: Technical Guidance LAQM.TG(09), February 2009.

5.2 Relevant policy, legislation and guidance

National Planning Policy Framework (NPPF)

5.2.1 The NPPF states that:

5.2.2 “Planning policies should sustain compliance with and contribute towards EU Limit Values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative effects on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.”

5.2.3 The implication of this National Policy for any proposed development at Manston is that it should not in itself cause any future breaches of the air quality Limit Value and should actively contribute to improving air quality in this area of Thanet, particularly since there is an AQMA nearby.

Aviation Policy Framework (APF)

5.2.4 In the APF, it is stated at the outset: “Emissions from transport, including at airports, contribute to air pollution. EU legislation sets legally binding air quality limits for the protection of human health. The Government is committed to achieving full compliance with European air quality standards.”

And:

5.2.5 “Our policy on air quality is to seek improved international standards to reduce emissions from aircraft and vehicles and to work with airports and local authorities as appropriate to improve air quality, including encouraging HGV, bus and taxi operators to replace or retrofit with pollution-reducing technology older, more polluting vehicles. There will be additional air quality (and noise pollution) benefits as the UK progresses to a low carbon economy with the likely increase in the proportion of electric vehicles and plug-in hybrid vehicles.”

5.2.6 “As a general principle, the Government expects that at the local level, individual airports working with the appropriate air traffic service providers should give particular weight to the management and mitigation of noise, as opposed to other environmental effects, in the immediate vicinity of airports, where this does not conflict with the Government’s obligations to meet mandatory EU air quality targets.”

5.2.7 “Whilst our policy is to give particular weight to the management and mitigation of noise in the immediate vicinity of airports, there may be instances where prioritising noise creates unacceptable costs in terms of local air pollution. For example, displacing the runway landing threshold to give noise benefits could lead to significant additional taxiing and emissions. For this reason, the effects of any proposals which change noise or emissions levels should be carefully assessed to allow these costs and benefits to be weighed up.”

Local planning policy

Thanet local plan (2006) (Saved Policies)

5.2.8 Saved Policy EP 5 of the 2006 Local Plan states:

5.2.9 “Local air quality monitoring

5.2.10 Proposals for new development that would result in the National air quality objectives being exceeded will not be permitted.

5.2.11 Development proposals that might lead to such an exceedance, or a to a significant deterioration in local air quality resulting in unacceptable effects on human health, local amenity or the natural environment, will require the submission of an air quality assessment, which should address:

- The existing background levels of air quality;
- The cumulative effect of further emissions; and
- The feasibility of any measures of mitigation that would prevent the National air quality objectives being exceeded, or would reduce the extent of air quality deterioration.”

Emerging Thanet local plan (2015)

5.2.12 Policy SE05 (Air Quality) states:

“All major development schemes should promote a shift to the use of sustainable low emission transport to minimise the impact of vehicle emissions on air quality, particularly within the designated Urban Air Quality Management Area. Development will be located where it is accessible to support the use of public transport, walking and cycling. Development proposals that might lead to a significant deterioration in air quality or an exceedance of air quality national objectives or to a worsening of air quality within the urban Air Quality Management Area will require the submission of an Air Quality Assessment, which should address:

- The cumulative effect of further emissions;
- The proposed measures of mitigation through good design and offsetting measures that would prevent the National Air Quality Objectives being exceeded or reduce the extent of the air quality deterioration. These will be of particular importance within the urban AQMA, associated areas and areas of lower air quality.

Legislation

Ambient Air Quality Regulations

5.2.13 The European directive on air quality and cleaner air for Europe (2008/50/EC) and the European directive relating to arsenic, cadmium, mercury, nickel, and polycyclic aromatic hydrocarbons in ambient air (2004/107/EC) are the principal instruments governing outdoor ambient air quality policy in the EU. They set binding Limit Values for concentrations of pollutants in the air we breathe.

5.2.14 The Air Quality Standards Regulations 2010 transpose into English legislation these two European directives, the council's decision on exchange of information, and replaced the Air Quality Standards Regulations 2007. The Air Quality Standards Regulations 2010 came into force in the UK on 11th June 2010. The Air Quality Limit Values are transposed into the updated Regulations as Air Quality Standards (AQS) with attainment dates in line with the European Directives.

5.2.15 In the UK, action on air quality is driven by the health-based Objectives as set out in the 2007 Air Quality Strategy for England, Scotland, Wales and Northern Ireland. The Air Quality Objectives (AQOs) are based on medical and scientific reports on how and at what concentration each pollutant affects human health. The AQOs are based on the Air Quality Standards / Air Quality Limit Values, with interim target dates to help the UK move toward the achievement of the Air Quality Limit Values. The AQOs in the Air Quality Strategy are a statement of policy intentions or policy targets and as such, there is no legal requirement to meet these objectives except as far as these mirror any equivalent legally binding Limit Values in EU legislation.

5.2.16 Part IV of the Environment Act 1995 requires local authorities to periodically review concentrations of the UK Air Quality Strategy pollutants within their areas and to identify areas where the AQOs may not be achieved by their relevant target dates. This process of Local Air Quality Management (LAQM) is an integral part of delivering the Government's AQOs detailed in the Regulations. When areas are identified where some or all of the Objectives might potentially be exceeded and where there is relevant public exposure, i.e. where members of the public would regularly be exposed over the appropriate averaging period, the local authority has a duty to declare an AQMA and to implement an Air Quality Action Plan (AQAP) to reduce air pollution levels towards the AQOs, to the extent that emission sources are under their control.

5.2.17 Protection of Vegetation and Ecosystems

5.2.18 In addition to the objectives for human health, a national objective relating to the protection of vegetation and ecosystems is prescribed for nitrogen oxides. The 30 $\mu g/m^3$ Limit Value is not a threshold in the sense that damage to vegetation is likely to occur when this concentration is exceeded, rather, that above this concentration, there is an increased risk of damage.

5.2.19 The Government and the Devolved Administrations intend that these limits are treated as national objectives, against which compliance is monitored at a national level, not ones that are included in the Regulations for the purpose of local air quality management. These objectives apply at locations which are:

- more than 20km from an agglomeration i.e. an area with a population of more than 250,000;
- more than 5km away from industrial sources regulated under Part A of the 1990 Environment Act;
- more than 5km away from motorways; and
- more than 5km away from built up areas of more than 5,000 people.

5.2.20 The predominant route by which emissions will affect the land in the vicinity of an airport is by deposition of atmospheric emissions. Potential ecological receptors can be sensitive to the deposition of pollutants, particularly nitrogen compounds, which can affect the character of the habitat through eutrophication (nutrient enrichment) and acidification.

5.2.21 Critical loads for nitrogen are a quantitative estimate of the level of exposure (via deposition) below which significant harmful effects on sensitive elements of the environment do not occur, according to present knowledge. It should be noted that critical loads are not statutory standards which are to be achieved, but are an indicator of when harmful effects can occur for different habitat types.

Guidance

5.2.22 Guidance on air quality assessment of development proposals is available form a number of sources, including Defra, the Institute of Air Quality Management and Kent County Council.

Defra Guidance (2016)

5.2.23 The local air quality management Technical Guidance produced by Defra in April 2016 and its content in relation to assessment of airport developments has been largely iterated in Section 1 of this document.

Kent and Medway Air Quality Partnership Air Quality and Planning Technical Guidance

5.2.24 This guidance was published by the Air Quality Partnership in July 2011. The guidance is aimed at local authorities, developers and consultants. It provides technical advice on how to deal with planning applications that could have an effect on air quality and human health. It also includes a detailed checklist (Appendix E) which includes thresholds, above which air quality assessments will be required. In relation to Manston, it is likely that these thresholds will be exceeded, in terms of likely increases in HGV movements and the scale of work due to be undertaken during the construction phase.

5.3 Main sources of data used in the scoping report

5.3.1 The main sources of data used in preparing this scoping report were:

- Thanet District Council Local Air Quality Management Progress Report;
- Defra database of air quality information; and
- The Government's Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.org.uk).

5.4 Engagement with consultees

5.4.1 To date meetings have been held with Thanet District Council (TDC), Kent County Council (KCC), and Natural England (NE) as part of the pre-application stages of the project.

5.4.2 The potential air quality effects of the proposed development were discussed with TDC, in particular how this development may effect the Ramsgate Air Quality Management Area.

5.4.3 NE requested that the assessment of potential effects on air quality should also assess non-human receptors, such as function habitat, and that the distinction between effects on human and non-human receptors is made clear.

5.4.4 Further consultation with the local authorities will be undertaken following the publication of this Scoping Report and as part of the development of the Environmental Statement.

5.5 Overview of the baseline conditions

5.5.1 Under Part IV of the Environment Act 1995, Thanet District Council is required to periodically review and assess air quality within its area of jurisdiction. This process of Local Air Quality Management (LAQM) is an integral process for achieving national air quality objectives (AQOs). Thanet's most recent published review and assessment study[21] states:

"Thanet generally has very good air quality; however there are areas at The Square in Birchington, High Street St Lawrence, Ramsgate and the junction of Hereson Road / Boundary Road, Ramsgate where air quality is poor due to pollution from road transport.

"An urban wide AQMA has been declared to enable effective management of air quality."

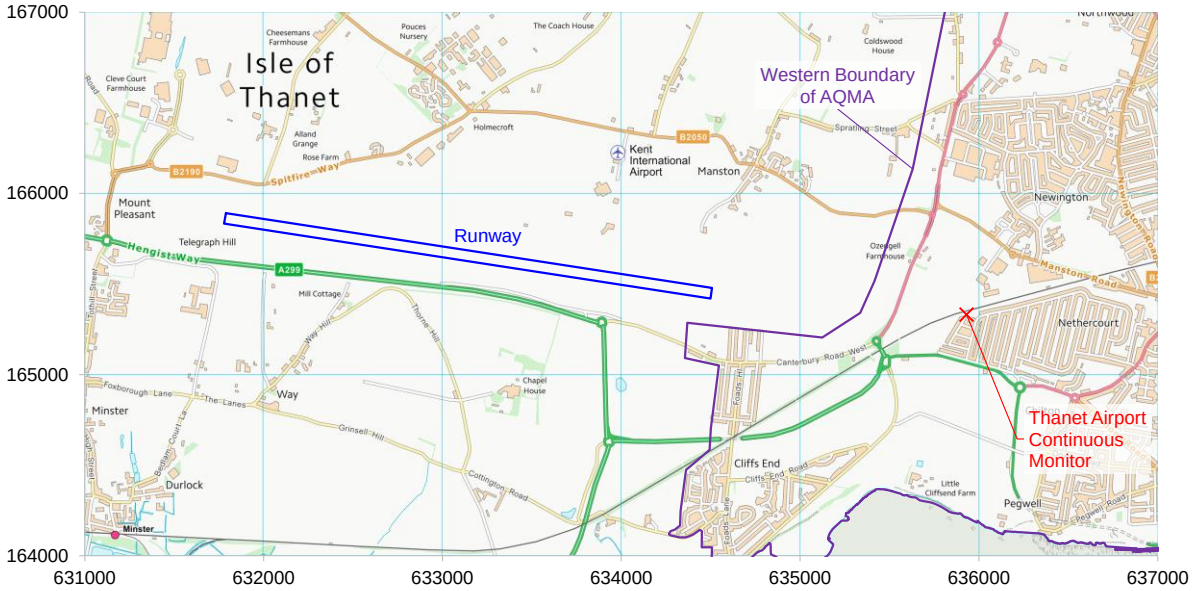
5.5.2 As noted above, the boundary of the AQMA abuts the boundary of the airport and is just 180 m from the centre of the runway (see **Figure 5.1**). However, the nearest of the locations identified as having poor air quality (High Street St Lawrence) is a roadside location approximately 2 km east of the eastern end of the airport.

5.5.3 Thanet undertakes a combination of continuous and passive monitoring within its jurisdictional area. There are four continuous monitoring stations and 22 passive monitoring locations (including eight triplicate sites) which measure NO_2. The nearest continuous monitoring station to the site is Thanet Airport, which measures NO_2 only. This is located approximately 1400 m east of the eastern end of the runway, on the edge of the built-up area of Ramsgate (see **Figure 5.1**). Between 2007 and 2013, the measured annual mean NO_2 concentration at this monitor was between 16 and 21 µg m^{-3}. Triplicate NO_2 diffusion tubes are collocated at this site; between 2009 and 2013 the bias-adjusted measured annual mean NO_2 concentration from these tubes was between 16.7 and 21 µg m^{-3}.

5.5.4 There are two continuous monitors which measure fine particulate matter (PM_{10} in central Ramsgate and in Birchington, both are roadside sites; they are therefore not representative of sensitive locations near the airport.

[21] Thanet District Council, LAQM Progress Report, September 2014.

Figure 5.1 The vicinity of the proposed development, showing AQMA and continuous monitor



5.5.5 Defra maintains a database of air quality information, and through its contractor (Ricardo Energy and Environment) provides results from a nationwide model (the Pollution Climate Mapping [PCM] model) of existing and future background air quality concentrations at a 1km grid square resolution. The PCM model is semi-empirical in nature, in that it uses data from the national atmospheric emissions inventory (NAEI) to model the concentrations of pollutants at the centroid of each 1km grid square but then calibrates these concentrations in relation to actual monitoring data.

5.5.6 The annual mean mapped background air quality data for the seven 1 km grid squares covering the airport are provided in **Table 5.1**.

Table 5.1 Annual mean mapped background concentrations across the airport (µg m^{-3})

	NO_x	NO_2	Sulphur dioxide	Carbon monoxide	Benzene	PM_{10}	$PM_{2.5}$
Concentration range	16.4 – 17.6	12.2 – 13.0	4.7 – 4.9	221 – 238	0.2 – 0.2	15.4 – 17.3	10.5 – 10.9
Air Quality Objective	30	40	N/A	N/A	5	40	25
Base year of data	2016	2016	2001	2001	2010	2016	2016

Concentrations of all pollutants are, therefore, well within the relevant air quality objectives.

5.6 The scope of the assessment, methodology and characteristics of the potential effects

Potential effects requiring further assessment

5.6.1 The assessment will cover:

- Potential air quality effects associated with the construction and operation of the proposed development including:
  - Effects on human health and ecology associated with emissions from road traffic as a result of the construction and operation of the development (e.g. HGV movements during construction, cargo deliveries to and from the airport).
  - Annoyance associated with fugitive dust emissions during construction; and
  - Effects on human health and ecology associated with emissions on the airport, from aircraft, ground support equipment and combustion plant.

Effects on human health and ecology associated with road traffic:

5.6.2 The Highways Agency's Advice Note HA 207/07 contained within Volume 11, Section 3 of the Design Manual for Roads and Bridges (DMRB) guidance details that a formal air quality assessment of vehicular emissions is likely to be required where any of the following criteria are met:

- Road alignment will change by 5 m or more; or
- Daily traffic flows will change by 1,000 annual average daily traffic (AADT) or more; or
- HGV flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more.

5.6.3 The Environmental Protection UK/Institute of Air Quality Management (EPUK/IAQM)[22] also suggest indicative criteria for requiring an air quality assessment, which include:

- A change of HGV flows of
  - more than 25 AADT within or adjacent to an AQMA
  - more than 100 AADT elsewhere.

5.6.4 Based on preliminary information, the change in HGV flows along some roads near the airport is expected to be in the region of 100 AADT or more, some of which may be within or adjacent to the AQMA. Consequently, at this stage, it is proposed to scope in vehicular emissions. However, this position will be re-evaluated once detailed traffic information is available, particularly HGV numbers and routes. Should a detailed assessment be required, dispersion modelling of road traffic emissions will be conducted using the ADMS-Roads model, which is widely used in the UK. The latest information on vehicle emission factors will be used.

[22] IAQM, 2015. 'Land-Use Planning & Development Control: Planning for Air Quality'.

Annoyance associated with fugitive dust emissions during construction

5.6.5 The following guidance will be utilised when undertaking the assessment of construction dust:

- EPUK/IAQM guidance on planning and air quality

5.6.6 A scheme for assessing the magnitude of change in ambient air quality concentrations at receptors was first developed by Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) in 2010 and an updated version was released in 2015. This scheme assesses the magnitude of change in ambient air quality as a function of the percentage increase in concentration relative to the relevant air quality standard and also takes into account the total ambient concentration as a percentage of the AQS. It has become the accepted best practice for air quality assessment in the UK and is now widely applied.

5.6.7 IAQM guidance on construction dust assessment

5.6.8 Guidance produced in 2014 by the IAQM provides a systematic risk-based methodology for assessing the potential for construction activities to give rise to dust nuisance and for mitigating potential adverse effects. Like the air quality and planning guidance referred to above, this has become the accepted best UK practice and is widely applied.

5.6.9 Air quality effects associated with typical construction activities include nuisance from dust due to demolition, earth-moving etc., and emissions from the engines of vehicles and machinery. From a review of the available information relating to construction activity, in the most recent (June 2016) airport masterplan, it is evident that there will be a degree of earthmoving and construction activity over the development period and that this may need to be considered as a part of the EIA. It may also be necessary to assess the effects arising from construction-related road traffic movements. The exact scale and magnitude of the activities are yet to be detailed.

Effects on human health and ecology associated with on-airport emissions

5.6.10 The principal pollutant of concern around major airports is nitrogen dioxide (NO_2), which is a product of most combustion processes, including those within aircraft and road vehicle engines. Sources of NO_2 emit both NO_2 and nitric oxide (NO), collectively known as NO_x, and chemical interactions in the atmosphere convert some of the NO to NO_2. Particulate matter (PM_{10} and $PM_{2.5}$) is often included within airport emission inventories although even large airports normally make only a small contribution to off-airport concentrations.

5.6.11 Other pollutants may be emitted on the airport, but in view of the low emission rates and the low background concentrations, they have been scoped out. Such pollutants include sulphur dioxide (SO_2), carbon monoxide (CO) and volatile organic compounds (VOCs).

5.6.12 Detailed dispersion modelling of NO_x/NO_2, PM_{10} and $PM_{2.5}$ may be undertaken to ascertain the effect of on-airport emissions on local air quality in populated areas surrounding the airport during operation of the proposed development, once more detail on the operational regime of the airport becomes available. In addition, the

potential effect of emissions upon sensitive ecological habitats which could be affected will also be assessed and reported in the Biodiversity chapter of the Environmental Statement, if relevant.

5.6.13 It is proposed to carry out the calculations of emissions and dispersion of these pollutants using the latest version of the Aviation Environmental Design Tool (AEDT). AEDT is a software tool produced on behalf of the Federal Aviation Administration in the US for modelling the noise and air quality effects of airport developments, and is the preferred method in the US for assessing applications such as the proposed Manston Airport development. It has a large amount of airport-related information built-in, including emission factors for most aircraft in the global fleet. It is also proposed to use AEDT for the noise assessment, so using the same tool for air quality ensures consistency between topics. The advantage of employing this particular modelling package for air quality, instead of the ADMS-Airport software, is that the aircraft movements on the ground and in the air on the LTO cycle will be consistently represented for both noise and air quality. The main difference between the two models in air quality prediction terms is that ADMS-Airport incorporates a routine to allow for the buoyancy of hot jet exhaust emissions. AEDT does not, which makes for slightly more pessimistic predictions. In this case, this is not considered to be a significant issue.

5.6.14 Model predictions will be made at relevant human receptor locations (e.g. residential properties, schools etc.) and combined with background data obtained from the Defra background maps and/or local monitoring. These concentrations will then be compared against statutory air quality standards (AQS). The significance of changes in air quality levels will be evaluated using the Environmental Protection UK/Institute of Air Quality Management (EPUK/IAQM) methodology[23].

5.6.15 Guidance from the UK Government makes it clear that exceedances of the health based objectives should only be assessed at outdoor locations where members of the general public are regularly present over the averaging time of the objective. **Table 5.2** provides an indication of those locations that are likely to relevant for different averaging periods.

Table 5.2 Examples of locations where the air quality objectives should apply for human receptors

Averaging period	Objectives should apply at:	Objectives should generally not apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc.	Building facades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
24-hour mean and 8-hour mean	All locations where the annual mean objectives would apply, together with hotels. Gardens of residential properties (see Note).	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.

[23] IAQM, 2015. 'Land-Use Planning & Development Control: Planning for Air Quality'.

1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives would apply. Kerbside sites (e.g. pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where the public might reasonably be expected to spend one hour or more. Any outdoor locations at which the public may be expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.
15-minute mean	All locations where members of the public might reasonably be expected to spend a period of 15 minutes or longer.	

Note: For gardens, playgrounds, such locations should represent parts of the garden where relevant public exposure is likely, for example where there is a seating or play areas. It is unlikely that relevant public exposure would occur at the extremities of the garden boundary, or in front gardens, although local judgement should always be applied.

5.6.16 For the purposes of assessing air quality effects, workplace locations will be excluded from the assessment in accordance with the Air Quality Standards Regulations 2010. These Regulations do not differentiate between whether this is a workplace location under the control of the operator, or an off-site workplace location.

5.6.17 Ecological receptor locations will also be included according to the guidance from the Environment Agency[24]. As well as air concentrations, deposition rates of nitrifying and acidifying compounds will be assessed taking into account data available from the UK Air Pollution Information System (APIS). The significance of these predictions will be evaluated within the Biodiversity chapter of the Environmental Statement.

Potential effects not requiring further assessment

Effects on human health and ecology associated with odour

5.6.18 Airports can give rise to complaints of nuisance associated with odour. There is no generally accepted methodology for assessing the effect of odour from airports; modelling studies at Stansted Airport used VOC emissions as a surrogate, but these were found to correlate poorly with perceived odour.

5.6.19 In view of the relatively small size of the development, it is expected that if air quality is satisfactory, then odours are unlikely to be a significant concern, and further detailed assessment has been scoped out.

[24] Environmental management – guidance: Air emissions risk assessment for your environmental permit. https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit.

6. Biodiversity

This chapter sets out the proposed approach to the assessment of the likely significant environmental effects of the proposed development on biodiversity and nature conservation interests.

6.1 Introduction

6.1.1 The Ecological Impact Assessment (EcIA) that will be undertaken as part of the wider EIA will focus on the potentially significant environmental effects of the construction and operation of the proposed development on conservation notable, and legally protected habitats and species. Potential effects on nature conservation interests both within and outside of the bounds of the Manston Airport site will be investigated.

6.1.2 The EcIA will include an assessment of the potential effects on internationally, nationally and locally designated sites of nature conservation interest. This assessment (with regards to internationally designated sites) will be supported by the production of information necessary for the competent authority (in this case the Secretary of State for Transport) to undertake a Habitat Regulations Assessment (HRA).

6.2 Relevant policy, legislation and guidance

6.2.1 Policy guidance and policies relevant to the scope of potential effects on biodiversity are as follows:

- National Planning Policy Framework[25] - The governments NPPF (paragraphs 109, 112, states that:
- Paragraph 109 - “The planning system should contribute to and enhance the natural and local environment by: minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures”.
- Paragraph 112 - “Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks”.

[25] Communities and Local Government (CLG)(2012)*National Planning Policy Framework*, CLG, London

- Paragraph 118 - “When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:
- 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;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- 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; and
- the following wildlife sites should be given the same protection as European sites: – potential Special Protection Areas and possible Special Areas of Conservation; – listed or proposed Ramsar sites; and – sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
- Thanet District Council Local Plan[26] -
- Saved Policy NC3. Development which would be damaging to…sites of Nature Conservation Interest…either in the long term or short term, will not be permitted.
- Thanet District Council Draft Local Plan to 2031 (not yet adopted) –
- Proposed policy SP05 (bullet point 8). Proposals at the airport, that would support the development, expansion and diversification of Manston Airport, will be permitted subject to all of the following requirements…There will be no significant harm to Thanet’s SSSI/SAC/SPA/Ramsar sites. A Habitats regulations assessment will be required.
- Proposed policy SP23. Thanet’s Green Infrastructure network is an integral part of the design of all major development. Opportunities to improve Thanet’s green infrastructure network by protecting and enhancing existing green

[26] Thanet District Council (TDC) *The Thanet Local Plan 2006: Saved Policies*, TDC, Thanet [Accessed here: https://www.thanet.gov.uk/your-services/planning-policy/thanets-current-planning-policy/thanet-local-plan-2006/ Last accessed 14/04/2016]

infrastructure assets and the connections between them, should be included early in the design process for major developments.

- Development should make a positive contribution to Thanet's Green Infrastructure network by:

- Creating new wildlife and biodiversity habitats
- Providing and managing new accessible open space
- Mitigating against the loss of any farmland bird habitats
- Providing private gardens and play space; and/or
- Contributing towards the enhancement of Thanet's Biodiversity Opportunity Areas or the enhancement of the Green Wedges.

- Investment and developer contributions should be directed to improve and expand green infrastructure and provide connecting links where opportunities exist.

- Proposed policy SP25. Protection of the European Sites, Sites of Special Scientific Interest and National Nature Reserve.

- Development that would have a detrimental impact on the European Sites, Sites of Special Scientific Interest or National Nature Reserve will not be permitted.
- Planning permission may only be granted when it can be demonstrated that any harm to internationally and nationally designated sites resulting from that development will be suitably mitigated.

6.2.2 In preparing the biodiversity assessment, account will be taken of relevant legislation, namely:

- Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitat Regulations);
- Natural Environment and Rural Communities Act 2006 (the NERC Act);
- Countryside and Rights of Way Act 2000 (the CRoW Act);
- Hedgerow Regulations 1997;
- Protection of Badgers Act 1992;
- Wildlife and Countryside Act 1981 (as amended);
- National Parks and Access to the Countryside Act 1949 (as amended).

6.2.3 Other guidance relevant to the biodiversity assessment includes:

- Advice Note Ten: Habitat Regulations Assessment relevant to nationally significant infrastructure projects (Version 7; 2016);
- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (Second Edition). Chartered Institute of Ecology and Environmental Management (2016);

- Government Circular 06/05 Biodiversity and Geological Conservation – Statutory Obligations and their impact within the planning system.

6.3 Main sources of data used in preparing the scoping report

6.3.1 Desk study data were obtained from the following sources to date:

- The Kent and Medway Biological Records Centre;
- The Government's Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.org.uk);
- A review of satellite imagery using Google Earth;
- UK Biodiversity Action Plan (UKBAP) http://ukbars.defra.gov.uk/plans/priority.asp);
- Kent Biodiversity Action Plan (KBAP) (http://www.kentbap.org.uk/habitats-and-species/);
- National Biodiversity Network (NBN) (www.nbn.org.uk); and

6.3.2 Ecological Appraisals provided for development projects in close proximity to the Manston Airport site – namely Land East of Haine Road (OL/TH/14/0050); Land south of Great West Autos (F/TH/12/0722); Land east of Worlds Wonder (F/TH/14/0645) and Land North of Thorne Farm (F/TH/13/0596).

6.4 Engagement with consultees

6.4.1 In respect of biodiversity, key consultees have been identified and focussed engagement (through both informal and formal consultation) has commenced as part of the pre-application stages of the project. Consultees are:

- Natural England (NE);
- Kent County Council (KCC);
- Thanet District Council (TDC) – including the Thanet Coast Project;
- Kent Wildlife Trust (KWT);
- Environment Agency (EA);
- Royal Society for the Protection of Birds (RSPB);
- Local Authority Ecologist(s);

6.4.2 To date, NE, KCC, and the EA have been engaged in respect of biodiversity interest.

6.4.3 During the meeting with NE an overview of the project was provided and it was confirmed that their involvement would focus on potential effects on sites designated for nature conservation (particularly in regard to Habitat Regulations Assessment) and European Protected Species (EPS). With regard to other legally protected species it was noted that NE would rely on their standing advice, with more detailed input being expected from KCC and/or TDC. At meetings with KCC

and EA general discussions regarding the potential ecological effects associated with the project were discussed. The EA noted the potential issues associated with the existing outfall that runs from the Manston Airport site and discharges into Pegwell Bay.

6.4.4 Future engagement will entail a suite of scheduled meetings with the statutory and non-statutory consultees outlined above, which will be undertaken in parallel to the biodiversity surveys and assessment work that will be carried out in advance of submission of the DCO application. If and when important biological receptors are identified, alongside the ongoing development of the scheme design, agreement with consultees will be sought on whether it is appropriate to vary the current survey scope so that all potential likely significant effects can be assessed. Measures to mitigate those effects will be developed in conjunction with the scheme design process and agreed.

6.4.5 Formal agreement with NE, KCC and TDC will be sought iteratively on the scope of all baseline surveys and the assessment methodology.

6.5 Overview of the baseline conditions

Current Baseline

6.5.1 The desk study indicates that the Manston Airport site comprises a combination of hardstanding and buildings, large expanses of grassland and some limited areas of scrub and/or landscaping. The desk study has revealed that there is the potential for, or records of species which are legally protected or a priority for nature conservation to be present on or adjacent to the Site, namely: reptiles within suitable terrestrial habitats and badgers within the wider landscape. Bats could also potentially roost in suitable trees and buildings (potentially on site), and forage within the vicinity.

6.5.2 The site is likely to support breeding bird assemblages associated with farmland and urban habitats; over-wintering species may include wading birds and wildfowl. Due to the historic management of the site as an airfield the usage of the area by birds is likely to be lower than may be expected for similar expanses of habitat elsewhere (i.e. management to reduce bird strike has been practiced for decades).

6.5.3 The desk study has indicated the presence of the following statutory sites within the potential Zone of Influence (ZoI) (See **Box 6.4** for definition): (see, **Table 6.1** and **Figure 6.1**). It should be noted that at this stage, a 10km radius has been used as the search area and potential ZoI for statutory sites. As more scheme information and baseline data becomes available, this ZoI may be extended or reduced. For example, the air quality assessment will inform the ZoI with regards to the potential distance over which deposition of nitrogen and other emissions may typically be detected. Over 10km, the emissions due to aircraft moving to or from the airport are likely to be deposited in a dispersed manner due to their ejection at altitude. This will be determined as the assessment progresses. There are no non-statutory sites within 1km of the airport boundary.

Table 6.1 Desk Study: Statutory Sites (in order of distance from Manston Airport)

Site	Status	Description	Approximate Distance from Site
Thanet Coast and Sandwich Bay	Ramsar	The site is of value to breeding and wintering birds, as well as supporting outstanding communities of terrestrial and marine plant species and a significant number of rare invertebrate species. The site supports a total of at least 15 Red Data Book invertebrate species associated with wetlands.	~925m South East
Thanet Coast and Sandwich Bay	SPA	The site supports populations of European importance for turnstone (*Arenaria interpres)* (Non-breeding);European golden plover (*Pluvialis apricaria*) (Non-breeding) and Little tern (*Sternula albifrons*) (Breeding)	~925m South East
Sandwich Bay	SAC	Selected as an SAC due to the presence of several Annex I habitats. These being; embryonic shifting dunes, shifting dunes along the shoreline with European marram grass (*Ammophila arenaria)* - 'white dunes', fixed coastal dunes with herbaceous vegetation and dunes with *Salix repens* ssp. *Argentea*.	~925m South East
Thanet Coast	SAC (including Inshore Marine SAC)	The longest continuous stretch of coastal chalk in the UK that supports Annex 1 Habitats: Reefs and submerged or partially submerged sea caves.	~925m South East
Sandwich and Pegwell Bay	NNR	The Reserve has a complex mosaic of habitats including inter-tidal mudflats, saltmarsh, shingle beach, sand dunes, ancient dune pastures, chalk cliffs, wave cut platform and coastal scrubland. It supports the only ancient dune pasture in Kent. The reserve is of international importance for its wader and wildfowl populations. 615ha of the NNR is managed as a Kent Wildlife Trust Reserve.	~925m South West
Sandwich Bay to Hacklinge Marshes	SSSI	The most important sand dune system and sandy coastal grassland in South East England. There are also a wide range of other habitats such as mudflats, saltmarsh, chalk cliffs, freshwater grazing marsh, scrub and woodland are found here. This site comprises grazing marsh habitats within Minster Marshes and often supports	~925m South East

Site	Status	Description	Approximate Distance from Site
		large wintering populations of waders, some of which regularly reach levels of National importance. Associated with the site are outstanding assemblages of both terrestrial and marine plants and invertebrates.	
Thanet Coast	SSSI	The Thanet Coast is particularly noted for its bird populations, supporting both internationally and nationally important numbers of wintering birds, Associated with the various constituent habitats of the site are outstanding assemblages of both terrestrial and marine plant species, including communities of marine algae that are of limited occurrence elsewhere in the British Isles. Invertebrates are also of interest and there are recent records of three nationally rare and one nationally scarce species.	~4500m East
Margate and Long Sands	SCI (Inshore Marine)	Margate and Long Sands starts to the north of the Thanet coast of Kent and proceeds in a north-easterly direction to the outer reaches of the Thames Estuary. It contains a number of Annex I Sandbanks slightly covered by seawater at all times, the largest of which is Long Sands itself.	~4840m North
Stodmarsh	SAC	A sizeable population of the rare Desmoulin's whorl snail (*Vertigo moulinsiana*) lives beside ditches within pastures on the floodplain of the River Stour where reed sweet-grass (*Glyceria maxima*), large sedges and common reed (*Phragmites australis*) dominate the vegetation.	~7700 South West
Stodmarsh	NNR	Supports internationally important habitats including reedbeds, fens, ditches, wet grassland and open water which provide an ideal habitat for breeding and wintering birds, invertebrates and rare plants. Water voles are found on the reserve.	~7700m South West
Stodmarsh	SSSI	This wetland site contains a wide range of habitats including open water, extensive reedbeds, scrub and alder (*Alnus glutinosa*) carr which together support a rich flora and fauna diversity. The vegetation is a good example	~7700m South West

Site	Status	Description	Approximate Distance from Site
		of southern eutrophic flood plain and a number of rare plants are found here. The site is also of interest due to its diverse breeding bird community and several scarce moths.	
Stodmarsh	Ramsar	The site supports six British Red Data Book wetland invertebrates, 2 nationally rare and 5 nationally scarce plant species. The flora of the site includes the rare sharp leaved pondweed, as well as vulnerable whorled water-milfoil (*Myriophyllum verticillatum*), rootless duckweed (*Wolffia arrhiza*) and *Carex divisa*. Otter are also recorded here.	~8450m South West
Stodmarsh SPA	SPA	The site supports populations of European importance for shoveler (*Anas clypeata)* (over-winter);wigeon (*Anas Penelope*) (over-winter), mallard (*Anas platyrhynchos*) (over winter); gadwall (*Anas strepera*) (breeding and over-wintering); pochard (*Anas ferinia*) (over-winter); tufted duck (*Anas fuligula*) (over-winter); bittern (*Botaurus stellaris*) (over-winter); hen harrier (*Circus cyaneus*) (over-winter); snipe (*Gallinago gallinago*) (over-winter); lapwing (*Vanellus vanellus*) (over-winter)	~8450m South West
Preston Marshes	SSSI	The last remaining area of fen vegetation within the Little Stour Valley, supporting a number of notable plant species and breeding and wintering bird assemblages including lapwing, redshank, reed buntings and reed and sedge warblers. Wintering species include lapwing, snipe and various wildfowl such as teal and widgeon.	~8900m South West

6.5.4 There are no non-statutory sites (known as Local Wildlife Sites in Kent) within 1km of the airport boundary. At distances greater than 1km it is currently considered that potential effects associated with construction and operation of Manston Airport can be discounted.

6.6 The scope of the assessment, methodology and characteristics of the potential effects

Further baseline information

6.6.1 A walkover survey will be undertaken at the site in order to identify any features of biodiversity conservation importance that are present on the site and, where access is possible, to a distance of 30m from the site boundary. This would be undertaken in accordance with the Phase 1 habitat survey methodology. As is standard practice, the Phase 1 habitat survey will also be 'extended' to determine the presence or potential presence of species that are afforded legal protection or are otherwise considered to be notable. This additional information will allow us to scope the need for any further survey work that may be required to support any future application for the development of the site. During this survey visit a badger activity survey of land within this search area will also be undertaken, albeit depending on the findings of this, further targeted searches for badger setts may be required.

6.6.2 Furthermore, an initial assessment of the buildings and trees within the survey area to determine their potential to support roosting bats will be carried out, and in turn, the need for more detailed inspection and survey work. The water bodies that occur on-site (and where access allows to a distance of 500m from the site) will be scoped for their potential to support great crested newts (GCNs). This will enable determination of the need for GCN presence/absence surveys to be made. From Ordnance Survey maps and satellite imagery only small numbers of waterbodies are considered likely to be present however.

6.6.3 The following surveys (and others) may need to be carried out to provide detailed data for the baseline and inform the assessment of potentially significant effects:

- Reptile surveys;
- Badger survey;
- Bat activity and roost surveys;
- Breeding bird surveys;
- Wintering bird surveys.

6.6.4 The detailed scope of this survey work will be confirmed following the extended Phase 1 habitat survey, consultation with relevant stakeholders and a review of available desk study information.

6.6.5 Additional desk study data will also be obtained from the following sources to further inform the assessment:

- Kent & Medway Biological Records Centre (KMBRC);
- Kent Ornithological Society (KOS);
- British Trust for Ornithology (BTO);
- Barn Owl Recovery Network (BORN);
- Sandwich Bay Bird Observatory;

- Pegwell Bay bird reports; and
- Kent County Bird Recorder.

6.6.6 The geographical context of the site will also be further examined using the relevant Ordnance Survey 1:10,000 scale maps and freely-available satellite imagery. These will be used to identify key landscape features that may be important for protected or conservation-notable species, such as potential migration or dispersal routes, or any potential receptors of site derived pollutants in the wider landscape. This contextual information is important as it may point to notable species that could occur on the site itself.

Scoping Assessment

6.6.7 A key consideration in assessing the effects of any development/proposed works on flora and fauna is to define the habitats and species that need to be included in the assessment. In identifying these receptors, it is important to recognise that a development can affect flora and fauna directly (e.g. the land-take required) and indirectly, by affecting land beyond the Site (e.g. through noise generation). The approach that has been taken in preparing this scoping report (and that will be used in the ongoing scoping and subsequent detailed assessment) is to identify important biodiversity resources (the sites, habitats and species of sufficient importance that effects upon them could be significant), as well as considering legally protected species.

6.6.8 Assessment of the effects of the proposed development on biodiversity will be undertaken with reference to CIEEM's Guidelines for Ecological Impact Assessment in the United Kingdom[27]. The assessment will focus on legally protected and otherwise important biodiversity resources (see **Boxes 6.1** and **6.2**).

[27] CIEEM (2016) Guidelines for Ecological Impact Assessment in the United Kingdom: Terrestrial, freshwater and marine. Accessed at http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

Box 6.1 Legally protected and controlled species

Legal protection

Many species of animal and plants receive some degree of legal protection.
For the purposes of the future assessment, legal protection refers to:

- species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 198*1 (as amended), excluding:
  - species that are only protected in relation to their sale (see Section 9[5] and 13[2]), given that the proposed development does not include any proposals relating to the sale of species, and
  - species that are listed on Schedule 1 but that are not likely to breed on or near the site, given that this schedule is only applicable whilst birds are breeding;
- species included on Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2010;
- badgers, which are protected under the Protection of Badgers Act 1992; and
- hedgerows, some of which are protected under The Hedgerow Regulations 1997.

Legal control

Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) lists species of animal that it is an offence to release or allow to escape into the wild and species of plant that it is an offence to plant or otherwise cause to grow in the wild.

Box 6.2 Important biodiversity resources

Statutory biodiversity sites

Internationally important sites (collectively referred to in this report as European sites – whilst recognising that Ramsar sites are designated at an international level): Special Area of Conservation (SACs), candidate SACs, Sites of Community Importance (SCIs), Special Protection Areas (SPAs), listed or proposed Ramsar sites, potential SPAs, possible SACs and sites identified or required as compensatory measures for adverse effects on other European sites

Nationally important sites: Sites of Special Scientific Interest (SSSIs) that are not subject to international designations and National Nature Reserves (NNRs).

Local Nature Reserves (LNRs) are statutory sites that are of importance for recreation and education as well as biodiversity. Their level of importance is defined by their other statutory or any non-statutory designation (e.g. if an LNR is also an SSSI but is not an internationally important site, it will be of national importance). If an LNR has no other statutory or non-statutory designation it should be treated as being of borough/district-level importance for biodiversity (although it may be of greater socio-economic value).

Non-statutory nature conservation sites

Non-statutory nature conservation sites in Kent are designated as Local Wildlife Sites. These are areas of countryside which are owned and managed by the local community, of value for both recreation and nature conservation, and accessible to all.

Priority habitats and species

In this report, the geographic level at which a species/habitat has been identified as a priority for biodiversity conservation is referred to as its level of 'species/habitat importance'. For example, habitats

and species of principal importance for the conservation of biological diversity in England are identified as of national species/habitat importance reflecting the fact that these species/habitats have been defined at a national level. The level of importance pertains to the species/habitat as a whole rather than to individual areas of habitat or species populations, which cannot be objectively valued (other than for waterfowl, for which thresholds have been defined for national/international 'population importance).

- International importance: populations of species or areas of habitat for which European sites are designated;
- International importance: populations of birds meeting the threshold for European importance (1% of the relevant international population).
- International Importance: Species listed under Annex 1 of the Directive 2009/147/EC of The European Parliament and of The Council of 30 November 2009 on the conservation of wild birds (codified version), commonly referred to as the Birds Directive.
- National importance: Priority habitats and species of principal importance for the conservation of biological diversity in England. These are listed on: http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/priorityliStaspx.
- National importance: Species listed as being of conservation concern in the relevant UK Red Data Book (RDB) or the Birds of Conservation Concern Red List[28].
- National importance: Nationally Rare and Nationally Scarce species, which are species recorded from, respectively, 1-15 and 16-100 10x10km squares of the national grid.
- National importance: Populations of birds comprising at least 1% of the relevant British breeding/wintering population (where data are available).
- National importance: Ancient woodland (i.e. areas that have been under continuous woodland cover since at least 1600).
- County importance: Habitats and species listed in the Kent BAP.
- County importance: Populations of birds comprising at least 1% of the relevant County breeding/wintering population (where data are available)

6.6.9 The starting point for the scoping assessment was to undertake an exercise, using the baseline data that were collected through the desk study and knowledge of the local area (see **Section 6.5**), to subdivide the recorded biodiversity receptors (i.e. designated sites, together with species populations and habitats) into:

- those that could be significantly affected by the proposed development or for which the development could result in the contravention of relevant legislation, and that therefore required more detailed assessment; and
- those that were assessed as not being likely either to be significantly affected or for relevant legislation to be contravened, and that did not therefore require further assessment (i.e. that were 'scoped out' of the assessment).

6.6.10 For sites/habitats/species that meet the criteria in **Box 6.1** and or **6.2**, and are therefore important for biodiversity conservation, the next stage of the scoping assessment was to determine whether the identified receptors are likely to be of

[28] Eaton M.A., Brown A.F., Noble D.G., Musgrove A.J., Hearn R., Aebischer N.J. Gibbons D.W., Evans A. and Gregory R.D. (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296-341.

sufficient 'biodiversity conservation value' that an effect upon them could be significant in EIA terms. In this context:

- biodiversity conservation value relates to the quality and/or size of sites or habitats, or the size of species populations (see **Box 6.3**); and
- potential significance means that the effect could be of sufficient concern, or for positive effects, of such substantial benefit, that it could influence the decision about whether or not planning permission or a specified consent should be granted.

Box 6.3 Value and importance for biodiversity conservation

The distinction between importance and value can be illustrated by common species such as the house sparrow. This species is important at a national level because it is a priority species (Section 41, NERC Act 2006). However, a small population that could be affected by a development would often be assessed as being of insufficient value for an effect (whether adverse or beneficial) to be of potential significance. On this basis it would not need to be assessed further within the ES (i.e. it would be 'scoped out' of the assessment).

6.6.11 Receptors that are of sufficient value that an effect upon them would have the potential to be significant, together with all relevant legally protected species, were taken through to the next stage of assessment. This involved identifying, for each receptor:

- any environmental changes that are likely to be caused by the proposed development which have the potential to lead to a significant effect and/or to contravene relevant legislation;
- for these environmental changes, determining the area within which each change could cause a likely significant effect or could contravene relevant legislation (i.e. an 'ecological zone of influence' - see **Box 6.4**);
- comparing the area where the receptor occurs with the ecological zone of influence; and
- if the receptor occurs or is likely to occur within the zone of influence, concluding that either the receptor could be subject to a significant effect and/or the relevant legislation could be contravened, in which case the effects upon the receptor are scoped in, or no significant effect is likely to occur and it is scoped out.

Box 6.4 Defining ecological zones of influence

The ecological zone of influence that is the most straightforward to define is the area affected by land-take and direct land-cover changes associated with the development. This zone is the same for all affected receptors. By contrast, for each environmental change that can extend beyond the area affected by land-take and land-cover change (e.g. changes in noise associated with development activities within the land-take area), the zone of influence may vary between receptors, dependent upon the receptors' sensitivity to the change and the precise nature of the change.

For example, dormouse might be unaffected by noise associated with a development unless the noise is generated very close to where the dormouse nests, while another mammalian species might be disturbed at much greater distances; other species (e.g. of invertebrate) may be unaffected by changes in noise. A further complication is that the response of a receptor to a change associated with one development may differ to the response of the same receptor to a similar change on another development. This can occur as a result of the wide range of variables that influences the precise nature of any change (e.g. for noise this can include: differing baseline noise conditions; specific magnitude, timing or other characteristics of the noise; and the effects of screening and topography).

In view of these complexities, the definition of the zones of influence that extend beyond the land-take area will be based upon professional judgement, informed by discussions with the technical specialists who are working on other chapters of the ES. These specialists will provide information about the environmental changes that they assess within their ES chapters. This information will be combined with available ecological information about receptors' sensitivities to different environmental changes in order to define the extent of each ecological zone of influence.

Potential effects requiring further assessment

6.6.12 Having undertaken the scoping assessment as outlined in the proceeding section the following potentially significant effect that require further assessment were identified:

- Direct effects of temporary and permanent habitat loss from land take for access and construction purposes;
- indirect effects by way of pollution (air quality effects associated with deposition, pollution from surface water run-off etc.) and disturbance (noise, visual and light) to surrounding habitats and associated species; and
- the effects of collision with aeroplanes (or management measures to reduce collision risk), which is of particular relevance in areas known to support raptors or large concentrations of waterfowl..

6.6.13 **Table 6.2** summarises information about the receptors that have been identified through the scoping process at this stage as having the potential to be significantly affected by the proposed development and/or for which legislation could be contravened. The table also identifies the potential effects that need to be assessed.

Table 6.2 Potential Receptors Scoped in for Further Assessment

Potential Biodiversity Receptor	Valued and / or legally protected?	Relevant criteria (from Box 7.1) and legislation (from Box 7.2)	Potentially significant effects/legal contravention and causal changes
Thanet Coast and Sandwich Bay Ramsar	Biodiversity conservation value Legal status	Habitat Regulations	No direct effects to the SPA are likely; however, there is potential for effects to foraging habitat and potential disturbance/displacement effects to over-wintering birds as a result of aircraft movements.
Thanet Coast and Sandwich Bay SPA	Biodiversity conservation value Legal status	Habitat Regulations	No direct effects to the SPA are likely; however, there is potential for effects to foraging habitat and potential disturbance/displacement effects to over-wintering birds as a result of aircraft movements.
Thanet Coast SAC	Biodiversity conservation value Legal status	Habitat Regulations	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Sandwich and Pegwell Bay NNR	Biodiversity conservation value Legal status	*National Parks and Access to the Countryside Act 1949* and *the Wildlife and Countryside Act 1981*(as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Sandwich Bay to Hacklinge Marshes SSSI	Biodiversity conservation value Legal status	*Wildlife and Countryside Act 1981* (as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Sandwich Bay SAC	Biodiversity conservation value Legal status	Habitat Regulations	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Thanet Coast SSSI	Biodiversity conservation value Legal status	*Wildlife and Countryside Act 1981* (as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition
Margate and Long Sands SCI (Inshore marine)	Biodiversity conservation value Legal status	Habitat Regulations	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Stodmarsh SAC	Biodiversity conservation value Legal status	Habitats Regulations	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition
Stodmarsh NNR	Biodiversity conservation value Legal status	*National Parks and Access to the Countryside Act 1949* and *the Wildlife and Countryside Act 1981*(as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.
Stodmarsh SSSI	Biodiversity conservation value Legal status	*Wildlife and Countryside Act 1981* (as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.

Potential Biodiversity Receptor	Valued and / or legally protected?	Relevant criteria (from Box 7.1) and legislation (from Box 7.2)	Potentially significant effects/legal contravention and causal changes
Stodmarsh Ramsar	Biodiversity conservation value Legal status	Habitat Regulations	No direct effects to the SPA are likely; however, there is potential for effects to foraging habitat and potential disturbance/displacement effects to over-wintering birds as a result of aircraft movements.
Stodmarsh SPA	Biodiversity conservation value Legal status	Habitats Regulations	No direct effects to the SPA are likely; however, there is potential for effects to foraging habitat and potential disturbance/displacement effects to over-wintering birds as a result of aircraft movements.
Preston Marshes SSSI	Biodiversity conservation value Legal status	*Wildlife and Countryside Act 1981* (as amended)	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition
Breeding birds	Biodiversity conservation value Legal status	*Wildlife and Countryside Act 1981* (as amended)	Potential effects on birds due to damage or destruction of nests. Any removal of vegetation or buildings with the potential to support nesting birds will, wherever possible, be undertaken outside the bird nesting season (March to August inclusive) to ensure compliance with the Wildlife and Countryside Act 1981 (as amended).
Badgers	Legal status	*Protection of Badgers Act 1992*	Sett disturbance or damage Death or injury from falling into uncovered excavations Increased noise and vibration, resulting in disturbance of setts. Loss of foraging habitat.
Bats	Biodiversity conservation value Legal status	Habitat Regulations NERC Act 2006 section 41 Species of Principal Importance (7 species) Kent BAP Priority species (Noctule, Soprano Pipistrelle and Brown Long-Eared Bat species)) *Wildlife and Countryside Act 1981* (as amended)	Removal of /damage to and/ or disturbance of roosts. Disturbance of commuting and foraging bats from light spill. Disturbance of /barrier effects to commuting routes from new development.
Reptiles	Legal status	NERC Act 2006 section 41 species of principal importance *Wildlife and Countryside Act 1981* (as amended) Kent BAP Priority species	Land take/land cover change (habitat removal) resulting in death or injury of reptiles.
Lowland, mixed deciduous woodland; Wet Woodland; Traditional orchards; Coastal and Floodplain grazing; and Reedbeds	Biodiversity conservation value	NERC Act 2006 section 41 Species of Principal Importance	There is potential for indirect effects resulting from a deterioration in air quality and increased deposition.

Significance assessment methodology

Assessment methodology

6.6.14 The detailed assessment of effects will be undertaken on the basis of the results of the desk study and survey data, and also relevant published information (on potential biodiversity receptors' status, distribution, sensitivity to environmental changes and ecology), and professional knowledge of ecological processes and functions.

6.6.15 For each scoped-in receptor, effects will be assessed against the predicted future baseline conditions for that receptor at the time of construction and operation. This future baseline will be defined using information about the likely future use and management of the site in the absence of development, known population trends (for species) and any other proposed developments (consented or otherwise) that may act cumulatively with the scheme to affect biodiversity receptors. If it is not possible to conclude that any predicted future baseline scenario is more likely to occur than the current baseline, the current baseline will be used in the ES.

6.6.16 Throughout the assessment process, findings about potential likely significant effects will be used to inform the definition of requirements for additional baseline data collection and the identification of environmental measures to incorporate into the scheme design (in order to avoid or reduce adverse effects or to deliver enhancements). Measures to comply with relevant policies and legislation will also be included. The results of the assessment, will, reflect the final scheme design (i.e. incorporating the environmental measures).

6.6.17 The spatial extent of the assessment of each potential likely significant effect reflects the area occupied by the receptor that is being assessed and the zone of influence associated with the environmental changes that are likely to affect the receptor (see **Box 6.4**). Thus, if part of a designated biodiversity site is located within the ecological zone of influence relating to a particular environmental change, an assessment will be made of the effects on the site as a whole. A similar approach will be taken for areas of notable habitat. For species that occur within an ecological zone of influence that relates to a change that could significantly affect the species, an assessment will be carried out on the total area that is used by the affected individuals or population of the species (e.g. for foraging or as breeding territories).

6.6.18 For each receptor, the assessment will deal with the effects of construction, together with the effects of the operational airport. As progressively more is known about the development proposals and about the populations of important and legally protected species/habitats/sites, the scope of the assessment will be refined to focus on those receptors that have the potential to be significantly affected by the proposed development. Each scoped-in receptor will then be subject to further assessment work that addresses how the receptor is likely to be affected by the proposed development, allowing for environmental changes that could affect the receptor during construction and operation, as well as dismantling where that is occurring.

Negative effects

6.6.19 An effect is considered to be significant if the favourable conservation status of a receptor is compromised by the proposed development. Conservation status is defined by the Chartered Institute of Ecology and Environmental Management[29] as being:

- for habitats - the sum of the influences acting on the habitat and its typical species, that may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area;
- for species - the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area.

6.6.20 A similar procedure will be used for assessing the effects on designated sites that are affected by the development, except that the focus is on the effects on the integrity of each site, defined by the CIEEM guidelines as "*… the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*." The assessment of effects on integrity draws upon the assessment of effects on the conservation status of the features for which the site has been designated.

6.6.21 The decision as to whether the favourable conservation status has been compromised will be made using informed judgement based on the findings of the assessment of how the resource would be affected.

Positive effects

6.6.22 A positive effect is assessed as being significant if development activities are predicted to cause:

- an improvement in the condition of a habitat/species population from unfavourable to unfavourable recovering or favourable (noting that condition data are only available for SSSIs but that professional judgement has been used to apply the same principle to habitats/species elsewhere); or
- partial or total restoration of a site's favourable condition.

6.6.23 If a species population, habitat or site is already in favourable condition, it is still possible for there to be a significant positive effect. There is, however, no simple formula for determining when such effects are significant and decisions about significance therefore have to be made on a case by case basis using professional judgement.

Potential effects not requiring further assessment

6.6.24 Assessment of the following potential effects has led to the conclusion that they are unlikely to be significant and do not require further assessment: Potential effects on relevant habitats and species in watercourses/water bodies resulting from contamination caused by soil disturbance or the accidental spillage of

[29] CIEEM (2016) Guidelines for Ecological Impact Assessment in the United Kingdom. CIEEM

chemicals during the works: It is unlikely that such a pollution incident will occur as appropriate measures will be instigated during the works to mitigate such events, these will be identified in the Water chapter of the Environmental Statement.

7. Ground and Surface Water

This section presents the proposed scope of work for the Ground and Surface Water assessment.

7.1 Introduction

7.1.1 The proposed development at Manston Airport has the potential to affect the existing hydrology, flood risk and water quality both on site and within in the vicinity. This chapter describes the scope of the assessment required. It should be read with reference to the scheme description in Chapter 2.

7.1.2 Following a summary of relevant policy and legislation, this chapter describes the data sources used for this scoping report, the overall baseline conditions and the scope of the EIA assessment, methodology and characteristics of potential effects.

7.2 Relevant policy, legislation and guidance

Policy context

7.2.1 Policies held within the Thanet Local Plan 2006 expired in June 2009. A number of the policies were saved and will form part of the development plan for Thanet which is planned to be adopted in February 2017. The 'saved' local planning authority policies, and other national planning policies, that may be of relevance to this assessment are given below in **Table 7.1**.

Table 7.1 Local and National Planning Policies

Policy Reference	Policy Information
National Policies	
Soil Strategy for England 'Safeguarding Our Soils' (DEFRA, 2009 (2))	The policy guidance describes adverse impacts on soils, such as soil pollution and compaction. The soil strategy also deals with the management of contaminated land.
National Planning Policy Framework: (NPPF)	The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It identifies requirements for addressing flood risk for new developments, steering more vulnerable development into areas of lower flood risk.
Local Policies	
Policy EC2 - Manston Airport	Identifies the requirement for demonstration that new development cannot contaminate groundwater sources and/or that appropriate mitigation measures will be incorporated into the development to prevent contamination.
Policy EP13 - groundwater protection zones	Development located within the groundwater protection zones, if identified to have the potential to result in a risk of contamination of groundwater sources, will not be permitted without adequate mitigation measures to prevent such contamination taking place.
Flood and coastal erosion risk management policy statement	Provides a public statement of the Council's approach to flood and coastal erosion risk management within the district.

Emerging Local Policies	
Policy SE04 (Ground Water Protection Zones)	Proposals for development within the Groundwater Source Protection Zones identified on Map 19 will only be permitted if there is no risk of contamination to groundwater sources. If a risk is identified, development will only be permitted if adequate mitigation measures can be implemented. Proposals for Sustainable Drainage systems involving infiltration must be assessed and discussed with the Environment Agency to determine their suitability in terms of the impact of any drainage into the groundwater aquifer

Legislative requirements

7.2.2 Legislation relevant to the assessment of potential effects on water quality, resources and flood risk includes, but is not necessarily limited to, the following:

- The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
- Floods and Water Management Act 2010;
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
- The European Union (EU) Floods Directive (2007/60/EC), as enacted into domestic law by the Flood Risk Regulations 2009;
- Priority Substances Directive (2008/105/EC), as enacted into domestic law by the 2010 Directions listed above;
- The EU Water Framework Directive (2000/60/EC) (WFD), as enacted into domestic law by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003;
- Water Act 2003;
- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999
- Environment Act 1995;
- Land Drainage Act 1991;
- Water Resources Act, 1991;
- Environmental Protection Act 1990; and
- Control of Pollution Act 1974.

Guidance and strategies

7.2.3 A range of general good practice advice and technical guidance is of relevance to this assessment, including the following:

- Pollution Prevention Guidance notes (PPG) (Environment Agency online);
- CIRIA Report C753: The SuDS manual;
- CIRIA Report C698: Site handbook for the construction of SuDS;

- CIRIA Report C532: Control of water pollution from construction sites;
- CIRIA Report C648: Control of water pollution from linear construction projects – technical guidance;
- CIRIA Report C649: Control of water pollution from linear construction projects – site guide ; and
- CIRIA Report C692: Environmental good practice on site (third edition).
- Groundwater protection: Principles and Practice (GP3). Environment Agency, August 2013 version 1.1

7.2.4 A number of bodies with responsibility for management and regulation of the water environment have also produced plans and strategies that are of relevance to this assessment. Regional management plans and strategies for the water environment of relevance to this assessment include:

- Thanet Surface Water Management Plan (2013)
- River Stour Catchment Flood Management Plan (2009)
- Stour Catchment Abstraction Management Strategy (May 2003)

7.3 Main sources of data used in preparing the scoping report

7.3.1 The baseline assessment in relation to the water environment is entirely desk-based. The most up to date information available on publicly accessible websites and mapping has been used to determine the existing baseline conditions on the development site, and in the immediate surrounding area. This has allowed identification of sensitive receptors in both the surface water and groundwater environment, which will need consideration during the design of the proposed development.

7.3.2 The assessment involves the collection and interpretation of a wide range of data and information from published material, principally the Environment Agency (EA). The data and sources of information collected are listed in **Table 7.2**.

Table 7.2 Water environment primary sources of information

Topic	Source of Information
Topography, Elevation, Relief	OS 1:10K and 1: 25K Mapping
Climate	Met Office http://www.metoffice.gov.uk/public/weather/climate
Surface waters	Environment Agency http://www.environment-agency.gov.uk/maps/
Water Quality & Flood Risk	Environment Agency http://environment.data.gov.uk/catchment-planning/ Environment Agency http://www.environment-agency.gov.uk/maps/ Thanet District Strategic Flood Risk Assessment, Entec, 2009.
Groundwater Vulnerability	Environment Agency http://www.environment-agency.gov.uk/maps/ Envirocheck Report, March 2016

Topic	Source of Information
Soils and Soil Type	Cranfield University website http://www.landis.org.uk/soilscapes/ Envirocheck Report, March 2016
Geology	British Geological Survey website: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html
Water Abstractions and Discharges	Envirocheck Report, March 2016 Thanet District Council
Designated Sites	www.magic.gov.uk North East Kent (Thanet) SIP, Natural England, 2014.

7.4 Engagement with consultees

7.4.1 Initial contact has been made with Southern Water and the Environment Agency, with the aim of understanding the scope of the assessment necessary to show no adverse effect on groundwater resources. This preliminary contact is summarised below.

Environment Agency

7.4.2 A meeting was held at the Environment Agency offices on the 11th April 2016. These discussions are summarised below.

Table 7.3 Baseline data discussions with the Environment Agency

Technical Area	Key Points
Site Drainage	The site discharge point from the runway area is believed to be in the south east corner of the site and may run under the road. It is not thought to run below the fuel station, located to the south of the site boundary. It is unknown if there are other pipes linked to this discharge or if it's the airports only. This pipe discharges to the beach (Pegwell Bay) and the Environment Agency get public complaints and enquiries as the pipe is visible on the beach. If this was going to continue to be the discharge route then assessment to water quality and discharge would need to be permitted and considered in the drainage strategy. They would hope that there would not be an increase in the volume of the discharge. Drainage within the red line boundary is currently partially to ground and partially captured. This discharge to ground would not be permitted in future in areas where potentially polluting substances are in use (e.g. de-icer in runway or apron areas) or there is fuel. SUDS would need careful consideration and are best outside SPZ1.
Water Quality	The fuel station to the south east of the site is a known to be an issue and there are probably groundwater and land contamination issues with that site associated with historical activities and spills. The Environment Agency and Southern Water hold water quality monitoring data boreholes around the site, this should be requested. The closest Southern Water source is mixed to treat for Nitrate pollution, and there have been issues in the past with hydrocarbons and solvents. There is currently no water quality monitoring data inside the site boundaries, this is seen as a key data gap.
Area of SPZ1	The Adit associated with the area of SPZ1 under the runway is thought to be at about 0 MAOD so approx. 40 to 50m below ground level. It is unknown if there are additional shafts associated

	with it. The SPZ delineation is very basic (50m circle) so they consider that the SPZ1 could potentially be larger. Further consultation with Southern Water is necessary.

7.4.3 The Environment Agency have been advised that the following pieces of technical work will be undertaken

- A hydrogeological risk assessment in line with GP3. This could be quantitative or qualitative, depending on data availability.
- A Flood Risk Assessment.

Southern Water

7.4.4 An initial meeting was held with Southern Water on the 29th April 2016. These discussions are summarised below:

Technical Area	Key Points
Lord of the Manor Public Water Supply	The adit running under the runway is one of longest in country and measures approximately 2x2m in cross section. The adit is at sea level (therefore approximately 40-50mbgl), and possibly dates from the 1930s. The spatial orientation of the adit is unconfirmed; delineation of SPZ1 is therefore regarded as approximate. The shaft is located to the east of the site. The source is currently not in use but is one of four that supply drinking water to Thanet. Sources are currently blended with imported water. There are recorded incidents of turbidity (generally caused by large changes in groundwater table elevation after heavy rainfall), plus there have been historical issues with high levels of nitrate and TCE. There are currently no facilities in place to remove TCE and the increases in use at the airport may result in increases in the levels of TCE, therefore Southern Water would require mitigation measures which minimise the use of, or target the interception of TCE's. Southern Water are not concerned about changes to aquifer recharge rate due to new airport concrete infrastructure.
Site Drainage	The site is private so Southern Water have limited information on the existing drainage. There were previous applications to install new drainage pipes and an interceptor but it is not known whether it was installed. If the existing pipe network was to be reused a condition survey should be undertaken first to ensure that is fit for purpose/use. If there were any pumps needed the design and location of these would need to be considered to reduce risks. Southern Water's initial position is that they would not want to see any sort of ponds or water storage tanks on the site due to risks to groundwater quality. Any water storage on site should be minimised. The fuel farm should be designed to include sufficient safeguards, e.g. above grounded bunded tanks, and should be located outside of groundwater source protections zones (SPZ) 1 and 2 are far as practically possible away from the adit.
Water use	Southern Water requested that an estimate of the water usage for the airport be provided, there is currently issues with capacity in Thanet and the proposed increase in flights would likely require more water. Southern Water requested that the DCO should include details of how waste water and surface water will be managed. It was stated that existing foul water connections could be used provided flow rates for sewerage are no greater than current, capacity checks for the existing infrastructure should also be undertaken. Nothing should be discharged to ground on the site.
Construction	The main concern for Southern Water is around the construction activities, for example deep pilling. Any foundations should be designed to avoid deep pilling where possible, Southern Water should be notified of any works ahead of time, there should be no use of anti-freeze within pilling operations. If the PWS borehole was knocked out and had to be pumped to clear waste Southern Water would charge a developer. If RiverOak wan to install any new water quality monitoring wells for they would need to be away adit and designed to minimise risk, the particular concern is turbidity. Southern Water would need to be notified in advance of any drilling.

Technical Area	Key Points
	There are two rising mains crossing the southwest of the site, the exact location not known as the records are old. They will need to be protected, no excavation within 6m either side, hand digging to identify services if required.

7.5 Overview of the baseline conditions

Topography and climate

7.5.1 The Manston Airport site is mainly situated at an elevation between 45-50mAOD. The southern portion is located at an elevation of approximately 50mAOD, along the length of the existing runway, but raises to approximately 55mAOD in the western most corner of the site. North of the runway the site declines to approximately 40mAOD, in the west, at the crossroads of the B2050 and the B2190, forming the start of the headwater valley for the Brooksend Stream, while remaining at 45-50mAOD in the northern most part of the site.

7.5.2 The average annual rainfall recorded at Manston between 1981 and 2010 is 592.5mm (Source: Met Office).

Surface Watercourses and other water features

7.5.3 There are no river watercourses on or adjacent to the site. A series of water channels and streams that form part of the Minster Marshes are located more than 1km to the south of the site. This marsh drains south into the River Stour, 3km south of the site, which flows east and into Sandwich and Pegwell Bays. OS mapping indicates a drainage channel on the opposite side of the road at the northern most point of the site. This is possibly associated with an operational garden nursery (Rosemary Nurseries) adjacent to the site.

7.5.4 OS mapping indicates a number of reservoirs within 3 km of the site. A number of small uncovered reservoirs are located approximately 1.5km or more from the western most boundary of the site. A covered reservoir is located approximately 0.5km north of the site, and on further uncovered reservoir located 0.3km from the southern boundary of the site.

7.5.5 There are a number of other small water features (e.g. ponds) located within 3km of the site.

Abstractions and discharges

7.5.6 There are no public water supply abstractions located within the site boundary, but a number of people and organisations abstract water from groundwater or ponds/lakes up to 1000m outside the site boundary (6 located within 500m, and a further 3 up to 1000m from the site boundary). The abstractions are for private water undertaking, public water supply and agriculture (**Table 7.4**). It is assumed that where no permit end date is provided in the Envirocheck Report that the abstraction is currently operational.

Table 7.4 Public water supply abstractions within 1000m of the Manston Airport site

Licence Holder	Purpose	Source	NGR	Operational	Direction from Development Site	Approx. Distance from Development site centre (m)
Wilson & Wilson Ltd	Private Water Undertaking: General Use (Medium Loss)	Groundwater	631690 165470	Yes	E	176
Southern Water Services Ltd	Public Water Supply: Potable Water Supply - Direct	Groundwater	635350 165100	Yes	E	384
Southern Water Services Plc	Public Water Supply	Pond or Lake	635350 165095	Yes	E	386
Mrs L R Saunders	Spray Irrigation	Pond or Lake	632855 166805	Yes	W	474
Mrs E Green	General farming and Domestic/ spray irrigation	Groundwater	632850 166810	Yes	W	481
Mrs L R Saunders	General farming and Domestic/ spray irrigation	Groundwater	632850 166810	Yes	W	481
Southern Water Services Ltd	Public Water Supply: Potable Water Supply – Direct	Groundwater	630650 165140	Yes	W	805
Southern Water Services Ltd	Public Water Supply: Potable Water Supply – Direct	Groundwater	630860 164860	Yes	SW	949
Southern Water Services Plc	Agriculture (General)	Pond or Lake	630860 164855	Yes	SW	954

7.5.7 Thanet District Council confirm that there are no known private water supplies within a 2km radius of the centre of the Manston Airport Site.

7.5.8 There are two permitted discharges identified within the Manston Airport site. The first was operated by The Modern Jet Support Centre Ltd, which discharged site drainage to land, and was revoked in 2004. Initial conversations with the Environment Agency have indicated that the other (still active) discharge (consent number P02258) is associated with the discharge of run-off from the runway and apron areas to Pegwell Bay. Envirocheck information indicates that the last listed holder is Kent International Airport Ltd, though since this organisation is no longer in existence it is not currently clear who is responsible for the current permit. Further information concerning the nature and operation of this discharge will be sought during the preparation of the Environmental Statement.

7.5.9 There are a further ten permitted discharges identified up to 500m outside the site boundary, and a further nine located up to 1000m from the site boundary. All those identified discharge to land, groundwater or saline estuary, being used for single domestic properties, surface waters, site drainage and process waters from trade effluents or storm sewage overflows for public supplies. It is assumed that where no revocation date is provided in the Envirocheck Report that the discharge is

currently operational, therefore ten, identified in **Table 7.5**, are assumed to be currently operational.

Table 7.5 Discharges within 1000m of the Manston Airport Site

Operator	Discharge type	Grid Reference (NGR)	Estimated distance from site in metres (indicated direction from site)	Receiving Water	Status
Kent International Airport Ltd	Discharge of other matter – surface water	634030 166280	On site (south)	Saline Estuary	Currently operational
The Modern Jet Support Centre Ltd	Trade Effluent Discharge-Site Drainage	633960 166000	On site (north)	Into Land	Revoked in 2004
Cohnen Partnership	Discharge Of Other Matter-Surface Water	631650 166220	119 (south)	Into Land	Revoked in 1999
Summit Engineering Limited	Sewage Discharges - Final/Treated Effluent	631719 166241	148 (south)	Ground Waters Via Soakaway	Currently operational
Thanet Waste Management	Trade effluent Discharge – site drainage	633980 167410	165 (north)	Into Land	Revoked in 2012
Dds (Demolition) Limited	Trade effluent Discharge – site drainage	633980 167410	195 (north)	Into Land	Currently operational
Cohnen Partnership	Trade Effluent Discharge-Site Drainage	631670 166380	280 (south)	Into Land	Revoked in 2014
	Trade Effluent Discharge-Site Drainage	631670 166380	280 (south)	Into Land	Revoked in 2012
	Discharge Of Other Matter-Surface Water	631670 166380	280 (South)	Into Land	Revoked in 1999
Mr. Struan Robertson	Sewage Discharges - Final/Treated Effluent	632068 166387	335 (south)	Ground Waters Via A Soakaway	Currently operational
Channel Freight Storage Limited	Sewage Discharges	631530 165326	337 (south)	Groundwater Via Borehole	Currently operational
Mr Stuart Robertson	Sewage Discharges - Final/Treated Effluent	632166 166421	342 (east)	Groundwater Via A Soakaway	Currently operational
Southern Water Services Ltd	Public Sewage: Storm Sewage Overflow	634600 164700	506 (south east)	Controlled Sea	Revoked in 1997
Mpo Homes Ltd	Sewage Discharge	634183 167736	526 (north)	Underground Water	Currently Operational
	Sewage Discharge	634183 167736	526 (north)	Underground Water	Revoked in 2012
Edward Stanton Farms	Trade Discharge - Process Water	631850 165050	575 (south east)	Into Land	Revoked in 2004
Mr John Randall	Sewage Discharges	632180 164970	620 (south east)	Underground Strata	Currently operational

Operator	Discharge type	Grid Reference (NGR)	Estimated distance from site in metres (indicated direction from site)	Receiving Water	Status
Cohline Uk Ltd	Trade Effluent Discharge-Site Drainage	631800 166760	673 (north east)	Into Land	Revoked in 2014
	Trade Effluent Discharge-Site Drainage	631800 166760	673 (north east)	Into Land	Revoked in 2012
Cosgrove Leisure (Wayside) Limited	Sewage Discharges	632110 164890	707 (south east)	Underground Strata	Currently operational
Ms Lydia Scott	Sewage Discharges	632110 164890	707 (south east)	Underground Strata	Revoked 2012
Reclamet Ltd	Trade Effluent Discharge-Site Drainage	632650 167210	914 (north east)	Into Land	Revoked in 2008
Southern Water Services Ltd	Public Sewage: Storm Sewage Overflow	635160 164270	976 (south east)	Saline Estuary	Currently operational

Flood Risk

7.5.10 Environment Agency flood mapping indicates that the whole of the Manston Airport site is located within an area where flooding from rivers and the sea is very unlikely (Flood zone 1 where there is a less than a 0.1 per cent (1 in 1000) chance of flooding occurring each year). The nearest flood risk is coastal flooding associated with Pegwell Bay located approximately 2 km south east of the site. There is no risk of flooding to the site from reservoirs.

7.5.11 Flooding from land (rainfall run-off and surface water flooding) is considered to be a potential source of flood risk to the development site, in particular in the lower elevation ground across the middle of the site. The flood risk would occur through rainfall falling directly onto the development site, particularly when the ground is saturated. The majority of this flood risk has been identified to be of low risk (each year, the chance of flooding is between 1 in 1000 (0.1%) and 1 in 100 (1%)). There are areas of higher risk (with a greater than 1 in 30 (3.3%) chance of flooding) which could be associated with localised depressions.

7.5.12 Groundwater within the Thanet District is not identified to be of strategic concern but an SFRA completed for Thanet District Council (Entec, 2009) recommends that flooding from groundwater, surface water and foul water drainage networks are considered at site specific level. As the development site is covered with relatively permeable soils and geology, groundwater flooding is not considered to be a significant risk to the development site.

7.5.13 It is anticipated that there will be sewers and associated infrastructure across the site, based on its previous use as an operational airport. Therefore there is a potential risk of sewer flooding.

Soils and Land Use

7.5.14 The LANDIS soils database indicates that the Site is underlain by slightly acid and lime rich, loamy soils that are freely draining. The leaching potential of the soils indicates that they have the potential to transmit a wide range of pollutants.

7.5.15 Although the Airport ceased operation in 2014, the remnant landuse across the site remains. The southern part of the site is dominated by the tarmac runway, with a network of roads and taxiways linking this to the northern parts of the site. Carparks and buildings across the site remain and all the infrastructure is surrounded by cleared, maintained grass areas.

7.5.16 The site is bordered by roads that run along the length of the southern and western boundaries, with the B2050 cutting across the site in the north. Beyond these roads are farmland and industrial/retail areas (including Manston Fire Museum). To the north and east of the site are areas of farmland and residential dwellings.

Geology

7.5.17 The BGS mapping indicates that the bedrock geology underlying the entire of the site is Margate Chalk Member, comprising Chalk only. The overlying superficial (drift) geology is variable with areas with no superficial geology (predominantly in the south of the site) are interspersed with areas of Head formation, comprising Clay and Silt.

Hydrogeology and Groundwater Vulnerability

7.5.18 Online Environment Agency mapping indicates that the Manston Airport Site is underlain by a Principal Bedrock Aquifer, associated with the underlying Chalk, which can provide high levels of water storage. This aquifer supports local public water supply.

7.5.19 The Manston Airport site is located entirely within a groundwater Source Protection Zone (SPZ) catchment. The inner zone (SPZ1), where risk of contamination from pollution causing activities is greatest, is identified in a strip beneath the runway. This is surrounded by a wider area of outer zone (SPZ2) that also dominates the area beneath the runway, in the south of the Site. The remainder of the site falls within the wider SPZ catchment area (SPZ3).

The entire of the Manston Airport site is also located within a groundwater Nitrate Vulnerable Zone (NVZ).

Water Quality

7.5.20 Under the Water Framework Directive (WFD), the Environment Agency has produced nine River Basin Management Plans for England to manage water quality targets and river basin planning, which were updated during 2015. One of the aims of the WFD is for all waterbodies to achieve Good Ecological Status and to ensure no deterioration from current status. The Manston Airport site is located with the South East River Basin District.

Surface Waterbodies

7.5.21 The 2009 river basin management plan waterbodies were revised for the updated plans and small streams (less than 1km in length or with a catchment area of less than 10km^2) are now identified to be non-reportable and are not formally a waterbody. The northern part of the Manston Airport site is located within the Thanet Operational Catchment, which is coastal (extending between Birchington and Ramsgate) and comprises a network of small channels, within the area of Wade Marsh, that drain straight to Minnis Bay. No waterbodies are formally identified and therefore no 2015 water quality conditions are reported, and no objectives are set under the Environment Agency Catchment Data Explorer. However these stretches of water are still protected by law from pollution, modification and abstraction and can be improved where local actions and assessments deem it to be a priority.

7.5.22 The southern part of the Manston Airport Site is located within the Monkton and Minster Marshes surface waterbody (within the Stour Marshes Operational Catchment), which forms the catchment of the Minster Stream before it joins the River Stour and flows into Sandwich and Pegwell Bays. **Table 7.6** provides the current water quality, objectives and mitigation measures identified for this waterbody and the downstream River Stour waterbody (East Kent Coast Operational Catchment). Neither of the two waterbodies are currently of good status, however mitigation measures have been identified that will provide improvement from the current status by 2027 for both waterbodies.

Table 7.6 Surface Waterbody status, objectives and mitigation (South East RBMP, 2015)

WFD Waterbody (Waterbody type)	2015 Overall Waterbody status (ecological status)	Reasons for failure to meet Good	Overall Objective	Types of mitigation measures anticipated
Monkton and Minster Marshes (River)	Moderate (Moderate)	Phosphate- Probable source: Sewage discharge (diffuse) from towns, cities and transport	Good status by 2027	Reduce diffuse pollution at source. Reduce diffuse pollution pathways (i.e. control entry to water environment. Mitigate/remediate diffuse pollution effects on receptor.
		Dissolved Oxygen – Probable source: physical modification and flow (Land drainage - water level management)		Improvement to the condition of channel/bad and/or banks Removal or modification of engineering structure Change to operations and maintenance Vegetation management Water demand management Control pattern/timing of abstraction Use alternative source/relocate abstraction or discharge.
River Stour (Kent) (Transitional)	Poor (Poor)	Phytoplankton – Probable source: Diffuse phosphate pollution from rural areas Confirmed Source: Point source pollution from waste water	Moderate by 2027	Reduce diffuse pollution at source Mitigate/remediate diffuse pollution effects on receptor Mitigate/remediate point source effects on receptor Reduce point source pollution at source

WFD Waterbody (Waterbody type)	2015 Overall Waterbody status (ecological status)	Reasons for failure to meet Good	Overall Objective	Types of mitigation measures anticipated
				Reduce point source pathways (i.e. control entry to water environment)
		Dissolved inorganic Nitrogen – confirmed source: Point source pollution from waste water		Mitigate/remediate point source effects on receptor Reduce point source pollution at source Reduce point source pathways (i.e. control entry to water environment)

Groundwater Body

7.5.23 The Manston Airport site is located within the Kent Isle of Thanet Chalk groundwater body (within the East Kent Chalk and Tertiaries Operational catchment). The overall 2015 waterbody is of poor status (as a result of poor status for both quantitative and chemical components), with an overall waterbody objective to remain at poor status by 2015. Attaining the default (good status) is not justified under WFD because the costs of the measures exceed the benefits for the quantitative component. However the Chemical component has an objective to reach Good status by 2027. To achieve this the WFD highlights improvements in relation to the Chemical Drinking Water Protected Area and General Chemical Test. These measures would be unaffordable to implement within a particular timetable (in advance of 2027) without creating disproportionate burdens for particular sectors or parts of society or any identified solution would be at odds with the polluter pays principle.

7.5.24 This waterbody is identified under the WFD as a Drinking Water Protected Area (DWPA), and has a number of associated 'safeguard zones'[30]. The Manston Airport Site extends into the safeguard zones for three abstractions.

Conservation sites

7.5.25 The north coast of the Isle of Thanet, located approximately 3.5km north of the site, is designated as a SSSI, SAC, SPA and RAMSAR site. In closer proximity to the Manston Airport site are Sandwich and Pegwell Bays, located 1.5km south east. Together these bays are part of designated National Nature Reserve (NNR), RAMSAR, SSSI, SPA and SAC sites, these sites are described more fully in **Table 6.1** in the Biodiversity chapter of this report. The proposed Manston Airport development site, due to the proximity to Sandwich and Pegwell Bay SSSI, has been identified as falling within associated SSSI effect risk zones[31].

7.5.26 Implementing the WFD contributes to outcomes for nature conservation and biodiversity by improving the water environment. The River Basin Management Plans (RMBP) include a summary of the measures needed for water dependent

[30] Safeguard zones are non statutory areas established for 'at risk' abstractions where land use, management practices and other activities can affect the quality of the raw water. Measures to prevent and reduce pollution are targeted within these zones.
[31] Zones around each SSSI site (the extent of which reflects the sensitivities of the features for which the site is notified) that indicate the extent beyond the SSSI where development proposals may still have adverse impacts on the SSSI.

Natura 2000 sites to meet their conservation objectives. Supporting Site Improvement Plans (SIPs[32]) provide an overview of the issues (both current and predicted) affecting the current condition and outlines the priority measures required to improve the condition of the features. Sandwich Bay SAC, Thanet coast and Sandwich Bay SPA and Thanet Coast SAC are water dependant and fall under the North East Kent (Thanet) SIP.

7.5.27 Measures for the Thanet Coast SAC and Thanet coast and Sandwich Bay SPA were completed in 2015 to enable conservation objectives to be met according to the SIP. For Sandwich Bay SAC the measures will be complete by 2027, which requires implementation of management actions to address and adapt to changes in water levels affecting sand dune vegetation.

Factors influencing the baseline

7.5.28 Baseline conditions for hydrology and flood risk could change over the anticipated lifetime of the Project as a consequence of changes in climate, land use, and as a result of measures taken to improve the water environment in the context of the WFD.

7.5.29 As a result of climate change, it is predicted that winters will become generally wetter and summers generally drier, as indicated by results from the UK Climate Projections 2009 (UKCP09)[33]. It is also likely that peak rainfall intensities could increase, with a consequent effect on the frequency and magnitude of high river flows. Furthermore, mean sea levels are predicted to rise, which could be accompanied by changes in storm surge and wave climate. There could be an increase in the frequency and magnitude of flood events in the Study Area as a consequence.

7.5.30 Changing land use, in the form of changing agricultural land management practices, urban development, and major developments, on site or in the surrounding area could cause changes to the surface water environment and flood risk within the Study Area. These changes could relate to changes in patterns and rates of rainfall infiltration, changes in flow pathways, sources and magnitude of sediment inputs, direct morphological alterations to water bodies, or the introduction, alteration or removal of sources of pollution.

7.5.31 It is anticipated that the future status of all lower quality WFD river water bodies will improve, ultimately to one of good status/potential, where possible, as required by the WFD.

[32] Site Improvement Plans (SIPs): provides an overview of the issues (both current and predicted) affecting the current condition and outlines the priority measures required to improve the condition of the features
[33] CONSTRUCTION INDUSTRY RESEARCH & INFORMATION ASSOCIATION. (2010). Environmental good practice on site (third edition). Report C692. London: Construction Industry Research & Information Association

7.6 The scope of the assessment, methodology and characteristics of the potential effects

Additional baseline information required

7.6.1 The following surveys will be undertaken and data will be collected to inform the assessment of effects on the potential receptors that are identified and allow identification of other possible receptors.

- A site walkover survey will be carried out to inform the assessment of effects on the potential receptors.
- Confirmation will be sought from the Environment Agency regarding groundwater abstractions, surface water abstractions, and discharges.
- Further consultation will be undertaken with the Environment Agency and Southern Water to increase the understanding of the SPZ and associated supplies.
- Further information will be sought with regards to the site drainage regime.
- Further information will be gathered with respect to site water quality. The scope of any intrusive work is as yet undetermined.

Identified Receptors

7.6.2 Potential receptors, relevant to this section of the assessment that may be affected by the development are:

- The waters of Pegwell Bay via the permitted discharge.
- Local Public Water Supply sources associated with the SPZ underlying the site.
- Other local groundwater abstractions associated with the underlying Chalk Aquifer.
- On-site and off-site users as a result in changes to surface water drainage patterns.

Potential effects requiring further consideration

7.6.3 This section defines the scope of the assessment for those receptors which have been identified as potentially being subject to likely significant effects. This is based on the data used so far to inform this report. Should further information requested or further confirmation on the development proposals provide more clarity on the potential receptors and effects this will be updated within the ES. A more detailed assessment will be undertaken as part of the ES to further consider those receptors that have the potential to be significantly affected by the proposed development (to consider receptor sensitivity, magnitude of change and significance of effects).

7.6.4 The following are the effects requiring further detailed assessment:

- Effects on water quality in the underlying Chalk aquifer causing noncompliance with WFD targets and failure of water quality standards at Southern Water Sources
- Effects on water quality in the underlying Chalk aquifer impacting water quality at other local abstractions
- Effects on water supply to local abstractions through increase in hardstanding in the local catchment of the sources.
- Effects on water quality targets at Pegwell Bay, and associated designated site.
- Change in run-off patterns at the site, as a result of the increase of hardstanding area, causing an increase in flood risk for site users or those immediately adjacent to the site.

7.6.5 The potential sources of contamination considered in this section will be those introduced to the site by the construction and operation processes. The potential for the mobilization of contaminates already present within the site boundary will be covered by the Land Quality assessment.

7.6.6 To properly assess these effects and develop mitigation measures as will be detailed within the Environmental Statement the following will be undertaken:

- A groundwater risk assessment in line with Groundwater protection: Principles and Practice (GP3). Environment Agency, August 2013 version 1.1
- A Flood Risk Assessment compliant with NPPF and relevant local policies as listed in **Table 7.1**.
- A site drainage plan. This will also include information on any on-site water quality treatment for the removal of de-icer from apron and runway runoff.

7.6.7 The scope of these will be developed in further consultation with Southern Water and the Environment Agency, as will the scope of any investigative works. Any programme of investigative works will be developed in tandem with the requirements of a Phase 2 land quality assessment to ensure that all sources and pathways are properly assessed and mapped.

Potential Effects not Requiring Further Consideration

7.6.8 The following effect has been assessed as not requiring further consideration

7.6.9 Effect on local surface water quality via site run-off. The highly permeable nature of the site means that there are no local surface water features to receive direct site run-off. The receptors for site runoff will be the underlying Chalk aquifer (via infiltration) and Pegwell Bay (via the permitted discharge).

8. Historic Environment

This section presents the proposed scope of work for the Historic Environment assessment.

8.1 Introduction

8.1.1 There has been an extensive and lengthy programme of archaeological work undertaken within the district, largely by the Trust for Thanet Archaeology. Archaeological work within the peninsula has revealed significant archaeological remains from all periods. Recent archaeological work for the East Kent Access Road, immediately to the south of the proposal site, revealed archaeological remains from the prehistoric and roman periods. The types of site revealed provided evidence for settlement, burial and agricultural production. Evidence from the Anglo-Saxon period in the form of land management and cemeteries has also been identified.

8.1.2 Within the proposal site there are a number of heritage features. Archaeological work within the site has revealed remains dating from the prehistoric, Roman and medieval periods onwards. There is also evidence for post-medieval use of the airport site with evidence for farming and mineral extraction.

8.1.3 The airport has its origins in World War I and was extensively used in World War II. The site was also used for a fighter-bombers of the United States Airforce early in the Cold War, until 1960, before it was returned to RAF, and subsequently, commercial use. The airport has the potential for remains from all periods of its use, and, especially for the WWII airfield, the perimeter defences, pillboxes and trenches have been identified on the Kent Historic Environment Record.

8.2 Relevant policy, legislation and guidance

8.2.1 The management of the historic environment is governed by national legislation, in the form of the Ancient Monuments and Archaeological Areas Act (1979), the Planning (Listed Buildings and Conservation Areas) Act (1990) and the policies contained within the National Planning Policy Framework (2012).

Table 8.1 National Legislation and Policy

	Legislation/Policy
Ancient Monuments and Archaeological Areas Act (1979)	Changes to the fabric of scheduled monuments require consent from the Secretary of State, as advised by Historic England.
Planning (Listed Buildings and Conservation Areas) Act (1990)	Covers the registration of Listed Buildings (buildings that are seen to be of special architectural or historic interest) and designation of Conservation Areas (areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance).
National Planning Policy Framework (2012) Paragraph 128	Local authorities will require applicants to describe the significance of heritage assets including the contribution made by their setting affected by the application.

	Legislation/Policy
Paragraph 132	When considering the impact of a proposal on a designated heritage asset great weight should be given to the asset's conservation. The more significant the asset the greater the weight should be. Significance can be harmed or lost through alteration to the asset or development in its setting.
Paragraph 134	Where development will lead to less than substantial harm to the significance of the designated asset the harm should be weighed against the public benefit of the proposal.
Paragraph 135	The effect of a proposal on the significance of a non-designated heritage asset should be taken into account in determining the application.
Paragraph 139	Non designated archaeological heritage assets of demonstrably equivalent in significance to scheduled monuments should be managed as designated heritage assets.

8.2.2 Thanet Council have received a direction from the Secretary of State saving policies from the Thanet Local Plan (2006). The Draft Thanet Local Plan to 2031 Preferred Options Consultation January 2015 includes policies which are relevant to the consideration of the historic environment. Subject to the consultation stage of the Draft Thanet Local Plan to 2031 greater weight should be applied to this document as it moves through the various stages to adoption.

Table 8.2 Relevant Local Planning Policy

	Policy
Thanet District Adopted Local Plan (2008) saved policies **Policy HE11**	To determine planning applications the District may require the provision of an archaeological assessment which, in certain cases, may involve fieldwork.
Policy HE12	Archaeological sites will be preserved and protected. Where sites do not merit preservation planning permission will be granted subject to a suitable programme of archaeological recording.
Draft Thanet Local Plan to 2031 Preferred Options Consultation January 2015 **Policy HE01**	The Council will promote the identification, recording, protection and enhancement of archaeology and historic sites and encourage their potential though management and interpretation. Developers should submit suitable information to enable the impact of proposals to be assessed in the form of a desk-based assessment or field evaluation. Development adversely affecting the setting of a scheduled monument or equivalent archaeology of comparable significance will be refused. Where the Council is not seeking to preserve a site a suitable programme of recording will be required according to a written scheme of investigation detailing site works, post-excavation works and publication.
Policy HE03	The Council supports the retention of local heritage assets that will be identified in the local list as part of the heritage strategy
Policy HE04	Permission will not be granted for any development that adversely affects the visual, historical or horticultural character of an historic park or garden whether or not it is on the statutory register.
Policy HE05	Works to address climate change by adapting heritage assets will be supported where the significance of the asset is not compromised.

8.2.3 Historic England have produced guidance on how to assess the impacts upon the setting of heritage assets and the implementation of heritage policies from the NPPF. The Chartered Institute of Archaeologists has produced standards and guidance documents for the production of desk-based assessments and providing consultancy advice in the historic environment.

Table 8.3 Historic England and CIfA Guidance

	Guidance
Historic England Managing significance in decision-taking in the historic environment (2015)	Guidance from Historic England on how to implement the historic environment policies included in the NPPF.
Historic England The setting of Heritage Assets (2015)	The setting of Heritage Assets (2015) Guidance form Historic England demonstrating how to assess the impacts upon the setting of a heritage asset.
CIfA Standard and guidance for historic environment desk-based assessment (December 2014)	Assessment will determine, as far as is reasonable, from existing records the nature, significance potential and importance of the historic environment with a defined area. The assessment will also assess the impact of the proposed development on identified assets, both designated and undesignated.
CIfA Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (December 2014)	Advice provided should be clear, impartial, informed robust and compliant with policy and guidance. It should be proportionate, research and provide a reasoned argument assessing the known and potential significance of heritage assets impacted by the proposal.

8.3 Main sources of data used in the scoping report

8.3.1 Baseline data, for the scoping report has been obtained from the following sources.

- Historic England National Record of the Historic Environment;
- Magic.gov.uk
- Kent County Council Heritage Maps; and

8.3.2 Thanet Council Conservation Area Mapping.

8.4 Engagement with consultees

8.4.1 Preliminary discussions have taken place with the Kent County Council Archaeology Advisors and Historic England. A radius of 500m around the proposal site was agreed to provide a suitable study area for the historic environment resource around the airport site to assess the character and significance of the archaeological resource within the area. Kent CC also requested that significant archaeological sites outside this radius should also be examined. The significant sites include:

- East Kent Access Road;
- Southern Water Weatherlees Pipeline Excavations;
- Ramsgate Causewayed Enclosure;
- Cliffsend Farm;
- Thanet Way Duelling (1990s); and

- Thanet Earth.

8.4.2 The Kent CC Archaeologist stated the 'gateway' nature of Thanet was highly influential to the archaeological character of the area. The archaeological resource in this area is particularly close to the surface and easily affected by development works. Kent CC have requested archaeological evaluations for similar projects and this is likely to be their advice in this case.

8.4.3 Kent CC's Archaeology advisor also stated the airfield should be regarded as a heritage asset in its own right due to its establishment in the First World War, use in the Second World War and the Cold War. Kent CC are undertaking a high level survey of historic structures on the airport site. The assessment should also cover above ground aviation-related archaeology.

8.4.4 For the study of designated heritage assets a draft Zone of Theoretical Visibility has been produced and viewpoints suggested. Historic England requested additional baseline views should be collected from Richborough Castle and the Abbey in Minster amongst other sites.

8.4.5 Kent CC also requested that the assessment consider any effects from flights on heritage assets.

8.5 Overview of the baseline conditions

8.5.1 Baseline conditions have been established from publically accessible heritage data held in various sources, including:

- The National Heritage List for England;
- Magic.gov.uk;
- Kent County Council Heritage Maps; and
- Thanet Conservation Area Mapping.

8.5.2 The limitations of this data are acknowledged, especially for the consideration of buried archaeological remains that are included in the Kent Heritage Maps, rather than a full search of the HER. However to demonstrate the extent, importance and character of the archaeological resource within the vicinity of the proposal site the detail included on the Kent Heritage Maps is sufficient. As part of the detailed assessment a full, detailed search of the Kent Historic Environment Record will be made.

Designated Heritage Assets

8.5.3 For the scoping report designated assets within a 1km boundary of the site have been reviewed. As the draft Zone of Theoretical Visibility has indicated potential effects beyond the 500m radius agreed for archaeological heritage for the scoping report, and examination of designated heritage assets, a wider boundary has been examined.

Scheduled Monuments

8.5.4 Within, approximately 1km of the airport boundary there are 2 Scheduled Monuments (SM):

- Anglo-Saxon Cemetery S of Ozengell Grange; and
- Enclosure and ring ditches 200yrds (180m) ENE of Minster Laundry.

8.5.5 Beyond the 1km boundary, and within 2km there are a further three scheduled monuments.

Listed Buildings

8.5.6 Historic England's data shows there are a number of listed buildings within 1km of the proposal site. These are:

- 21 grade II listed building entries; and
- 2 grade II* listed building entries.

8.5.7 The grade II* listed buildings are Wayborough Manor and Cleve Court, and Cleve Lodge.

Conservation Areas

8.5.8 There are no conservation areas within a 1km boundary around the site, however the Conservation areas of Acol and Minster in Thanet are within a 2km boundary of the site.

Heritage Assets

8.5.9 Undesignated heritage assets consists of assets listed in the Kent Historic Environment Records, any locally listed assets and assets identified during the plan making process or during research to inform applications.

Local Heritage Assets

8.5.10 As part of Thanet's Heritage Strategy policy HE03 of Draft Thanet Local Plan to 2031 Preferred Options Consultation January 2015 states that lists of local heritage assets will be produced as part of the Heritage Strategy. So far no details of any locally listed heritage assets have been published on Thanet Council's web site.

Kent Historic Environment Record and Archaeology

8.5.11 The Kent Historic Environment Record (KHER) has been examined through publically accessible records, via the Kent Heritage Maps. This initial examination of HER data demonstrates that within a 500m radius of the proposal there are numerous archaeological sites from multiple periods. These periods range from early prehistory through to late 20th century Cold War defensive sites. There is evidence of burial and ritual archaeology from the prehistoric periods through to the early medieval period. There is settlement evidence from the prehistoric periods through to the post medieval and modern world. Industrial evidence dates from the roman, post medieval and modern periods. The immediate area around the site is rich in archaeological remains.

8.5.12 Within the proposal site there are remains dating from prehistoric periods, roman, medieval, post-medieval and modern uses of the site.

8.6 The scope of the assessment, methodology and characteristics of the potential effects

Additional baseline information required

8.6.1 The following surveys and sources of data will be examined to inform the assessment of effects upon potential receptors that are identified and allow identification of other potential receptors.

- A site walkover;
- Townscape and visual impact assessment reports and data;
- Any site investigation works;
- Kent County Council Historic Environment Records;
- Kent County Council Historic Landscape Characterisation data;
- Kent Archives and Local History Service;
- The library of the Society of Antiquaries of London; and
- Other libraries as necessary.

Identified Receptors

8.6.2 Potential receptors, relevant to this section of the assessment that may be affected by the development are

- Buried archaeological resource within the proposal site;
- Remains of WW1, WW2, Cold War and RAF Manston Airfield;
- Setting effects upon designated heritage assets identified within the zone of visual influence.

8.6.3 To provide further contextual information significant sites outside the search boundary will also be considered, such as the Ramsgate Causewayed Enclosure, the Southern Water Weatherlees Pipeline Excavations, Cliffsend Farm, Thanet Way Duelling and the results of the archaeological excavations at Thanet Earth.

Potential effects requiring further consideration

8.6.4 The purpose of the detailed assessment will be to understand the potential direct and indirect (setting) effects of the proposal on designated and undesignated heritage assets. Development within the airport site may have a direct effect upon heritage assets within the site boundary and an indirect (setting) effect upon heritage assets beyond the site boundary.

8.6.5 The assessment will comply with relevant CIfA guidance for desk-based assessment, provision of consultancy advice and the Code of Conduct.

8.6.6 The Environmental Statement will describe the baseline study and its findings in more detail and through an assessment, in line with the guidance quoted above, of potential effects upon designated and undesignated heritage assets will determine whether the proposal will have any significant effects on any sites of heritage significance on or within close proximity to the development site and develop appropriate mitigation measures.

8.6.7 The assessment will also consider the heritage significance of the airport and surviving assets relating to World War 1, interwar, World War 2 and Cold War uses of the site.

8.6.8 For designated heritage assets a zone of visual influence will be determined in line with the Landscape and Visual Impact Assessment to identify designated assets that may be indirectly effected by the proposal. A series of viewpoints will be established to assess setting effects and these shall include viewpoints from Minster Abbey and Richborough Castle. Other designated assets, such as the Enclosure and Ring Ditches at Minster Laundry, the cemetery at the Lord of the Manor junction and the Anglo-Saxon cemetery S of Ozengell Grange will be examined as will other viewpoints from the listed house and farm at Manston Court farm.

9. Land Quality

This section presents the proposed scope of work for the Land Quality environmental impact assessment.

9.1 Introduction

9.1.1 This Chapter provides an assessment of the effects in relation to land quality and soils of the proposed development during the construction and operation phases. The chapter should be read in conjunction with the proposed development description in chapter 2.

9.1.2 The Phase 1 Land Quality Assessment (LQA) (to be submitted in support of the DCO application) should be regarded as an initial phase of assessment in relation to potentially contaminated land and further phases of site investigation will be undertaken if required following the findings of the desk study and at a suitable point within the scheme's development.

9.2 Relevant policy, legislation and guidance

International Legislation

9.2.1 There is no European Union (EU) legislation which is directly relevant to the subject of land quality apart from the Environmental Liability Directive (2004/35/EC).

Environmental Liability Directive

9.2.2 The Environmental Liability Directive is based on the "polluter pays" principle and requires EU member states to impose obligations and liabilities on operators whose activities cause or threaten environmental damage. Environmental damage specifically includes land contamination where there is a significant risk of adverse effects to human health.

9.2.3 The Environmental Liability Directive requires an operator to take preventative, as well as remedial, measures. It applies both to damage that has occurred and where there is an imminent risk of it occurring, but does not apply to damage that occurred prior to 30 April 2007. The Environmental Liability Directive is implemented in England by the Environmental Damage (Prevention and Remediation) Regulations 2009 (SI 2009/153).

9.2.4 There are various pieces of EU Legislation (see below) which are indirectly relevant:

- The Water Framework Directive (2000/60/E); and
- Groundwater Directive (80/68/EEC).

The Water Framework Directive

9.2.5 The overall purpose of the Water Framework Directive (WFD) is to establish a framework for the protection of surface fresh water, estuaries, coastal water and groundwater. The objectives of the WFD are to enhance the status and prevent further deterioration of aquatic ecosystems and associated wetlands, promote the sustainable use of water, reduce pollution of water (especially by 'priority' and 'priority hazardous' substances), and ensure progressive reduction of groundwater pollution.

9.2.6 The main features of the WFD are:

- Member states should take all necessary measures to ensure that groundwater quality does not deteriorate and to prevent the input of pollutants to groundwater.
- Discharges of hazardous substances must cease or be phased out within 20 years of their identification as a priority hazardous substance.
- All inland and coastal waters within defined river basin districts must reach at least good status by 2015. The directive defines how this should be achieved through the establishment of environmental objectives and ecological targets for surface waters.

9.2.7 The WFD incorporates an associated annex which comprises a list of priority substances and priority hazardous substances. This annex has now been replaced by the Directive on Priority Substances (2008/105/EC) which also includes a list of substances for which it should be investigated whether they should be included in the list of priority substances or priority hazardous substances. In July 2006 the European Commission published a proposal for a directive on environmental quality standards in the field of water policy (COM 2006 397), which would set limits on concentrations in surface waters for priority substances.

9.2.8 The WFD will ultimately lead to the repeal of several other long standing key directives including on the Protection of Groundwater from Dangerous Substances (80/68/EEC) and Substances Discharged into the Aquatic Environment (76/464/EEC).

9.2.9 As part of the ongoing implementation of the WFD, the Environment Agency has recently been given the power to apply environmental standards to individually defined WFD water bodies via the River Basin Districts Typology, Standards and Groundwater Threshold Values (Water Framework Directive) (England and Wales) Directions 2010. The thresholds and descriptions of water body typology within these Directives are largely based upon the research work by the United Kingdom Technical Advisory Group (UKTAG).

Groundwater Directive

9.2.10 The Groundwater Directive aims to protect groundwater against pollution caused by dangerous substances. The Directive requires the prevention of the discharge of Hazardous' substances to groundwater, and the investigation of 'Non-Hazardous' substances prior to direct or indirect discharge. The Directive is

primarily implemented in England and Wales by the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010/675).

9.2.11 The EU has also adopted the Directive on the Protection of Groundwater against Pollution and Deterioration (2006/118/EC). The aim of this Directive is to ensure good groundwater quality by 2015, in line with the requirements of the WFD. The Directive sets out specific measures for preventing and controlling groundwater against pollution and deterioration.

National Legislation

Land Contamination

9.2.12 There are several items of legislation and/or guidance that aim to deal with the prevention of land and groundwater contamination and others which aim to address and remediate contamination once it has occurred. As with European legislation, several of these regulations are indirectly relevant to the management and prevention of land contamination. Examples of indirectly relevant regulations are listed here for reference but are not discussed in detail within this Chapter:

- Water Resources Act 1991 (SI 57) (as partly amended by the Water Act 2003) and associated Anti-pollution Works Regulations 1999 (SI 1999/1006);
- Control of Pollution (Oil Storage) (England) Regulations 2001 (SI 2001/2954); and
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (SI 2003/3242) amended in 2015 (2015/1623).

Environmental Protection Act 1990 Part 2A

9.2.13 The contaminated land regime is set out within Part 2A of the Environmental Protection Act 1990 (EPA, 1990). The regime came into force in England on 1 April 2000 and was subsequently revised in 2006 and 2012.

9.2.14 The Department for Environment, Food and Rural Affairs (Defra) recently reviewed the contaminated land regime in England and found the primary legislation remained fit for purpose. However, there were flaws in the accompanying Statutory Guidance which had undermined the effectiveness of the regime and created considerable regulatory uncertainty. The Contaminated Land (England) (Amendment) Regulations 2012 and revised Statutory Guidance were therefore released in April 2012 to address these issues.

9.2.15 Part 2A provides a statutory definition of ‘Contaminated Land’ and sets out the nature of liabilities that can be incurred as a result of contaminated land and groundwater. Contaminated land is defined 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:

- Significant harm is being caused, or there is significant possibility of such harm being caused; or
- Significant pollution of controlled waters is being caused or there is a significant possibility of such pollution being caused".

9.2.16 The Statutory Guidance states that Part 2A takes a risk based approach to defining contaminated land. The guidance follows established principles of risk assessment, including the concept of a 'contaminant linkage' (i.e. a linkage between a 'contaminant' and a 'receptor' by means of a 'pathway') where:

- a contaminant is a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or cause significant pollution of controlled waters; and
- a receptor is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property or controlled waters.
- A pathway is a route by which a receptor is or might be affected by a contaminant.

Water Resources Act 1991 And Environmental Permitting Regulations (in relation to controlled waters)

9.2.17 For sites where contamination of controlled waters is a potential issue, in addition to the provisions of Part 2A consideration must also be given to the Water Resources Act (WRA) 1991. Parts of the Act have been replaced by the Environmental Permitting (England and Wales) Regulations 2010, SI 2010 No.675 (referred to here as EPR), although some of the core definitions (e.g. controlled waters) still refer to the WRA. The two aspects of the EPR so far as controlled waters are concerned are:

- Schedule 21: Water discharge activities – these are concerned with discharges to surface waters, that are controlled waters, of any poisonous, noxious or polluting matter; waste matter; trade effluent or sewage effluent; and
- Schedule 22: Groundwater activities – these are concerned with discharges of pollutants, or other discharges that may lead to input of a pollutant, to groundwater.

9.2.18 The "activities" relate both to those that require a permit and activities that are unlawful (e.g. causing pollution to controlled waters), with only a small number of activities being exempt, although even these need to be registered with the Environment Agency. We note that a "passive" release of pollutants, such as may occur to groundwater from land where the original cause of pollution has ceased is not considered to be an activity requiring permitting and this would be regulated by other means (e.g. via the planning system or under Part 2A).

9.2.19 Under the WRA, the Environment Agency still has the power to remediate pollution of controlled waters by means of Anti-Pollution Works Notices, via Section 161A of the WRA. The necessary remediation can be carried out by the Environment Agency and a notice can then be served to recover the cost from the person liable (the person who caused or knowingly permitted the substances to be present on the land or in the water).

9.2.20 The provisions of the WRA and EPR (and the consequent powers of the Environment Agency) can apply when the land is not Statutory Contaminated Land under the terms of Part 2A. The Environment Agency has indicated that in general Part 2A will be applied in preference to WRA powers if it is applicable (i.e. passive discharges are occurring).

Environmental Damage (Prevention and Remediation) Regulations 2009

9.2.21 The Environmental Damage (Prevention and Remediation) Regulations 2009 implement the provisions of the Environmental Liability Directive in England. The Regulations follow the provisions of the Directive closely and accordingly impose obligations and liability on operators for environmental damage caused or threatened by their activities, specifically including damage to land by contamination by substances, preparations, organisms or micro-organisms that results in a significant risk of adverse effects on human health. The Regulations only apply to damage that takes place after the Regulations come into force on 1 March 2009.

9.2.22 If an operator of an activity causes an imminent threat of environmental damage the operator must immediately take all practicable steps to prevent the damage and provide all relevant details to the enforcing authority. Where environmental damage has been caused, the authority must require the operator to undertake remedial works, subject to certain exemptions. In relation to land, the remediation must ensure, as a minimum, that the contaminants are removed, controlled, contained or diminished so that the land, taking account of its lawful current use or any planning permission in existence at the time of the damage, no longer poses any significant risk of adverse effects on human health.

Environment Agency CLR 11, Model Procedures for the Management of Land Contamination

9.2.23 CLR 11 provides the technical framework for applying a risk management process when dealing with land affected by contamination. The technical approach presented in the Model Procedures is designed to be applicable to a range of non-regulatory and regulatory contexts. These include:

- Development or redevelopment of land under the planning regime;
- Regulatory intervention under Part 2A of the Environment Protection Act 1990;
- Voluntary investigation and remediation; and
- Managing the potential liabilities of those responsible for individual sites or a portfolio of sites.

UK Best Practice Guidance

9.2.24 In addition to the above legislation and policies, there is a large amount of UK best practice guidance documentation which is relevant to geology and land contamination. Some of the key pieces of guidance are listed below (the list is indicative only, i.e. it is not exhaustive):

- BS10175:2011+ A1:2013 Investigation of Potentially Contaminated Sites – Code of Practice;
- Guidance on the Safe Development of Housing on land affected by contamination (NHBC, Environment Agency and CIEH) 2008;
- Guiding Principles for Land Contamination (Environment Agency 2010); and
- Department of Environment Industry Profiles.

9.2.25 There is also a range of best practice guidance mainly relating to prevention of pollution and good environmental management which is relevant to construction and operational phases of the proposed facility. This includes:

- (CIRIA) Report 132 A guide for safe working practices on contaminated sites;
- (CIRIA) Report C532: Control of Water Pollution from Construction Sites;
- CIRIA Report C502: Environmental Good Practice on Site; and
- HSE 1991 Protection of workers and the general public during the development of contaminated land.

National Planning Policy

9.2.26 Planning guidance relating to the development of land potentially affected by contamination is detailed in the National Planning Policy Framework (NPPF), which came into force in March 2012. The NPPF sets out the Government's planning policies for England and how these should be applied. This framework is a key part of the Government's reform of the planning system and replaces all previous planning policy statements (PPS), with the exception of PPS 10: Planning for Sustainable Waste Management, until it is replaced at a later date.

9.2.27 The NPPF states that:

- The natural environment should be conserved and enhanced by remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land;
- In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value; and
- Planning policies and decisions should encourage the effective use of land by re-using land that has previously been developed (brownfield land), provided that it is not of high environmental value.

9.2.28 Therefore, planning policies and decisions should also ensure that:

- A 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 effects on the natural environment arising from that remediation;
- After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and
- Adequate site investigation information, prepared by a competent person, is presented.

9.2.29 In addition the NPPF states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. The primary regulators under the NPPF are the Local Planning Authorities (LPA) and the Regional Planning Bodies (RPB).

Regional and Local Planning Policies

9.2.30 Local Policies

- Thanet District Council Local Plan. Policy EP 13 – Require mitigation to prevent contamination in groundwater protection zones;
- Saved policies of Kent County Council's 'Construction Aggregates Minerals Local Plan', 'Chalk and Clay Minerals Local Plan', 'Oil and Gas Minerals Local Plan' and 'Brick Earth Subject Local Plan'.

9.2.31 Guidance

- Safeguarding our Soils; a Soil Strategy for England, 2011, Defra;
- EA / Defra 'Model Procedures for the Management of Land Contamination (CLR11)' (2004);
- Government Circular 06/2005 'Biodiversity and Geological conservation – Statutory obligations and their impact within the planning system' (2005).

9.3 Main sources of data used in preparing the scoping report

9.3.1 The following data sources have been reviewed in the preparation of this Scoping Report:

- BGS mapping website: borehole logs, BGS maps (geological map, sheet no. 274, Ramsgate, 1:50,000, published 1980 and hydrogeological map of the Chalk and Lower Greensand of Kent, sheet no. 3, 1:126,720, published 1970)
- Environment Agency website: "What's in your backyard?"
  - Aquifer designations;
  - Catchment data explorer;
- NHBC/ CIEH / Environment Agency, Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008;
- Magic website;
- Historical website for the site and its surroundings of the Spitfire and Hurricane Memorial Museum, Manston, Kent;
- Envirocheck report (reference 82787389_1_1), including historical / recent Ordnance Survey plans and environmental datasheets, and
- Preliminary UXO Assessment (reference P5188).

9.4 Engagement with consultees

9.4.1 An initial meeting with the Environment Agency (EA) was held on 11th April 2016 to discuss the approach to the assessment as well as to obtain further baseline environmental information and to identify any potential land quality risks. A summary of these discussion is presented below:

- The EA are not aware of an specific sources of contamination present on the site, however there was a pollution incident associated with a fuel farm on the site which may not have been remediated, and there are anecdotal accounts of historic sources of contamination across the site associated with the former use as a RAF and USAF air field;
- Waste water from the runway and aprons, particularly any containing de-icing fluids, should be treated on-site before discharge;
- Construction activities associated with the development would need to be controlled and managed through the production of a Construction Environmental Management Plan (CEMP); and
- Any intrusive site investigation works would need to be carefully designed and managed in order to ensure that new contamination pathways into the underlying Principle Bedrock Aquifer, and agreed in advance with the EA and Southern Water.

9.4.2 It was confirmed that a Phase 1 Land Quality Assessment would be undertaken and the findings of this discussed with the EA.

9.5 Overview of the baseline conditions

Current Baseline

Geology/Hydrogeology

9.5.1 The Site is underlain by Quaternary deposits comprising Clay and Silt which are underlain by bedrock in the form of Margate Chalk Member and the Seaford Chalk Formation. The British Geological Survey (BGS) 2016 mapping indicates that Sand, Silt and Clay from the Thanet Formation may be present north-east of the site, but this is not supported by the BGS borehole information available for the site. Made Ground is recorded in the centre of site on the BGS logs, however is likely to be present across the site associated with past development.

9.5.2 The Chalk bedrock is classified as a Principal Aquifer. The site lies within a source protection zone (SPZ). The groundwater is extracted by four public water supply (PWS) boreholes which are located around the airport site, the closest being the Lord of the Manor PWS borehole located approximately 400 m to the east; the groundwater SPZ for this borehole extends below the existing site runway.

Hydrology

9.5.3 There are no surface water features on the site. The nearest major river is the River Stour located approximately 3 km south of the site boundary, which flows eastwards to the North Sea. The River Stour is classified as Moderate ecological quality status within the Water Framework Directive assessment (WFD) as issued on the Environment Agency website.

Sensitive Land Use

9.5.4 The Site is located within a nitrate vulnerable zone. Approximately 900 m south-east of the site boundary are The Sandwich and Pegwell Bay as well as the

Thanet coast classified as National Nature Reserves, Ramsar sites, Sites of Special Scientific Interest, Special Areas of Conservation and Special Protection Areas.

Current / Historic Land Use

9.5.5 Based on historical mapping the site was grassland and agricultural land from 1873 to 1915. At least two chalk pits were located within the site boundaries in the central eastern area of the site until 1896 and may have been infilled from this date. A 'Pit' is also recorded in the southwestern part of the site in 1873, presumed to be a former underground chalk mine.

9.5.6 Information obtained from the Spitfire museum website[34] indicates that aircraft started to use the open farmland of Manston for emergency landings during the winter of 1915-16. An aerodrome was established at the site shortly after including operational flights and a training school. Several training schools were established between 1921 and 1936 and additional facilities – classrooms and barracks – were built[35]. Aerial photographs dated 1947-1949 show the presence of a runway in the southern part of the site. During World War II, Manston was heavily bombed. The site was used as an emergency landing field for returning bombers suffering from low fuel or problems to their hydraulic systems. Three emergency landing strips (concrete) and associated taxiways and dispersals were built and the runway opened in April 1944. The airfield became a storage for heavy bombers. During the 1950's the US Airforce used the site as a Strategic Air Command base for its fighter and fighter-bomber units. From 1960, the airfield was back under RAF control from the US Airforce and was designated one of the country's Master Emergency Diversion Airfield for both military and civilian flights due to its runway and its facility for foam-laying**Error! Bookmark not defined.**.

9.5.7 A map from 1968 shows that the site had been developed with taxiways, aprons and buildings in addition to the runway which was already present at the site. A sub-station is noted in the extreme eastern part of the site from 1977. Two museums had also been developed in the western part of the site by 1995. The RAF operation of the site finished in 1999 and the airport became Kent International Airport operating civilian air traffic (cargo and passenger flights). Kent International Airport ceased operations in 2014. A freight handling facility located in the western part of the site is still in use by a range of haulage companies. There is also a small charter helicopter business operating from the area adjacent to the facility.

9.5.8 Historically, the immediate surrounding area was largely agricultural land but has been subject to increased residential development over time, as well as extensions and additions to the road network. A tank farm located in the direct south-eastern vicinity of the site and which was already visible on an aerial photograph dating from 1949, has reduced in the number of tanks since 1995. The A299 highway, a roundabout and a solar energy farm (Earth Thanet) were constructed to the south of the site during the period 1995-2016.

[34] www.spitfiremuseum.org.uk/rafmanston
[35] THE MILITARY AIRFIELDS OF BRITAIN – Southern England, Ken Delve, Crowood (ISBN 1-86126-729-0)

Agricultural Land Quality

9.5.9 An Agricultural Land Classification (ALC) assessment has been undertaken for the site and its surroundings. This classifies the area (of approximately 325 m^2) located directly south-west of the site as being Grade 2 (very good quality agricultural land) and Grade 3a (good quality agricultural land) lands. The site itself is not classified as agricultural land[36].

Soils

9.5.10 The soils on and directly surrounding the site are classed as variably permeable urban soils of high leaching potential.

Waste disposal / Landfilling

9.5.11 Based on the available information, there are six historical landfills in the close surroundings of the site (within a 500m distance). At least two chalk pits were located within the site boundaries in the central eastern and south-eastern areas and may have been backfilled at the beginning of the 20th century.

9.6 The scope of the assessment, methodology and characteristics of the potential effects

Additional baseline information required

9.6.1 Further baseline information will be obtained and will comprise an environmental information request from the Environment Agency, Southern Water and Thanet District Council to determine if they hold any further environmental information not readily available through the Envirocheck reports and public websites (e.g. BGS, "What's in your backyard").

9.6.2 A request to carry out a site walkover will be undertaken. The intent of the survey is to confirm the current land use, identify any potential geotechnical constraints associated with this use, identify evidence of contamination / potential sources of contamination and determine the potential receptors (on- and off-site). The site walkover will also be used to characterise site access and potential site investigation locations.

9.6.3 In order for land contamination risk to be realised, a 'contaminant linkage' must exist[37]. A contaminant linkage requires the presence of:

- Source of contamination;
- Receptor capable of being harmed; and
- Pathway capable of exposing a receptor to the contaminant.

9.6.4 An initial review of baseline information indicates that there are potential sources of contamination within the Site particularly the Made Ground associated with the former development, the site's historical / recent use as an airport and a RAF base, the car garages, the sub-station present on-site, the on-site infilled chalk

[36] Ministry of Agriculture Fisheries and Food. Post 1988 Agricultural Land Classification and www.magic.gov.uk
[37] Environment Agency (2004) Model Procedures for the Management of Land Contamination – Contaminated Land Report 11

pits, the supposed infilling activities on-site, and the off-site current fuel farm and any potential tank-farm on-site.

Identified Receptors

9.6.5 A review of currently available baseline information has identified the following Receptors potentially subject to likely significant effects as a result of the proposed development and Exposure Pathways:

Table 9.1 Identified Receptors and Exposure Pathways

Receptors	Potential Pathways
Future site users (commercial users, personnel on-site, passengers)	Dermal contact, ingestion and inhalation of dusts, vapours, fibres and accumulated gases
Buildings and Services	Direct contact, ingress and accumulation of soil gas
Controlled Waters: Principal Aquifer in bedrock	Leaching, migration
Controlled Waters: Surface Water (Drains, River Stour river to south / south-east)	Surface water runoff, baseflow migration

Potential effects requiring further assessment

9.6.6 The Phase 1 LQA includes a qualitative risk assessment of the identified potential contaminant linkages. The risk assessment will be used to identify potentially significant land quality effects as a result of the development.

9.6.7 Based on the initial information, it is likely that the Phase 1 LQA concludes that intrusive work will be carried out following the granting of the Development Consent Order in order to confirm the qualitative risk assessment conducted and the contamination status of the site. Aquifer protection may be required to prevent mobilisation of contamination during drilling in the event that contamination or perched water is identified at the surface. The requirement for any intrusive ground investigation and appropriate control and mitigation measures will be identified and confirmed with the Environment Agency and Southern Water.

9.6.8 A Preliminary Unexploded Ordnance (UXO) Risk Assessment has been undertaken for the site and identifies that there is a medium to high probability of UXO encounter on the site (probability rating of 4, on a scale up to 5). The report recommends that in accordance with CIRIA C681 Chapter 5 on managing UXO risks, 6 Alpha, a detailed UXO threat & risk assessment should be carried out prior to any intrusive works. Further information will be provided in the Environmental Statement.

Potential effects not requiring further assessment

9.6.9 Potential contamination effects on human health due to spills and leaks from mechanised plant during construction and installation of the planned tank farms not need be considered further. Spillages or leaks will be limited and managed by standard good practice and, in the event that such a spillage or leakage occurs, will be localised, of limited volume and the effect will be reduced further by the adoption of standard good practices, particularly the dampening down of soils, practices relating to vehicles and equipment maintenance, and dealing with

associated leaks or accidental spills. Therefore effects are unlikely to be significant.

9.6.10 Potential effects from contaminated soil or buried animals during construction (topsoil stripping and excavation works) on construction workers also need not be considered further. Potential effects could occur via direct contact, inhalation and/or ingestion. However, no worker will be permitted to work at the site without adequate training in, and use of, appropriate PPE, and adoption of good site hygiene practices. Therefore with these measures in place significant effects are unlikely.

10. Landscape and Visual

This section presents the proposed scope of work for the Landscape and Visual environmental impact assessment.

10.1 Introduction

10.1.1 The landscape and visual impact assessment (LVIA) consist of two related assessments that assess effects of the construction and operation of the proposed development on the landscape as a whole, concentrating upon effects upon the landscape character, and effects upon the views and visual amenity of people who live, undertake recreational activities, work and/or travel through the area around Manston Airport.

10.2 Relevant policy, legislation and guidance

10.2.1 Policy guidance and policies relevant to the scope of potential landscape and visual effects are as follows:

Table 10.1 Planning Context

Relevant Policy	Comment
National Planning Policy Framework	
Policy 11: conserving and enhancing the natural environment	The planning system should contribute to and enhance the natural and local environment, protecting and enhancing valued landscapes. (Paragraph 109).
Thanet Local Plan to 2031 Preferred Options (Consultation dated January 2015)	
POLICY SP05: Manston Airport	Sets out requirements for development at Manston Airport. Bullets 2 and 3 are of particular relevance as new built development is to be designed to minimise visual impact on the open landscape of the central island, especially with regards to the mass of buildings on the skyline in views from the south. Also requires the provision of an appropriate landscaping scheme, to be designed and implemented as an integral part of the development.
POLICY SP22: Protection and Enhancement of Thanet's Historic Landscapes	Development proposals should conserve and, where possible, enhance Thanet's local distinctiveness and visually sensitive skylines and seascapes. It sets out principles for each one of Thanet's six local landscape character areas.
Thanet Local Plan (2006) Saved Polices	
POLICY CC1: Development in the Countryside	Development in the Countryside will not be permitted unless there is a need for development that overrides the need to protect the countryside.
POLICY CC2: Landscape Character Areas	Seeks to protect Landscape Character Areas
Dover Core Strategy (Adopted 2014)	
POLICY DM15: Protection of the Countryside	Seeks to protect the character and appearance of the countryside.
POLICY DM16: Landscape Character	Requires the protection of landscape character within the district.

10.2.2 The Dover Core Strategy is of relevance because whilst the proposed development is entirely located outside the area covered by the Strategy, there is potential for the proposed development to have indirect effects upon the landscape character of some areas in Dover District.

Legislative requirements

10.2.3 In preparing the landscape and visual assessment, account would be taken of relevant legislation and regulations, namely:

- Town and Country Planning (Environmental Impact Assessment Regulations 2011 (SI No 1824); and
- The *European Landscape Convention 2000,* which became binding in the UK in 2007, seeks to protect (conserve and maintain) the significant or characteristic features of the landscape.

Other guidance

- Natural Environment Topic Paper (Thanet District Council, January 2015);
- Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA3) (Landscape Institute and IEMA, 2013);
- Landscape Character Assessment – Guidance for England and Scotland (Countryside Agency and Scottish Natural Heritage, 2002); and
- Photography and photomontage in landscape and visual impact assessment-Advice note 01/11 (Landscape Institute, March 2011);

10.3 Main sources of data used in preparing the scoping report

10.3.1 Access to the development site is currently restricted, however a visit to publicly accessible areas and the surrounding landscape was carried out on April 28th 2016. During the visit an initial selection of viewpoints were visited and a photographic record was produced.

10.3.2 Also the following Ordnance Survey (OS) map data sources have been reviewed:

- Road Map - scale 1:250 000;
- Landranger series - scale 1:50,000 (Sheet 179 Canterbury and East Kent, Dover and Margate); and
- Explorer series - scale 1:25,000 (Sheet 150 Canterbury & the Isle of Thanet).

10.3.3 In addition the following landscape character assessments have been used in preparing the scoping report:

- National Character Area (NCA) Profile 113- North Kent Plain (Natural England, 2015);
- Kent Historic Landscape Characterisation (Croft, Munby & Ridley, May 2001);
- Landscape Assessment of Kent (Jacobs Babtie, Kent County Council, October 2004)

- Thanet Landscape Character Areas (Thanet District Council, Updated August 2012); and
- Dover District Landscape Character Assessment (Jacobs Babtie, Dover District Council, January 2006)

10.3.4 Tranquillity Mapping produced by the Campaign to Protect Rural England (CPRE) available at http://maps.cpre.org.uk/tranquillity_map.

10.4 Engagement with consultees

10.4.1 Initial consultation is at an early stage and engagement with relevant organisations specifically regarding landscape and visual amenity has yet to be carried out. KCC and Local Authorities (Thanet and Dover) will be consulted and their opinions sought on the selection of landscape receptors for inclusion in the landscape assessment, principally landscape character areas, and the selection of viewpoints for use in the visual assessment and the potential requirement for photomontages or other visualisations

10.5 Overview of the baseline conditions

Study Area

10.5.1 The LVIA study area is shown on **Figure 10.1**. It is currently deemed to encompass a 5km offset from the development boundary thereby providing a minimum separation distance of 5km from any part of the development site. It is however, to be confirmed through this scoping exercise and through consultation. The study area has been selected with regard to previous experience of undertaking LVIAs for similar types of development. This definition of the study area ensures that the baseline and the subsequent landscape and visual assessments will include any landscape and visual receptors with the potential to sustain significant landscape or visual effects as a consequence of the construction and operation of the proposed development at Manston Airport.

Landscape elements within development site at Manston Airport

10.5.2 Manston Airport covers an area of 298 hectares (ha) and has been the site of an airfield since 1915. In May 2014 the Airport was closed, although a number of buildings are still in use, including a helicopter pilot training centre and RAF museum. The airport is located to the west of the settlement of Manston and north-east of the larger settlement of Minster. It is bounded by transport routes to the south (A299 – recently dualled) and west (B2190) whilst the B2050 Manston Road bisects the northern part of the Airport.

10.5.3 As already stated Manston Airport has been closed since May 2014 albeit the buildings and facilities that helped support airport operations are still present on site. These include a 2748m long runway that is 230m wide and orientated in an east-west direction across the southern part of the Airport. The runway is at an elevation of ~50m AOD that is approximately 10m higher than the northern part of the Airport. Built form is clustered along the east and west edges and includes:

- cargo handling facility comprising 2 storage warehouses ~6-8m high, 1 hanger ~12m high, all finished with metal cladding and covering an area of 5,200m² with gated entrance and security box;
- fire Station building ~12m high covering an area of 2,200m² and constructed of brick with a corrugated metal roof;
- helicopter Pilot Training facility comprising 2 hangers ~10m high featuring metal cladding and covering an area of 950m²;
- two Museum buildings of brick construction ~5m high and covering 2,000m² ;
- main airport terminal ~4m high and covers 2,400m² is located on the Airport's eastern edge and is surrounded by large expanses of hard surfacing to its east and west which was used as stands for air planes and car parking for passengers respectively;
- Ground traffic building ~6m high including a viewing tower ~9m high, covering an area of 700m²
- large airplane maintenance hangar covering 4,700m² and ~12m high with a taller ~16m high movable section to enclose an airplane tail fin;
- network of hard surfacing used for taxi ways, aprons and roads connect the buildings to the runway and to the two main entrance points that are located in the east and west; and
- These buildings and facilities are generally surrounded by closely mown grassland. The requirements of being an operational airport (until recently) have meant that other landscape planting has been severely restricted and is limited to some lines of ornamental trees and shrubs along some sections of the boundary such as the B2190, around some buildings and also in car parking areas on the eastern edge. Post and wire security fencing of varying height runs alongside most of the perimeter.

Landscape baseline – landscape designations

10.5.4 There are no national or local landscape designations present within the study area.

Landscape baseline – landscape character

10.5.5 Manston Airport is located within the National Landscape Character Area 113: North Kent Plain. This encompasses a ~90km long strip of land bordering the Thames Estuary to the north and the chalk of the Kent Downs in the south. In general the area is considered an open, low and gently undulating landscape which is characterised by its arable use. The chalk outlier of Thanet, on which Manston Airport is located, is identified as a key feature that is a discrete and distinct area characterised by its dominant agricultural use stemming from the highly quality fertile soils.

10.5.6 At a county level landscape character is defined by the Kent Historic Landscape Characterisation and the Landscape Assessment of Kent which includes assessments of condition and sensitivity of landscape character areas that were

defined by an earlier study. These county level documents are over a decade old, consequently there relevance will need to be checked during the site assessment and in consultation with Thanet and Dover District Council officers.

10.5.7 The Kent Historic Landscape Characterisation locates Manston Airport within the Historic Landscape Character Area (HLCA) 18 – Isle of Thanet. Which is comprised mainly of two Historic Landscape Types (HLTs) post-1801 settlement (HLT 9.6) and irregular fields bounded by roads, tracks and paths (HLT 1.14). The latter is described as a relativity recent phenomenon and overlies potentially earlier landscapes of similar character. Urban developments of Margate and Ramsgate are considered to be integral elements within HLCA 18.

10.5.8 The Kent Landscape Assessment locates Manston Airport within the Thanet Landscape Character Area. This features a centrally domed ridge with the Airport dominant on the ridge's crest. Other features include open, large scale arable fields with long views. Thanet Landscape Character Area is assessed as having a poor condition due the *'vulnerability of the farmed landscape, lack of natural habitats and the negative impact of recent development'.* However, the sensitivity of the Thanet Landscape Character Area is described as very high due to the open views and very strong sense of place.

10.5.9 At a local scale the Natural Environment Topic Paper and Thanet Local Plan refer to six landscape character areas (LCAs) that have been defined for Thanet in 2012. These are as follows:

- Pegwell Bay LCA;
- The Former Wantsum Channel LCA;
- The Former Wantsum North Shore LCA;
- The Central Chalk Plateau LCA;
- Quex Park LCA; and
- The Urban Coast LCA.

10.5.10 The distribution of these LCAs is shown in **Figure 10.2**.

10.5.11 Manston Airport is sited within the Central Chalk Plateau LCA. This LCA is characterised by flat or gently undulating topography, slight elevation in comparison with neighbouring LCAs, relative openness and extensive views. Manston Airport and other large scale developments are identified as contributing to the fragmentation of the open character along with the sporadic settlement pattern. Policy SP22 in the Thanet Local Plan to 2031 Preferred Options Consultation which is entitled '*Protection and Enhancement of Thanet's Historic Landscape*' states that in this LCA development proposals should avoid skyline intrusion, and the loss or interruption of long views. Developments must be demonstrated to take advantage of and engage with views.

10.5.12 With regard to tranquillity the desktop preliminary baseline review has been restricted to a review of the CPRE Tranquillity Map. This indicates that levels of tranquillity vary considerably across the study area. Within the Manston Airport development site they are moderate and they are relatively high to the south and south-east where there are few settlements and roads within the Stour Valley.

However, tranquillity levels diminish to low levels to the east and north close to and within the urban development site on the coast.

Visual baseline

10.5.13 The preliminary desktop study shows that Manston Airport is surrounded by a moderately high level of residential development, implying relatively high numbers of potential residential visual receptors. The coastal area between Pegwell to the south-east and Birchington to the north-west is an almost continuous belt of urban and residential development focused upon the main towns of Ramsgate, Broadstairs, North Foreland and Margate. Inland areas, including those close to Manston Airport, are generally characterised by a moderate density of villages, small groups of residential properties and individual properties implying a moderately high number of potential residential visual receptors. There are several smaller settlements to Manston Airport's south, west and north including Minister, Cliff's End, Monkton, Acol and Woodchurch. Most of these settlements are located at slightly lower elevations than Manston Airport and the reviews of aerial photography indicate that they contain moderate levels of tree cover. However outside of the settlements and areas such as Quex Park tree cover levels are very low with the consequence that open and extensive views are a widespread landscape characteristic. Taller elements of the airport are a common feature of these views.

10.5.14 The dense and evenly dispersed settlement pattern has resulted in in a relatively dense network of 'A', 'B' and minor roads. Likewise there is a moderate density of public rights of way (PRoWs) in the area around the Airport that are likely to be used by recreational visual receptors. Long distance walking routes include the Saxon Shore and the Turner and Dickens Walk, whilst the long distance cycling route; the Viking Way (National Cycle Route 15) is also present. These routes are highlighted on **Figure 10.3**.

10.5.15 Parts of the study area are popular holiday and recreational destinations and consequently a number of amenity assets are present such as campsites, equestrian centres and beaches. Key destinations for visitors and local residents will be identified during the consultation process. This section will describes the existing visual context of elements within the proposed development and will identify the key visual receptors associated with each of them.

10.6 The scope of the assessment, methodology and characteristics of the potential effects

Additional baseline information required

10.6.1 The following additional baseline information will be collected:

- Digital terrain data (OS Terrain 5) and heights of the main existing built development within the Airport to facilitate the calculation of a baseline Zone of Theoretical Visibility (ZTV) across the study area;
- Details of the existing development within Manston Airport including the condition of existing built development and the limited amount of vegetation;

- A more detailed understanding of the landscape role of the present development at Manston Airport and its role in views available to visual receptors in the ZTV taking into account the presence of screening elements;
- Definitive maps to allow a comprehensive understanding of the PRoW network and to allow accurate cross referencing to individual PRoWs;
- The distribution of open access land;
- Development of a comprehensive understanding of formal and informal recreation and visitor facilities within the study area including, but not restricted to country parks, parks and gardens open to the public, sports and recreation grounds, allotments, caravan and camping areas, fishing sites, nature reserves open to the public, cemeteries, and other tourist attractions;
- A greater understanding of the main contributory factors to varying levels of tranquillity including night time lighting levels and the relative role of glare, sky glow and light overspill from the present use of Manston Airport to be obtained from site visits;
- A draft viewpoint schedule to form the basis of viewpoint consultation.

Scoping assessment

Nature and scope of effects

10.6.2 The LVIA will be undertaken in accordance with the third edition of the '*Guidelines for Landscape and Visual Impact Assessment*' (GLVIA3). This was published in 2013 by the Landscape Institute and Institute of Environmental Management and Assessment and is widely recognised as providing the framework within which LVIAs are to be undertaken. .

10.6.3 GLVIA3 defines an assessment of landscape effects as:

10.6.4 "An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character."

10.6.5 This includes direct effects upon the landscape elements and patterns within the development site and effects upon landscape character and also landscape designations where present within the study area. As already noted with regard to the reopening and redevelopment proposals for Manston Airport the landscape assessment will therefore be concentrated upon assessing effects upon landscape character.

10.6.6 In GLVIA3 an assessment of visual effects is similarly defined as:

"An assessment of visual effects deals with the change and development on views available to people and their visual amenity."

10.6.7 These people are termed visual receptors and include people with views from their residential properties, local communities, transportation routes (including 'A' and 'B' roads, key local routes and cycle routes); along with people undertaking outdoor formal and informal recreational activities ranging from walking along

public rights of way or in open access areas to visiting country parks to people fishing or playing golf. Specific effects will arise from changing the constituent factors in a visual receptor's views i.e. removal or changing of existing visual elements as well as introducing new visual elements

Spatial scope

10.6.8 The LVIA will be undertaken within the 5km study area, offset from the development boundary, which includes all potential landscape and visual receptors located within 5km of any component of the proposed redevelopment at Manston Airport. The selection of landscape and visual receptors will be refined by the use of ZTVs. The baseline ZTV will be recalculated to incorporate the key components of the proposed development; a) any existing built development to be removed b) the main built components of the proposed new developments. The final development ZTV will show the areas where visual receptors could potentially have a view of at least some components of the construction and/or operation of the proposed development at Manston Airport.

10.6.9 Any groups of visual receptors e.g. settlements or areas within the coastal urban area that are sited outside the ZTV will be scoped out of the visual assessment. Likewise any of the Thanet or Dover LCAs that are entirely outside the ZTV will be scoped out. LCAs that only have a small proportion of their area within the development ZTV may be scoped out subject to a review of their defined key characteristics against likely changes that could be generated by the proposed development at Manston Airport.

Temporal scope

10.6.10 The landscape and visual assessments will be undertaken for the following periods:

- At the period during the construction period when the greatest level of construction activity is being undertaken;
- At the first winter after the commencement of the operational period (to account for any increase in visibility due to seasonal leaf loss); and
- At the summer 15 years after the commencement of the operational period (when any mitigation planting will be established and fully effective in landscape and visual terms).

Potential effects requiring further assessment

10.6.11 A review of the current development proposals against the existing baseline, taking into account the longstanding presence of a wide range of built and landscape development within Manston Airport, has led to the identification that there is potential for a limited number of significant landscape and visual effects to be generated as a consequence of the construction and operation of the proposed development at Manston Airport. These will be subject to further assessment, and are summarised below:

Landscape

- Effects upon landscape character as a result of the construction and operational activity associated with the redevelopment and reopening of Manston Airport. The assessment will be undertaken upon the limited number of Dover and Thanet LCAs that are completely or partially located within the study area and the development ZTV. Landscape effects will also be assessed against Historic Landscape Character Area 18 – Isle of Thanet and Kent Landscape Character Area – Thanet LCA. Effects upon tranquillity will be assessed within the context provided by the defined key characteristics of the different landscape character areas.

Visual

- Effects upon the views and visual amenity of visual receptors within the study area and the development ZTV as a result of construction activity required to redevelop Manston Airport. These will be principally the construction activities required for the cargo facility, fuel farm, hangers and new aircraft stands.
- Effects upon the views and visual amenity of visual receptors within the study area and the development ZTV as a result of the operation of the redeveloped Manston Airport. These will be principally the operational activities at the cargo facility, fuel farm, hangers and new aircraft stands but will also include the movements of aircraft on the ground and when taking off and landing, movement of vehicles and plant within and around the redeveloped Airport and operational lighting requirements.

Potential effects requiring no further consideration

10.6.12 The following landscape effects will not be considered by the EIA.

Landscape

- Effects upon National Landscape Character Area 113 – North Kent Basin. This NLCA is too extensive to potentially sustain significant landscape effects from a development of the type and scale proposed at a single location such as Manston Airport;
- Any other landscape character areas within the study area that are entirely outside the development ZTV as without a visual effects pathway it is highly unlikely that effects could be sustained by other potential effects pathways.

Visual

- Effects upon visual receptors that are located within the study area but outside the development ZTV.

Significance assessment methodology

10.6.13 The assessment of the significance of landscape and visual effects is according to GLVIA3 "*an evidence-based process combined with professional judgement*." All assessments and judgements must be transparent and capable of being understood by others. Levels of landscape and visual effects are determined by consideration of the nature or 'sensitivity' of each receptor or group of receptors

and the nature of the effect or 'magnitude of change' that would result from the reopening and redevelopment of Manston Airport.

Landscape effects

10.6.14 The sensitivity of a landscape receptor e.g. an LCA, to a particular development is determined by the susceptibility of that landscape receptor and its value. The methodology describes landscape sensitivity as high, medium or low and is assessed by taking into account the landscape receptor's landscape value and landscape capacity or susceptibility to the changes identified as the result of a particular proposed development i.e. the redevelopment and subsequent operation of Manston Airport.

10.6.15 Landscape value is determined by taking into consideration a range of attributes including: the presence or absence of landscape designations; landscape and scenic qualities; rarity and representativeness; conservation interests; recreational value; perceptual qualities; and historic and cultural value. The absence of landscape planning designations such as is the case in Thanet, does not automatically mean that an area or landscape receptor is of low landscape value. Landscape susceptibility concerns the ability of a landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation. It is also concerned with landscape quality and the physical state of a landscape receptor which could include consideration of the landscape receptor's intactness and the condition of individual landscape elements. The landscape assessment in support of the DCO application will include analysis for each landscape receptor of the factors that have been assessed in the determination of its landscape value and the assessment of its susceptibility to the redevelopment and operation of Manston Airport. These will be set out in a proforma that will show how the assessment of the landscape value and landscape susceptibility have been combined to determine that landscape receptor's sensitivity.

10.6.16 The magnitude of landscape change resulting from the redevelopment and operation of Manston Airport will be assessed as high, medium, low or negligible. In accordance with GLVIA3 the magnitude of landscape change takes into account: the size and/or scale of the change that would result from each identified landscape effect acting upon a landscaped receptor; the geographical extent over each identified landscape effect would be experienced; and the duration and reversibility of each identified landscape effect. Once again methodology that will be presented in the DOC submission documents will set out in detail factors influencing the magnitude of landscape change as they pertain to the study area and the type of development proposed.

Visual effects

10.6.17 The sensitivity of visual receptors takes into account the susceptibility of the visual receptor to the visual change identified and the value that is likely to be attributed by the visual receptor to their baseline view. These are described as high, medium or low. The main influencing factors are the occupation or activity of the visual receptor at a particular location; the extent to which their attention or interest is focused upon the available views; the importance and/or popularity of the view; the typical numbers of receptors to whom that view is available; and in a link with

landscape considerations, the context of a viewpoint in terms of landscape value and quality within a view; and any indication of a view being valued such as the presence of interpretation boards, parking and seating facilities, it being referenced in a guidebook or marked on a published map. Once again the methodology that will be presented in the DOC submission documents will set out in detail factors influencing the susceptibility of visual receptors and how the value of available views has been judged.

10.6.18 The nature of visual effects or their magnitude of change resulting from the redevelopment and operation of Manston Airport will be assessed as high, medium, low or negligible. The magnitude of visual change will be assessed taking into account the baseline presence of the closed Airport. The magnitude of visual change will described by reference to the scale of visual change; the contrast with the baseline view; separation distance; the duration over which a view is available; the angle of view; levels of screening; and whether new visual elements are seen on a skyline or against a background. More detailed information on these factors as they apply to the Manston Airport visual baseline will be provided in the LVIA methodology sections in the submission documents.

10.6.19 The visual effects assessment will be supported by visualisations and viewpoint assessments from each of the viewpoints whose location is to be agreed during consultation.

Evaluating and explaining the significance of landscape and visual effects

10.6.20 The level of landscape and visual effects will be determined with reference to landscape or visual sensitivity (or the nature of the landscape or visual receptor) and the magnitude of landscape or visual change experienced (or the nature of the landscape or visual effect). For each receptor the evaluation process will be informed by use of a matrix as shown below.

Table 10.2 Matrix of EIA Significance

Magnitude of Change	Value or Sensitivity		
	High	Medium	Low
High	Substantial	Moderate/Substantial	Moderate
Medium	Moderate/Substantial	Moderate	Slight/Moderate
Low	Moderate	Slight/Moderate	Slight
Negligible	Slight	Slight/Negligible	Negligible
Key:	Significant	Not Significant	

10.6.21 Likely significant landscape and visual effects arising from the proposed redevelopment and operation of Manston Airport would be effects that are assessed as being likely or certain to result in levels of effect that would be ‘substantial’ or ‘moderate/substantial’. In line with the emphasis placed in GLVIA3 upon application of professional judgement, the adoption of an overly mechanistic approach through reliance upon a matrix will be avoided. This will be achieved by the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor over and

above the outline assessment provided by the use of the matrix. Wherever possible cross references will be made to baseline figures and/or to photomontage visualisations in order to support the rationale.

11. Noise

This section of the Scoping Report addresses the potential effects of changes in noise that may result from the re-opening, development and commencement of operations at Manston Airport, Kent.

11.1 Introduction

11.1.1 Noise can have an effect on the environment and on the quality of life, health and well-being of individuals and communities. It can also pervade and affect the quality of natural resources.

11.1.2 The assessment will consider the following principle sources of noise at key sensitive receptors:

- Renewed exposure to noise from aircraft in the air and on the ground from the re-opening and mature operation of the airport;
- Changes in and exposure to surface access noise, namely road traffic noise from vehicle movements associated with the operation of the airport; and
- Noise from the construction of associated infrastructure.

11.1.3 The assessment will also consider the potential cumulative noise effects from other developments within the Zone of Interest (ZOI) and the potential in-combination effects resulting from the interaction of other effects associated with the re-opening of the airport.

11.2 Relevant policy, legislation and guidance

11.2.1 The section provides a summary of the relevant legislation, policy and guidance that has been considered when determining the scope of the noise assessment.

11.2.2 Noise from airports is considered in a number of planning policy documents and is subject to legislative control and regulation. At an international level, standards governing aircraft noise emissions are set by the International Civil Aviation Organization (ICAO). In the UK, the Department for Transport (DfT) and the Department for Environment, Food and Rural Affairs (Defra) are responsible for regulating the various environmental aspects of the aviation industry. At a local level, local planning authorities such as Thanet District Council also have some control through planning conditions and legal agreements.

Relevant Legislation

11.2.3 Relevant legislation exists for the control of aircraft and environmental noise. For most commercial UK airports, the DfT and Defra are responsible for regulating environmental noise. The Secretary of State has powers under the Civil Aviation Act 2006[38] to control aircraft noise at certain designated airports, however at present this only currently applies to Heathrow, Gatwick and Stansted. **Table 11.2**

[38] The Civil Aviation Act 2006 (Commencement No. 1) Order 2007 (S.I. 2007/598 (C. 25))

provides details of relevant legislation that has been considered when determining the scope of the noise assessment.

Table 11.1 Summary of Relevant Legislation

Legislation	Description
The Civil Aviation Act, 2006	The Civil Aviation Act is the principal legislation for the regulation of aircraft operations. The Act was updated in 2006 when additional powers to avoid, limit or mitigate the effects of noise connected with departures or arrivals of aircraft at an aerodrome were introduced.
Environmental Protection Act 1990	Section 79 of the Environmental Protection Act (EPA) 1990 (as amended by the Noise and Statutory Nuisance Act 1993) provides the principal controls "statutory nuisances", and declares a number of items as statutory nuisance. Under the provisions of the EPA, local authorities have a duty to inspect their areas periodically to detect any nuisance, and where a complaint of statutory nuisance is made, to take such steps as are reasonably practicable to investigate the complaint.
The Environmental Noise (England) Regulations, 2006	The Environmental Noise (England) Regulations 2006 (Statutory Instrument 2006 No. 2238) give effect to EU Directive 2002/49/EC, referred to as the Environmental Noise Directive or END, relating to the assessment and management of environmental noise.
The Aerodrome (Noise Restrictions) Rules and Procedures Regulation, 2003	The Aerodromes Regulations implements into UK law the provisions of Directive 2002/30/EC. Directive 2002/30/EC establishes procedures on noise related measures at large airports. It is closely related to the ICAO Assembly Resolution A33/7, which establishes a 'balanced approach' to noise management with respect to environmental benefit and economic incentives, but without imposing measures that would be overly restrictive. The Directive requires consideration of noise reduction at source, land-use planning, noise abatement, operational procedures and operating restrictions.
Control of Pollution Act, 1974	The CPA gives the local authority special powers to deal with noise and vibration arising from construction and demolition works, regardless of whether a statutory nuisance has been caused or is likely to be caused. The powers may be exercised either before works start or after they have started.
The Noise Insulation Regulations (1975)	The noise insulation regulations make it compulsory for noise insulation to be provided to residential dwellings where noise from new or realigned road schemes results in certain levels and changes in road traffic noise.
The Land Compensation Act (1973)	Under Part 1 if the Act, property owners can claim compensation for properties that have been reduced in value by a certain amount by the use of a new or altered airport runways.

Relevant National, Regional and Local Policies

11.2.4 Relevant national and local policy exists to help manage the effects of noise, a summary of relevant national, regional and local policy that has been considered when determining the scope of the noise assessment is provided in **Table 11.3**.

Table 11.2 Relevant National, Regional and Local Polices

Policy Document	Description
National Policy	
National Planning Policy Framework (2012)	The NPPF seeks to achieve sustainable development and states that the planning system should be concerned with "*preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely*

Policy Document	Description
	affected by unacceptable levels of soil, air, water or noise pollution or land instability".
Noise Policy Statement for England (NPSE) (2010)	The NPSE forms the overarching statement of noise policy for England. NPSE sets out the long-term vision of the Government.
Aviation Policy Framework (APF), 2013	The Government's Aviation Policy Framework (APF) was published in March 2013 and provides the Government's overall policy for aircraft noise.
Local Policy	
Policy EP7 (Aircraft Noise)	The saved policies from the local plan covers the control of noise sensitive development or redevelopment on sites likely to be affected by aircraft noise, including noise exposure categories to be used in determining applications and a requirement for proposals to include adequate levels of sound insulation.
Emerging Local Policy	
Policy SE08 (Aircraft Noise)	The emerging local plan includes a similar policy and noise exposure categories used to measure and control noise, including aircraft noise.

Relevant Guidance and British Standards

11.2.5 A number of guidance documents and British standards exist to inform the assessment of aircraft noise and other noise sources associated with airports. Details of those that are considered relevant to the scope of the assessment are provided in but are not limited to **Table 11.3**.

Table 11.3 Summary of Relevant Guidance and British Standards

Environmental Policy Reference	Policy Issues
Calculation of Road Traffic Noise (1988) (CRTN)	Calculation of Road Traffic Noise (CRTN) is a prediction methodology for road traffic noise. Using detailed information on two-way traffic flows, percentage of HGV movements, road gradient, vehicle speed, ground conditions and screening, the methodology calculates the propagation of noise from roads.
Design Manual for Roads and Bridges (DMRB) Volume 11 Environmental Assessment Part 7 Noise and Vibration (2011 – Revision 1)	Design Manual for Roads and Bridges (DMRB) contains advice on the assessment of noise from road traffic, particularly from new and altered roads.
World Health Organisation Guideline on Community Noise, 1999	World Health Organisation (WHO) Guidelines for Community Noise presents guideline noise levels for community noise in specific residential environments, e.g. outdoor living areas.
World Health Organisation Night Noise Guidelines for Europe, 2009	The WHO Night Noise Guidelines for Europe present guideline noise levels for community noise at night (e.g. target of outdoor night noise limit of 40 dB and short-term interim target of 55 dB for countries where 40 dB target cannot be met).
CAP1278 Aircraft Noise and Health Effects: Recent Findings	Published by the Civil Aviation Authority (CAA), this report is an update to the previous ERCD Report 0907 and highlights key research that has been published in aircraft noise and health effects since 2007, including sleep disturbance, cardiovascular disease, children's learning and other health effects.
BS 4142:2014 - Methods for rating and assessing industrial and commercial sound	BS 4142:2014 is used to rate and assess sound of an industrial nature, including but not limited to assessing sound from proposed, new, modified or additional sources of industrial sound. It contains guidance on the monitoring and assessment of industrial and commercial sound sources (including fixed installations comprising mechanical and electrical plant and equipment) affecting sensitive receptors.

BS 7445-1:2003 Description and measurement of environmental noise – Part 1: Guide to quantities and procedures' (BS7445-1:2003)	BS 7445 provides guidance for describing and measuring noise from all sources. The standard recommends equivalent continuous A-weighted sound pressure level (L_{Aeq}) as the most appropriate basic noise indicator.
BS 8233:2014 Guidance on sound insulation and noise reduction for buildings. British Standards Institute, London.	BS 8233 presents design criteria for internal noise levels in residential living rooms and dining rooms during the day and in bedrooms at night.
Good Practice guide on noise exposure and potential health effects	Developed by the European Environment Agency (EEA), the guide provides assistance to policy makers to fulfil the requirements of the Directive 2002/49/EC, The Environmental Noise Directive for a noise action plan.

11.3 Main sources of data used in preparing the scoping report

11.3.1 In preparing this Scoping Report, a number of data sources have been reviewed. Details of these data sources are provided in **Table 11.5**.

Table 11.4 Sources of data used in preparing scoping report

Reference Name	Summary of information
Digital Mapping and Aerial Imagery	Review of digital mapping to provide aerial imagery of surrounding area
Manston Airport Masterplan – Draft Option	High level draft airport masterplan drawing produced for the promoter, setting out potential airfield infrastructure locations
Manston Airport Aircraft Night Noise Assessment Report (2010)	Assessment of aircraft night noise from future operations, undertaken by Bickerdike Allen Partners. This assessment was undertaken in 2010, and was developed when the airport was previously open and was undertaken to assess the potential noise effect of night-time operations.
Manston Airport Night Noise Assessment Review (2010)	Review of night noise assessment by Bureau Veritas on behalf of Thanet District Council. The review was undertaken to provide assurance to the local council of the assessment the airport had undertaken on plans for night-time operations, and was undertaken prior to the airport closing.
Manston Airport Noise Action Plan – First Draft (2014)	First draft of noise action plan under *Environmental Noise (England) Regulations 2006* and *undertaken* prior to the airport closing. The action plan was undertaken as part of the second round of noise action plans, due to the airport location within the Thanet agglomeration. The airport closed before the action plan was adopted and approved by the secretary of state for Environmental, Food and Rural Affairs.

11.4 Engagement with consultees

11.4.1 Key consultees have been identified and engagement will be undertaken and recorded throughout the pre-application stages of the project. The following consultees have been identified:

- Local Authority Environmental Health Practitioners (EHPs);
- The Civil Aviation Authority (CAA), specifically Environmental Research and Consultancy Department (ERCD); and
- National Air traffic Services (NATS).

11.5 Overview of the baseline conditions

11.5.1 Manston Airport, Kent is a former civil aerodrome which closed in May 2014. However, much of the infrastructure remains unchanged from when it was operational. The airport has one main runway (Runway 10/28) which is 2,748 metres in length, and one Terminal located to the north east of the site. To the north of the site is a maintenance and freight area, with a number of hangar buildings and aircraft parking stands.

11.5.2 To the east of the airport, Ramsgate town centre is located approximately 3,800 metres from the threshold of Runway 28. To the west, the nearest residential area is St Nicolas Wade which is 6 km away. Northern areas of Cliffsend are less than 300 metres southeast of Runway 28 and the main access route to the airport, the A299 runs through Cliffsend. To the North of the airport the only access road to the airport, the B2050 runs through the village of Manston. A number of houses are also located less than 300 metres away from the main hangar area.

11.5.3 A helicopter charter business (Heli Charter) operates from a base outside of the airport boundary to the north west of the airport and north of the B2190. Another helicopter charter business (Polar Helicopters) operates from a hangar at the north of the airport, 50 metres south of the B2190. In addition, the Spitfire and Hurricane Museum and the RAF Manston History Museum are located north of Manston Road, inside of the site boundary.

11.5.4 Although current and future baseline conditions are that Manston will not operate as a commercial airport and will effectively remain closed, a small number of helicopter movements still occur. Therefore, the baseline noise environment around the airport consists of mainly road traffic noise from the A299, A253, B2190 and B2050, and rail movements on the two-track Ramsgate-Minster railway that runs 1.5 kilometres south of the airport. Noise from natural sources are likely to be observed, particularly in Ramsgate where sea birds are likely to be heard.

Air Noise Prior to Closing

11.5.5 As outlined above, current and future baseline conditions assume that the airport will remain closed. However, up until May 2014, aircraft operations still occurred at Manston Airport

11.5.6 When previously operational, Manston airport had established arrival and departure routes, including a noise abatement route for jet and large aircraft operations during a westerly mode of operations. When operational, aircraft arriving at the airport from the east would arrive over Ramsgate, and aircraft arriving from the west would arrive over Herne Bay and St Nicolas At Wade. During a westerly mode, aircraft would depart over St Nicolas At Wade and eastern areas of Herne Bay, and departures during an easterly mode of operation would depart over Ramsgate. In previous years of operation, approximately 30% of aircraft movements operated in an easterly mode and 70% during a westerly mode.

11.5.7 As part of the development of the scheme, all previous routes and procedures will be examined and may be subject to change as a result part of new operating practices.

11.5.8 When previously operational the airport produced noise contours as part of their draft Noise Action Plan (NAP) under *The Environmental Noise (England) Regulations 2006 (as amended)*. The contours were produced based on aircraft movements in 2011 and were required due to the proximity of the airport to the Thanet agglomeration. In 2011, Manston Airport handled 18,695 aircraft movements and 48,500 passengers. Of the total aircraft movements, 10.5% were Air Transport Movements (ATMs).

11.5.9 The level of noise exposure reported in the NAP was presented in terms of daytime $L_{Aeq, 16hr,}$ night-time L_{night}, and day-evening-night L_{den} exposure contours for relevant exposure levels and thresholds. The NAP reported that in 2011, 100 dwellings were exposed to noise of at least 57 dB $L_{Aeq, 16hr}$. In the APF the 57 dB $L_{Aeq, 16hr}$ is reaffirmed by Government "*as the average level of daytime aircraft noise marking the approximate onset of significant community annoyance*". The NAP also stated that no noise sensitive buildings were located within the 60 or 63 dB $L_{Aeq, 16hr}$ contours.

11.5.10 The types and activities of the aircraft operating in 2011 and underpinning the noise contours reported in the NAP are not representative of the proposed aircraft movements, however they do provide an indication of areas that are likely to be exposed to air noise as a result of the proposals.

11.5.11 The NAP noise contours show that the 55 dB L_{den} contour extends easterly to St Lawrence, and westerly to Mount Pleasant. To the west the 60 dB L_{den} contour does not extend much further than the airport boundary and to the east, the 60 dB L_{den} contour extends approximately 600 metres from the airport boundary. Levels of noise above 65 dB L_{den} does not extend further than the airport boundary.

Noise in the Immediate Vicinity of the Airport Prior to Closing

11.5.12 For areas in the immediate vicinity of the airport, ground noise and sources of air noise that occur on the ground also contributes to the ambient noise environment.

11.5.13 There is no evidence that noise from aircraft ground operations has been previously assessed for Manston Airport. However, experience of this type of noise from other airports would indicate that several receptors around the Airport would have experienced and have been exposed to airside ground noise prior to closing. These receptors are typically located close to areas where aircraft ground movements take place, for example near to taxiways, runway hold and exit points, and parking stands. This receptors would have therefore included northern areas of Cliffsend (e.g. King Arthur Road), northern areas of Minster (for example Southall Close and Smugglers Leap), southern areas of Manston (e.g. High Street) and southern areas of Acol (e.g. western receptors along Spitfire Way).

11.5.14 It is also likely that northern areas of Minster and Cliffsend, which are less than 1 kilometre from the ends of Runway 10 and Runway 28 would have received noise from aircraft start-of-roll.

Characterisation of Local Area

11.5.15 **Table 11.6** provides details of the existing sources of noise in locations around the airport.

Table 11.5 Sources of noise within local area

Location	Location in relation to airport	Distance from airport boundary to place centres	Existing sources of noise
Manston	North east of airport	600 m	Residential, road traffic
Ramsgate	East of airport	3.8 km	Road traffic, residential, light industrial
Cliffsend	South east of airport	1 km	Road traffic, rail
Minster	South west of airport	800m	Road traffic, rail
St Nicolas At Wade	West of airport	4.5 km	Residential
Herne bay	West of airport	13.5km	Road traffic, residential, light industrial

11.6 The scope of the assessment

Noise Definitions

Aircraft Noise

11.6.1 The noise produced by aircraft as a result of airport operations is as follows:

- **Air Noise** which is defined as noise from aircraft during the landing and take-off cycle, including noise from start-of-roll for take-off until the aircraft exits the runway after landing; and
- **Airside Ground Noise** which is defined as noise from aircraft whilst on the ground before and after the landing and take-off cycle, i.e. when the aircraft exits the runway after landing to the aircraft entering the runway to take-off. This includes taxiing, holding and aircraft activity at stand. Other aircraft ground activities that are considered as airside ground noise include engine testing and aircraft servicing activities.

11.6.2 Further definitions of the types of noise from an airport and the categorisation (i.e. whether air or ground noise) are presented in **Table 11.6**.

Table 11.6 Summary of sources of aircraft noise

Airport Activity	Categorisation	Definition	Source of sound	Location of sound
Arrival	Air Noise	Noise from aircraft landing at an airport	Engine noise, aerodynamic noise from the movement of air over the aircraft surfaces and landing gear	Arriving aircraft will typically follow the Instrument Landing System (ILS), intercepting the glide slope and arriving the airport. Arrival noise therefore tends to be observed around arrival routes and within 1-2 km laterally of the arrival routes and the airport.

Airport Activity	Categorisation	Definition	Source of sound	Location of sound
Departure	Air Noise	Noise from aircraft taking-off from an airport	Principal sources of departure noise relate mainly to the aircraft's engines	Departing aircraft are typically expected to follow prescribed routes. Some of these routes are sometimes referred to as Noise Preferential Routes (NPRs). NPRs typically follow departure routes which are designed to route aircraft away from more densely populated areas. Aircraft are expected to follow departure routes up to a release altitude, where aircraft will then be directed by Air Traffic Control.
Start-of-roll (SoR)	Air Noise	Noise from aircraft starting take-off roll before departing	SoR noise occurs when aircraft engines are spooling up on the runway for departure	Occurs at the runway SoR point and observed within a few hundred metres laterally and behind the aircraft. Although, SoR occurs when aircraft are on the ground on the runway, the modelling of this noise is considered within air noise models
Reverse thrust	Air Noise	Noise from aircraft diverting the engines exhaust forward to slow aircraft down after landing	Noise from reverse thrust is produced by aircraft engines after touch-down but is not always used to slow the aircraft. The decision to use reverse thrust is the pilots.	Occurs on the runway and is observed within a few hundred metres of the runway. Reverse thrust only occurs for a short-time after the aircraft has landed. Although reverse thrust occurs when aircraft are on the ground on the runway, the modelling of this noise is considered within air noise models
On-stand	Airside Ground Noise	Noise from aircraft on parking stands	When on-stand, noise from aircraft is produced by the Auxiliary Power Unit (APU). The APU is needed to provide power for on-board systems, including air conditioning. An alternative to APU is for aircraft to use the airport's electricity supply by applying fixed electrical ground power (FEGP) or an external generator by using a Ground Power Unit (GPU). A GPU is effectively a small diesel generator which is connected to the aircraft.	Aircraft stand noise occurs on aircraft parking stands, which are typically located near to terminal buildings and maintenance/freight areas. Within community locations the noise can be difficult to distinguish from the general airport ground noise.
Taxi	Airside Ground Noise	Aircraft manoeuvring on the ground, typically 'taxi-out' to the runway for departure, or 'taxi-in' from the runway after arrival	Aircraft typically taxi using their engines. Many airlines now adopt a policy whereby one or more of the engines is shut down and aircraft taxi on a reduced number of engines, a technique known as 'single engine taxi' or 'reduced engine taxi'.	Aircraft taxi to the runway for take-off and from the runway after landing along taxiways. , Taxi noise is more continuous than other sources of airport noise.
Hold	Airside Ground Noise	Noise from aircraft holding on the taxiway during taxi	Noise from aircraft holding is produced by aircraft engines.	Hold noise is produced at hold points throughout the airfield, which are typically located near to runways or where taxiways meet. The noise tends to be similar noise from aircraft taxiing, however, the aircraft is stationary.

Airport Activity	Categorisation	Definition	Source of sound	Location of sound
Engine Ground Run (EGR)	Airside Ground Noise	Aircraft EGR is usually undertaken for maintenance activities to test the aircraft engines, with the engines run at between idle and high power	EGR involves the running of aircraft engines whilst the aircraft is on the ground	Low power or idle EGRs often occur when aircraft are at stand. However, high-power EGRs will often occur in an open-field location or in a dedicated EGR enclosure which is designed to mitigate jet blast, noise or both.

Other Airport Ground Based Noise

11.6.3 In addition to noise from aircraft, a number of other sources of ground noise exist at an airport. Generally on the airfield, noise is produced by ground support equipment (GSE) that are required to service aircraft, and occasionally from temporary construction and maintenance activities. Away from the airfield, noise is also produced from construction activities and by surface access movements, especially road traffic.

Ground Support Equipment

11.6.4 At an airport, a number of mobile and fixed GSE are required to service aircraft during the turnaround and typically, these will be deployed around aircraft stands. Noise from GSE can be disturbing close to the source; however, in community locations the noise is often mixed in with the general sounds and activities from the airport. In addition to the noise from GSE, some equipment will be fitted with a warning siren, and the noise from the siren will be at a specific tone and can therefore be disturbing to a specific location.

Surface Access Noise

11.6.5 Noise from other modes of transport used to access the airport is defined as ‘Surface Access Noise’. In the case of Manston Airport, surface access noise is generated by road vehicle movements from HGV’s transporting freight, staff and in the longer term, passengers. These vehicle movements contribute to the flow of traffic on local and national networks, and can add to the level of noise produced by other traffic movements.

Construction Noise

11.6.6 Airport development may require construction activities. The noise produced during this activity depends on the nature of the construction activities required. Where construction activity is required to facilitate a development, the construction activity typically occurs prior to operation and would therefore be temporary in nature.

11.6.7 It is considered that due to the distance of residential properties from the airport, vibration from construction will be negligible and as such will be scoped out of the assessment.

Construction Phase

11.6.8 At this stage, it is not clear what construction activities will take place. However, it is likely that some construction work will be needed on the airfield infrastructure, and for the construction of additional hangars for freight. The level of noise generated by construction activities will be dependent on the construction methodologies and the construction plant and machinery used. Noise from construction activities needed to reopen the airport will be considered with the ES.

Operational Phase

11.6.9 The re-opening of a re-developed Manston Airport may result in a number of potentially significant noise effects due to a number of different operational activities and associated noise sources.

Air Noise

11.6.10 The proposals will result in aircraft departing and landing according to the flight paths, operational procedures and the prevailing weather conditions at the time of operation. The airport will be operational during the day and may be operational to some extent at night. The noise generated due to this activity may give rise to potentially significant effects.

11.6.11 An assessment of air noise is therefore scoped into the assessment.

Airside Ground Noise

11.6.12 The proposals will result in aircraft ground activity which will produce noise from taxiing, holding at runway ends and whilst stationary at stand. The proposals may also result in noise from aircraft during engine testing. Likewise, activity associated with hangars such as activities within and their associated services plant, as well as activity on aprons that is not associated with aircraft will also produce noise. Noise from airside ground activities may therefore give rise to potentially significant effects.

11.6.13 Noise from airside ground operations is therefore scoped into the assessment.

Surface Access Noise

11.6.14 The proposals will result in increased vehicular movements on the local road network during both the day and night. The proposals may also result in changes to the local road network. The change and resulting level of road traffic noise at sensitive receptors as a result of the proposals may give rise to potentially significant effects.

11.6.15 Noise from surface access road traffic is therefore scoped into the assessment.

Identification of Sensitive Receptors

11.6.16 **Table 11.7** identifies noise sensitive receptors and associated noise effects that are to be considered in the assessment. The assessment and corresponding determination of significance will reference relevant legislation, policy and guidance, applicable to each sensitive receptor.

11.6.17 The assessment will focus on residential receptors and the general population; however, other potential noise sensitive receptors will be considered where necessary and will be identified on a case-by-case basis.

Table 11.7 Summary of noise sensitive receptors and associated effect

Receptor	Type of effect
Residential Dwellings	Annoyance, sleep disturbance
Oher residential	Annoyance, sleep disturbance
Educational Facilities	Interference with teaching and task performance, annoyance
Healthcare Facilities	Speech interference, sleep disturbance, annoyance
Places of worship	Speech interference, musical quality, intrusion, annoyance
Community Resources	Speech interference, musical quality, intrusion, annoyance
Acoustical resources	Listening and perception of acoustical quality

Summary Scoped-in effects

11.6.18 **Table 11.8** provides a summary of the potential effects that are included within the noise and vibration assessment.

Table 11.8 Potential Noise and Vibration Effects

Noise Effect	Description
Air Noise	Effects of noise exposure from aircraft in-flight. The effect will be assessed in terms of absolute levels of noise and exposure.
Airside Ground Noise	Effects of ground based aircraft operations to overall levels of noise and exposure.
Ground Noise from Fixed Sources	Effects of ground based static or fixed sources of noise
Construction Noise	Noise from construction activities associated with re-opening the airport. Including construction traffic, airfield infrastructure and new buildings.
Surface Access Road Traffic Noise	Effects of noise from road traffic noise associated with the airport, including staff, passenger surface access and freight.

11.7 The methodology and characteristics of the potential effects

11.7.1 The assessment will consider potentially significant noise effects on existing noise-sensitive receptors.

11.7.2 This section presents the methodology and approach that will be taken to assess the potential effects of re-opening Manston Airport. The methodology considers only those effects that have been scoped-in. The methodology for assessment is discussed by:

- Relevant noise indices for effects;

- Methodology for the calculation of noise exposure; and
- Methodology for determination of significant effects.

Establishing Baseline Conditions

11.7.3 Currently there are no aircraft operations from Manston Airport however aircraft operations were occurring as recently as May 2014 and therefore arguably a degree of recognition of aircraft noise remains within the local area. However, at this stage it is proposed that the baseline noise conditions are considered by the existing noise environment, which does not include aircraft noise from Manston Airport. A review of the noise conditions associated with Manston Airport when it was last operational will also be undertaken.

11.7.4 Baseline noise monitoring will be undertaken at locations around the airport in order to quantify and characterise existing conditions. The location and format of this monitoring will be agreed with the local environmental health practitioners and other relevant consultees. The baseline conditions will not be established just in terms of the objective measured ambient sound environment but will also be gathered in terms of what sources of noise comprise it. Observations will therefore be undertaken as part of establishing the baseline to provide indicators of the soundscape.

Noise Modelling

Construction Noise

11.7.5 The assessment of construction noise will consist of a series of construction noise predictions that will be undertaken using noise modelling software. Noise modelling will be used to predict and assess noise emissions due to construction activities at the closest, worst-affected, noise sensitive receptors at key phases of the construction works. The calculations and the assessment will take into account likely methods of working, the duration of construction phases and the periods of the day construction will take place.

11.7.6 All calculations and assessments will be undertaken based on the methodology advocated in BS5228-1:2009+A1:2014 *'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise'*.

Air Noise

11.7.7 There are several air noise indices that have been used for the assessment of air noise at UK airports. The selection and suitability of these indicators is based primarily upon the noise effect being considered however, policy and legislative considerations must also be taken into account such as the APF and NPSE as well as relevant guidance and research.

11.7.8 Air noise exposure levels and metrics will be assessed through noise modelling using the Aviation Environmental Design Tool (AEDT) or Integrated Noise Model (INM). These are internationally recognised tools for the computation and assessment of air noise.

11.7.9 The noise modelling will consider the proposed airport operations include flight paths, airport infrastructure and layout, fleet-mix and scheduling of aircraft. The modelling will take into account the proposed operations of the airport and the Noise Mitigation Strategy.

Ground Noise

11.7.10 Effects of aircraft ground noise and noise from static sources on the ground will be assessed through noise modelling. Modelling of these sources will be undertaken within noise modelling software with calculations adopting the ISO9613-2:1996 *'Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation'* methodology which calculate levels of noise under meteorological conditions favourable to propagation of sound.

Surface Access Road Traffic Noise

11.7.11 A road traffic noise model will be developed enabling road traffic noise calculations to be made in accordance the methodology set out in *'Calculation of Road Traffic Noise (1988)'* as adapted in accordance with the guidance set out in DMRB 2011.

Impact Assessment and Significance Criteria

11.7.12 Impact assessment criteria and the significance of the effects have been arrived from review of relevant legislation, policy and guidance and consideration of the following:

- the number and clustering of receptors that are subject to the effects;
- the type of potential effect that is being considered (e.g. annoyance);
- the existing noise environment in absolute terms and the character of the soundscape;
- the duration of the effect and their temporality;
- the potential effectiveness or adequacy of mitigation through the design of the Development or through alternatives; and
- unique or specific features of the effects and whether further assessment would be required.

Construction Impacts

11.7.13 The construction noise assessment will be undertaken in accordance with the 'ABC' methodology as provided within Annex E of BS5228-1:2009+A1:2014. This criteria is based on experience of other infrastructure projects and considers noise due to construction and the existing baseline ambient noise levels at sensitive receptors.

Table 11.9 Noise from Construction – Impact Criteria for Residential Receptors (airborne sound only)

Period	Assessment Category and Threshold Values		
	A[1]	B[2]	C[3]
Daytime, where for: **Weekdays, T = 12 hours (0700-1900)** **Saturday Mornings, T = 6 hours (0700-1300)**	> 65 dB LAeq, T	> 70 dB LAeq, T	> 75 dB LAeq, T
Evening and Weekends, where for: **Weekdays, T = 1 hour (1900-2300)** **Saturdays, T = 1 hour (1300-2300)** **Sundays, T = 1 hour (0700-2300)**	> 55 dB LAeq, T	> 60 dB LAeq, T	> 65 dB LAeq, T
Night-time (all days) where: **T = 1 hour (2300-0700)**	> 45 dB LAeq, T	> 50 dB LAeq, T	> 55 dB LAeq, T

Notes:
1. **Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.**
2. **Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.**
3. **Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.**
4. **All noise levels presented at the façade of receptors**

11.7.14 In accordance with the methodology set out by Annex E of BS5228-1:2009+A1:2014, a potential significant effect is indicated if the $L_{Aeq, T}$ noise level arising from construction exceeds the threshold value for the category appropriate to the ambient noise level.

11.7.15 A potential significant effect may also occur if the ambient noise level exceeds the Category C threshold values provided in **Table 11.9** (i.e. the ambient noise level is higher than the threshold value) and the total $L_{Aeq, T}$ noise level for the period increases by more than 3 dB as a result of the construction noise.

Operational Impacts (Air Noise, Airside Ground Noise and Surface Access Noise)

11.7.16 **Table 11.10** sets out the quantification of the magnitude of the effects arising from the Development which apply to all operational noise sources.

Table 11.10 Impact Magnitude Descriptors for changes in Operational Noise – Residential Receptors

Short Term Magnitude Descriptors		Long Term Magnitude Descriptors	
0 dB	No Change	0 dB	No Change
0.1 – 0.9 dB	Negligible	0.1 – 2.9 dB	Negligible
1.0 – 2.9 dB	Minor	3.0 – 4.9 dB	Minor
3.0 – 4.9 dB	Moderate	5.0 – 9.9 dB	Moderate
> 5 dB	Major	> 10 dB	Major

Note: Magnitude descriptors presented in table aligned to *'HD 213/11 – revision 1, Design Manual for Roads and Bridges Volume 11 Section 3 Part 7 – Noise and Vibration'*.

11.7.17 For the purposes of assessing the potential significance of changes in noise as a result of the Development, for sources of noise that are continuous and already occur as part of the baseline conditions, such as road traffic noise, a 3 dB change in average noise exposure (e.g. $L_{Aeq, 16hr}$) will be used as a measure for potentially significant effects. Where noise exposure is already high, a smaller change may be considered as potentially significant.

11.7.18 For daytime periods (0700-2300hrs), operational adverse or beneficial noise effects on residential receptors will be identified where the effect of the development is or results in:

- Free-field average absolute free-field noise exposure of at least 50 dB $L_{Aeq, 16hr}$[39]; and
- A magnitude of effect as indicated by **Table 11.10** where a change of at least 3 dB is considered as potentially significant.

11.7.19 For daytime periods (0700-2300), operational noise will be considered to give rise to significant adverse effects at residential receptors where it results in average absolute free-field noise exposure of at least 63 dB $L_{Aeq, 16hr}$[40].

11.7.20 For aircraft noise, Consideration will also be given to the size of the population exposed to noise above 57 dB $L_{Aeq, 16hr}$[41] and 69 dB $L_{Aeq, 16hr}$[42] in accordance with Government policy.

11.7.21 For night-time periods, operational noise will be considered to give rise to significant adverse effects at residential receptors where it results in:

- An absolute free-field noise level of at least 40 dB $L_{Aeq, 8hr}$[43]; and
- A magnitude of effect as indicated by **Table 11.10** where a change of at least 3 dB is considered as potentially significant.

11.7.22 For night-time periods, operational noise will also be considered to result in an adverse effect on residential receptors where noise levels at the façade as a result of the Development are at least 60 dB L_{Amax}[44].

11.7.23 During the night, operational noise will be considered to give rise to significant adverse effects at residential receptors with no specific form of noise insulation where the development results in:

[39] Based on WHO *'Guidelines for Community Noise'* 1999 for the avoidance of *'moderate annoyance'* during daytime and evening periods

[40] Based on Aviation Policy Framework (APF) Paragraphs 3.37 – 3.39 which indicate that above 63 dB $L_{Aeq, 16\ hour}$ airports should provide assistance towards noise insulation at noise-sensitive buildings and residential dwellings, and other infrastructure projects which have identified 63 dB $L_{Aeq, 16hr}$ as a significant level of noise exposure. In the case road traffic noise, a free-field level of exposure at 63 dB $L_{Aeq, 16hr}$ is approximately 68 dB $L_{A10, 18hr}$ which is the threshold at which the Noise Insulation Regulations 1975 prescribes noise insulation.

[41] The Aviation Policy Framework (APF) states in Paragraph 3.17 that 57 dB $L_{Aeq, 16hr}$ will continue to treat as *'the average level of daytime aircraft noise marking the approximate onset of significant community annoyance'*

[42] The Aviation Policy Framework (APF) states in Paragraph 3.36 that the Government expects airports operators to offer households exposed to 69 dB $L_{Aeq, 16hr}$ or more assistance with the costs of moving.

[43] Value aligns with the WHO 'night noise guideline' as set out in the WHO Night Noise Guidelines for Europe (2009) and is described as the 'Lowest Observed Adverse Effect Level (LOAEL)'

[44] An outdoor 60 dB L_{Amax} at the façade is likely to result in an indoor L_{Amax} value of around 45 dB L_{Amax} which is cited by WHO in publications 'Guidelines for Community Noise' (1999) and 'Night Noise Guidelines for Europe' (2009) as a known threshold for the potential effects of sleep disturbace.

- Absolute average free-field noise levels exceeding 55 dB $L_{Aeq, 8hr}$[45]; or
- An absolute noise level of at least 80 dB L_{ASmax} (approximately 90 dB SEL[46]) where the average number of events during the night above this level is at least 18 (based one additional awakening due to aircraft noise[47]).

11.7.24 Whilst the above effect criteria provide objective measures for the significance of the noise effects associated with the Development, adverse or beneficial effects may also be identified through any potential features of the effects or through professional judgement.

11.7.25 **Table 11.11** summarises the criteria that will be adopted for assessing the effect of the Development upon non-residential noise sensitive receptors. In the case of non-residential noise sensitive receptors, the criteria provided in **Table 11.11** will be used to indicate effects however significance will be determined on a case-by-case basis.

Table 11.11 Impact Criteria for Potentially Significant Effects on Non-Sensitive Receptors

Receptor(s)	Impact Criteria		Potential Effects
	Daytime (0700-2300)	**Night-time (2300-0700)**	
Acoustical resources i.e. Theatres, concert halls, opera houses, concert halls or any specific space for the dedicated to the enjoyment of sound	60 dB L_{Amax}; or 50 dB $L_{Aeq, T}$; and No increase upon existing See Note 1		Loss in acoustic quality and enjoyment
Places of worship	50 dB $L_{Aeq, T}$ and an increase of 3 dB See Note 2	n/a	Disruption or disturbance
Educational Facilities Including schools, colleges and	50 dB $L_{Aeq, T}$ and an increase of 3 dB See Note 2	n/a	Disruption or disturbance and interference with task
Healthcare Facilities Including hospitals and out-patients clinics	50 dB $L_{Aeq, T}$ and a change of 3 dB See Note 2	45 dB $L_{Aeq, T}$ and a change of 3 dB See Note 3	Disruption or disturbance during daytime periods and sleep disturbance during the night
Community Resources including libraries	50 dB $L_{Aeq, T}$ and a change of 3 dB See Note 2	n/a	Disruption or disturbance and interference with task

Notes:
NOTE 1: Values based on indoor noise levels of 25 dB $L_{Aeq, T}$ and 25 dB L_{ASmax} as available within BS8233:2014 and FRA/FTA guidance respectively. Values have been converted to outdoor levels assuming a façade adjustment with a partially open window.

[45] Value aligns with the WHO 'interim target' value as set out in the WHO Night Noise Guidelines for Europe (2009) and is described as the 'Significant Observed Adverse Effect Level (SOAEL)'
[46] 90 dB SEL has been used by Department for Transport and at other UK airports as a measure of sleep disturbance and the basis of for night-noise insulation schemes when considering the number and nature of aircraft night operations.
[47] Based on the findings of Basner et. al. *'Aircraft noise effects on sleep: Application of the results of a large polysomnographic field study'* 2006 enabling the calculation one additional awakening due to aircraft noise using L_{ASmax} noise events. Assumes an average insulation value of the 21 dB for a bedroom façade as adopted by the WHO Night Noise Guidelines for Europe (2009)

NOTE 2: Value is based on an indoor noise level target value of 35 dB $L_{Aeq, T}$ as aligned with the guidance available within Building Bulletin 93 and BS8233:2014. Value has been converted to outdoor levels assuming a façade adjustment with a partially open window.
NOTE 3: Value is based on an internal noise level target value of 30 dB $L_{Aeq, T}$ which is consistent with the guidance provided in BS8233:2014 and WHO Guidelines for Community Noise. Value has been converted to outdoor levels assuming a façade adjustment with a partially open window.

Operational Impacts (Fixed noise sources)

11.7.26 For fixed or static noise sources such as building services plant, an effects assessment will be undertaken through comparison of a sound rating level and background sound level in accordance with the assessment framework set out in BS4142:2014.

Background noise levels will be established for the periods of operation e.g. day and night-time periods through the baseline with noise levels.

11.7.27 The magnitude of the noise effect will be determined through the descriptors outlined in **Table 11.12** below. It should be noted that, as outlined in BS4142:2014, the significance of the effect is dependent upon local context. Significance will therefore be concluded for each fixed noise source under consideration on a case-by-case basis. This approach is consistent with PPG-N.

Table 11.12 Impact Magnitude Descriptors for changes in Fixed Operational Noise Sources

Impact Descriptor	Difference between Sound Rating Level and Background Sound Level
No Impact	< - 10 dB
Negligible	≥ -10 dB and < 0 dB
Minor	≥ 0 dB and < +5 dB
Moderate	≥ +5 dB and < +10 dB
Major	≥ 10 dB

Mitigation Options

11.7.28 Mitigation options will be considered for the Development that will reflect industry best practice and which will be designed to reduce and minimise the adverse effects of noise. Proposals for mitigation will be embedded within the design and operating regime for the airport and developed through consultation with stakeholders. A specific Air and Ground Noise Mitigation Strategy will be developed for air and ground noise effects.

11.7.29 At this stage the possible measures identified to mitigate effects of noise from the various sources associated with the Development include:

- Operational procedures and airfield layout, including
  - Noise Preferential Routes (NPRs);
  - Continuous Descent Approach (CDA);
  - Continuous Climb Operations (CCO);
  - Preferential runway usage;
  - Displaced Thresholds; and

- Increased Glideslopes.

- Noise insulation scheme;
- Noise barriers and screens;
- Low-noise road surfacing; and
- Operational restrictions, such as an aircraft quota system.

12. Socio-Economic

This section presents the proposed scope of work for the Socio-economics assessment.

12.1 Introduction

12.1.1 This section outlines the socio-economic baseline conditions for, and explains the proposed approach to, measuring the likely socio-economic effects which are likely to be associated with development at Manston Airport. The need for the assessment arises from the likely effects of the proposed development at site, local, sub-regional, regional and national scales reflecting its scale and likely scope of effects. The socio-economic assessment will measure potential positive and negative effects during construction and operation, identifying appropriate mitigation to address any negative effects. This section sets out the socio-economic baseline in respect of:

- Population characteristics
- Index of Multiple Deprivation
- Education
- Health
- Social cohesion, security and crime
- Economic development measures

12.1.2 The analysis sets a reference point against which the likely effects of the proposed development can be set.

12.2 Relevant policy, legislation and guidance

12.2.1 The following documents contain policies which are of importance in establishing a reference point for the consideration of socio-economic issues associated with the proposed development at Manston Airport:

Table 12.1 Summary of Relevant Legislation

Policy Document	Principal sections/policies
National Planning Policy Framework (2012)	Focus on securing sustainable development through the planning system which includes balancing economic, social and environmental considerations. Economic development as a core delivery priority for local planning policies and proposals.
South East Local Enterprise Partnership (2014) Strategic Economic Plan	Key Themes: Building on our Economic Strengths Boosting Our Productivity Improving Our Skills
Kent County Council (2013) 14-24: Learning, Employment and Skills Strategy 2015 re-fresh	Strategy priorities: the need for a radical improvement in vocational and technical education, and training; the importance of addressing employers' concerns about work readiness;

Policy Document	Principal sections/policies
	the employability skills of those learners leaving school, college or university.
Kent Forum (2012) A Vision for Kent	The top 3 commitments for Ambition 1 - To grow the economy To deliver the critical infrastructure that will create the conditions for economic growth across Kent. To raise the career aspirations of Kent's residents, from early years through to adulthood, and to meet those increased aspirations with a range of learning opportunities, apprenticeships and internships that meet future business need. To be business friendly and the county of choice for inward investment and expansion.
Thanet District Council (2013) Thanet District Council Economic Growth and Regeneration Strategy and Plan 2013 – 2031	Vision: to accelerate economic growth and achieve greater productivity and profit for businesses; to create more jobs, and increased prosperity for residents. Critical pathways: Create the right environment and conditions to deliver real economic growth Capitalise on the District's assets Maximise the potential of existing businesses Create an enterprising and aspirational labour force with the right education and skills
Thanet District Council (January 2015) Thanet Local Plan Preferred Options	Strategic Priority 1 - Create additional employment and training opportunities, to strengthen and diversify the local economy and improve local earning power and employability. Policy SP02 - Economic Growth Policy SP03 - Land Allocated for Economic Development Policy SP04 – Manston Business Park Policy SP05 – Manston Airport

12.3 Sources of data used in preparing the Scoping Report

12.3.1 The principal sources of data which inform this Scoping Report and will be drawn upon for the Environmental Statement are:

- Office for National Statistics 2011 Census Data
- NOMIS
- Thanet District Council (2012) Economic and Employment Assessment
- Thanet District Council (2013) Thanet District Council Economic Growth and Regeneration Strategy and Plan 2013-2031
- Thanet District Council https://www.thanet.gov.uk/your-services/statistics-and-census-information/state-of-the-district-facts-and-figures/thanet-statistics/
- Kent County Council http://www.kent.gov.uk/about-the-council/information-and-data/Facts-and-figures-about-Kent/area-profiles#

12.4 Engagement with consultees

12.4.1 Initial consultation with Kent County Council (KCC) and Thanet District Council (TDC) has been undertaken to date; these meetings were held to introduce the scheme and included discussion of the socio-economic effects of the development.

12.4.2 The meeting with KCC discussed the potential for Manston Airport to support jobs growth and creation in East Kent. It was suggested that RiverOak should also consult with East Kent Opportunities, a joint venture between KCC and TDC

formed to develop a number of sites, including the Manston Business Park, over their plans for development as there maybe areas of common ground.

12.4.3 Further consultation with interested parties, such as the local authorities will be undertaken following the publication of this Scoping Report and as part of the development of the Environmental Statement.

12.5 Overview of baseline conditions

Population Profile

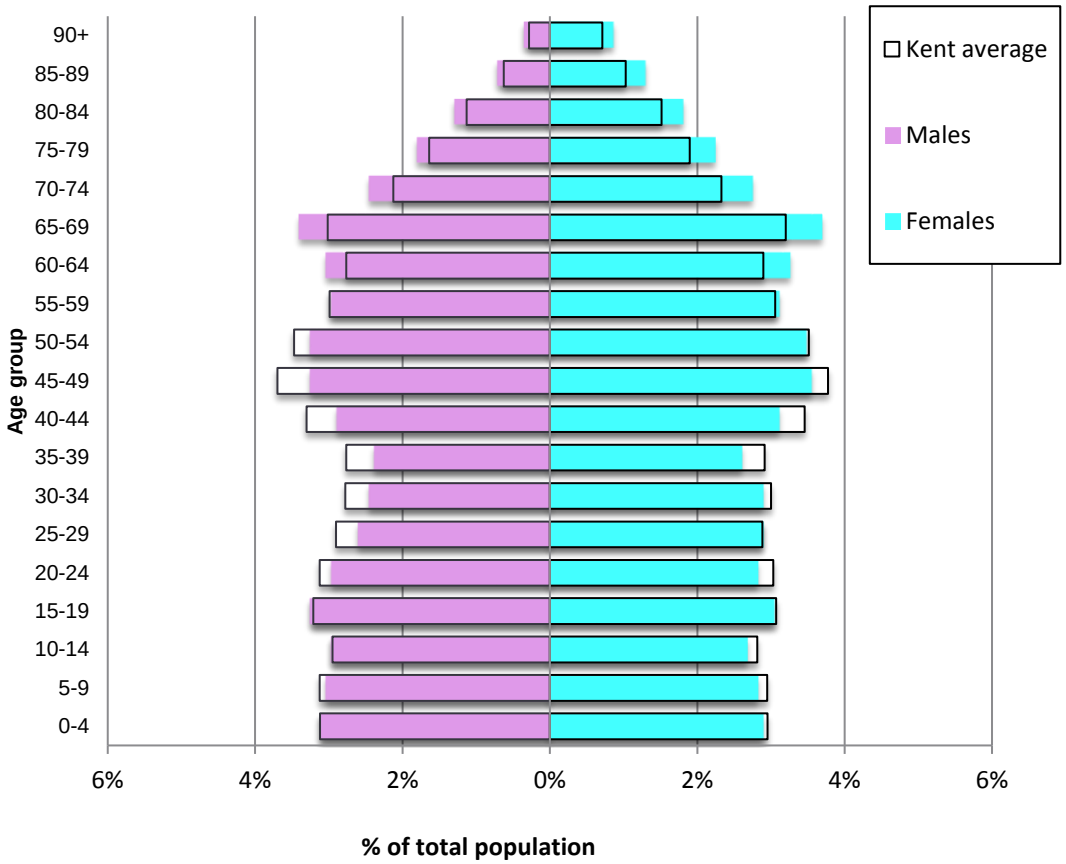
12.5.1 **Table 12.2** and **Figure 12.1** summarise the profile of the population in Thanet and shows, most notably, a relatively low proportion of those of working age and a relatively high proportion of elderly compared to Kent and England and Wales more widely, whilst the proportion of those aged 0-15 are in line with County and National figures. Nevertheless, the majority of the population within Thanet is of working age and this is an important resource on which to draw to contribute to economic development in the District.

Table 12.2 Population Profile 2014 by Geography

	Thanet		**Kent**		**England & Wales**	
	No.	% of total population	No.	% of total population	No.	% of total population
All People	138,400		1,510,400		57,408,700	
0-15	26,000	18.8%	289,400	19.2%	10,858,400	18.9%
16-64	81,000	58.6%	926,500	61.3%	36,397,802	63.4%
65+	31,300	22.6%	294,500	19.5%	10,152,500	17.7%

Source: ONS Mid Year Estimates

Figure 12.1 Population Profile in Thanet by Age and Gender

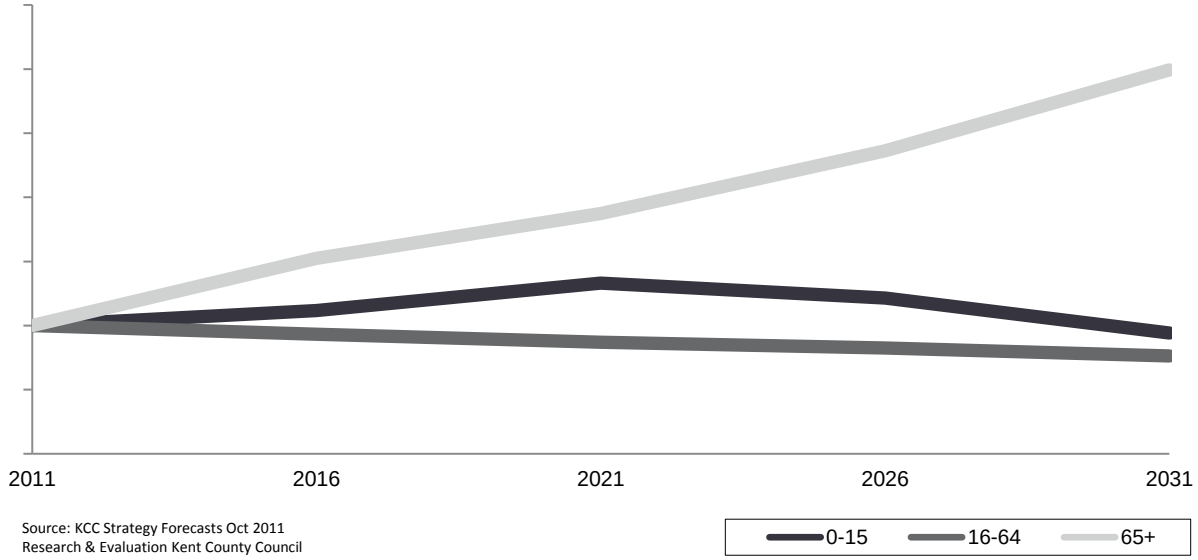


Source:

Source:Source: ONS Mid Year Estimates
Presented by: Research & Evaluation, Kent County Council

12.5.2 The expected changes in the population profile in Thanet are more significant, predicting a continuing aging of the population (**Figure 12.2**). Which reflects a combination of the aging of the current cohort of those aged 50-65 which forms part of the 'post-war bulge', out-migration of those of working age and a falling birth rate.

Figure 12.2 Population Projections in Thanet by Age 2011 - 2031



Source: www.kent.gov.uk/__data/assets/excel_doc/0007/.../District_Profile.xls

Index of Multiple Deprivation

12.5.3 The Index of Multiple Deprivation (IMD) is a composite measure which is defined by a number of domains or dimensions[48], including household income, education, health and living environment. The index offers a readily comparable measure, by area, of the degree to which communities may be struggling with particular issues. As illustrated in **Table 12.3**, whilst Thanet overall performs marginally better than Kent and a good deal better than England in respect of the absence of deprivation, this disguises variability amongst local communities (**Figure 12.3** in which all seven domains of deprivation are considered)) where there are significant concentrations of relative deprivation, particularly in parts of the coastal towns.

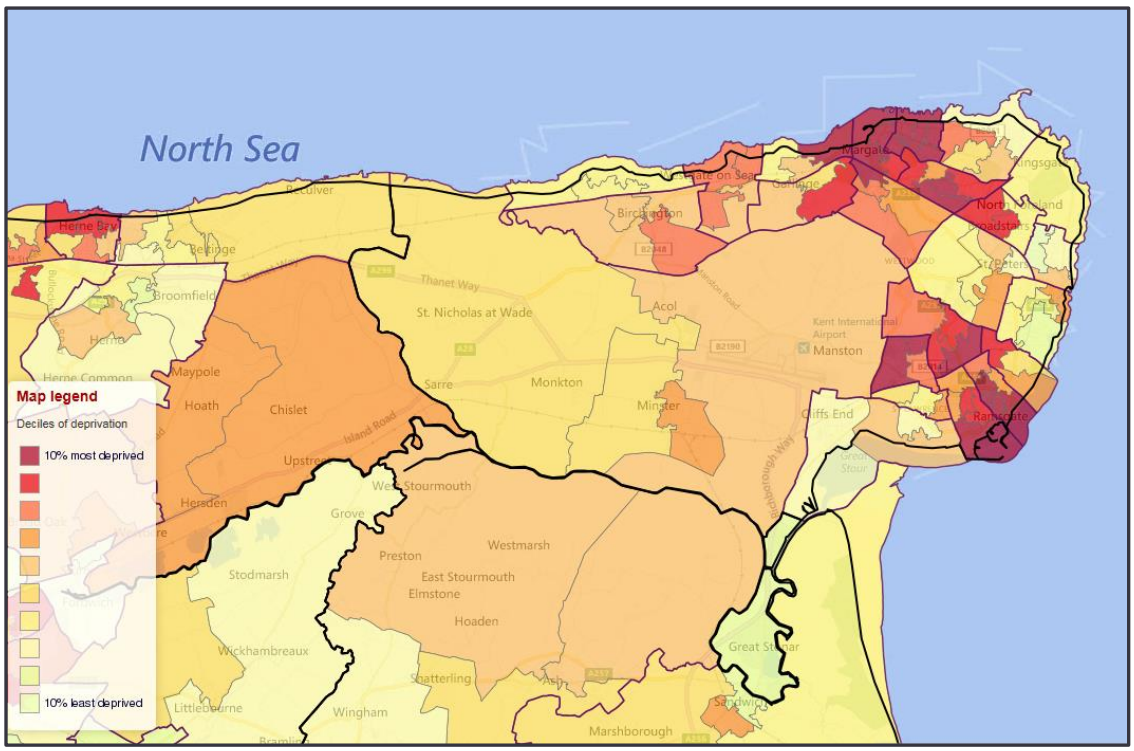
Table 12.3 Deprivation in Thanet, Kent and England 2010

Variable	Thanet	%	Kent	%	England	%
All Households	59,513		546,742		22,063,368	
Household is Not Deprived in Any Dimension	20,410	34.3	170,873	31.2	9,385,648	42.5
Household is Deprived in 1 Dimension	20,419	34.3	198,939	36.4	7,204,181	32.7
Household is Deprived in 2 Dimensions	14,331	20.6	133,819	24.5	4,223,982	19.1
Household is Deprived in 3 Dimensions	3,889	7.0	39,105	7.2	1,133,622	5.1
Household is Deprived in 4 Dimensions	464	0.8	4,006	0.7	115,935	5.3

Source: Census 2011 Households by Deprivation Dimensions, Tables QS119EW (2011), UV67 (2001)

[48] There are seven domains (or dimensions) used in calculating the Index of Multiple Deprivation: Income, Employment, Health Deprivation and Disability, Education, Skills and Training Deprivation, Barriers to Housing and Services, Crime and Living Environment Deprivation.

Figure 12.3 Index of Multiple Deprivation (2015) at Neighbourhood LSOA) Scale



Source: http://dclgapps.communities.gov.uk/imd/idmap.html

Education

12.5.4 Thanet has a relatively high level of residents with either no qualifications or qualifications equal to 1 or more GCSE at grade D or below, than the national average (**Table 12.4**), with a commensurately low relative proportion of residents with more advanced qualifications. There is clearly a significant skills gap which serves to supress average wage levels and can prove unattractive to prospective and existing employers seeking to invest in the area. Levels of educational attainment can be closely linked to the Index of Multiple Deprivation, as discussed above, of which education is one dimension. Poor educational achievement can be difficult to turn around and require time to achieve.

Table 12.4 Qualifications by Geography

Qualification[49]	Thanet	Kent	England
No Qualifications	28.4%	22.5%	22.5%
Level 1	14.8%	14.7%	13.3%
Level 2	16.4%	16.9%	15.2%
Apprenticeship	3.9%	3.8%	3.6%
Level 3	11.3%	12.3%	12.4%
Level 4	19.6%	24.7%	27.4%
Other	5.6%	5.1%	5.7%

Source: 2011 census

Health and Crime

12.5.5 Health can reflect a range of other indicators such as deprivation, crime and unemployment and this is no exception for Thanet where there a higher proportion of some vulnerable populations in Thanet such as children in care, ex-offenders and people with a mental health condition. Most indicators relating to healthy lifestyles show that Thanet has statistically worse outcomes compared to the England average. These include smoking prevalence (including smoking during pregnancy), excess weight in adults, physically active adults and prevalence of opiate and/or crack use. **Table 12.5** sets out the key health variables by geography, illustrating significantly higher levels of bad and very bad health, lower levels of very good health, combined with lower life expectancy and higher dependence in incapacity benefits than the South East or England.

Table 12.5 Key Health Variables by Geography

Variable	Measure	Thanet	South East	England
Very Good Health	%	40.7	49.0	47.2
Good Health	%	35.1	34.6	34.2
Fair Health	%	16.7	12.0	13.1
Bad Health	%	5.8	3.4	4.2
Very Bad Health	%	1.7	1.0	1.2

[49] Level 1: 1-4 O Levels/CSE/GCSEs (any grades), Entry Level, Foundation Diploma, NVQ Level 1, Foundation GNVQ, Basic/Essential Skills;
Level 2: 5+ O Level (Passes)/CSEs (Grade 1)/GCSEs (Grades A*-C), School Certificate, 1 A Level/ 2-3 AS Levels/VCEs, Intermediate/Higher Diploma, Welsh Baccalaureate Intermediate Diploma, NVQ level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma; Apprenticeship;
Level 3: 2+ A Levels/VCEs, 4+ AS Levels, Higher School Certificate, Progression/Advanced Diploma, Welsh Baccalaureate Advanced Diploma, NVQ Level 3; Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma;
Level 4 and above: Degree (for example BA, BSc), Higher Degree (for example MA, PhD, PGCE), NVQ Level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher level, Foundation degree (NI), Professional qualifications (for example teaching, nursing, accountancy);
Other qualifications: Vocational/Work-related Qualifications, Foreign Qualifications (not stated/level unknown).

Variable	Measure	Thanet	South East	England
Low Birthweight Live Births	%	8.0	6.5	7.2
Infant Mortality	Rate per 1000	4.5	3.7	4.4
Life Expectancy at Birth; Males	Years	76.5	79.4	78.3
Life Expectancy at Birth; Females	Years	81.6	83.3	82.3
Incapacity Benefits	%	9	5	7

Source: Census 2011

12.5.6 There are considerable variations in population health within Thanet and inequalities are wider than in any other district in Kent. Around one third of the Thanet population are in the most deprived quintile nationally with less than one in twenty in the least deprived quintile. The difference in life expectancy between the highest and lowest wards is 16.77 years and mental health contact rates were around four times higher between the highest and lowest wards[50].

12.5.7 Crime is rising in Thanet (**Table 12.6**) and across almost every type is higher than that of Kent as a whole (**Table 12.7**).

Table 12.6 Reported crime in Thanet 2009/10 – 2014/15

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Cases	10,783	10,658	10,560	9,945	11,971	11,708

Source: Kent Police

Table 12.7 Recorded Crimes 2014/15 by Geography per 1,000 population

Type of Crime	Thanet	Kent
Burglary dwelling (per 1,000 households)	9.9	7.1
Burglary other	4.0	4.3
Criminal damage offences	14.6	10.0
Robbery	0.9	0.5
Sexual offences	2.3	1.4
Shoplifting	8.9	6.5
Theft from motor vehicle	4.7	3.6
Theft of motor vehicle	1.4	1.3
Theft of pedal cycle	2.1	1.1
Theft offences	12.2	9.1

[50] See: http://www.kpho.org.uk/health-and-social-care-maps/pdf-social-care-maps

Type of Crime	Thanet	Kent
Vehicle interference	0.9	0.6
Violence against the person	23.7	15.6
Victim based crime	80.4	57.0

Source: Kent County Council Community Safety Portal

Economic Development Measures

Working Age Population

12.5.8 Related to its population characteristics, Thanet has a relatively smaller population of working age compared to Kent and nationally (**Table 12.8**). Whilst the differences are relatively small (3 to 5%) and need to be placed in the context of the working age population forming the largest proportion of residents in Thanet (see **Table 12.1**).

Table 12.8 Working Age Population by Geography 2014

	Thanet		Kent		England & Wales	
	Number	%	Number	%	Number	%
Males	39,300	58.9%	458,400	61.9%	18,147,900	64.1%
Females	41,700	58.3%	468,100	60.8%	18,249,900	62.7%
Total	81,000	58.6%	926,500	61.3%	46,558,400	63.4%

Source: ONS Mid Year Estimates

Employment

12.5.9 Unemployment is a problem in Thanet, with worklessness at significantly higher levels than Kent or Nationally. Whilst concentrated in the coastal towns and associated with wider social issues (see Index of Multiple Deprivation below), the issue is nevertheless of concern. As at February 2013 the following wards showed key out-of-work benefits over 20% of the working age population: Cliftonville West 41.6%; Margate Central 41.1%; Newington 26%; Eastcliff 23.8%; Dane Valley 21.5%; Ramsgate Central Harbour 21%; and Northwood 20.1%.

Table 12.9 Worklessness in People Aged 16 – 64, May 2015

	Thanet District		Kent		England & Wales	
	Number	**% of 16-64 age group**	**Number**	**% of 16-64 age group**	**Number**	**% of 16-64 age group**
Out of work benefits	**11,260**	**13.9%**	**74,980**	**8.1%**	**3,359,280**	**9.2%**
Jobseekers	2,370	2.9%	12,880	1.4%	609,330	1.7%
Those claiming incapacity benefits	7,290	9.0%	49,540	5.3%	2,242,470	6.2%
Lone parents	1,240	1.5%	10,300	1.1%	406,630	1.1%
Others on income related benefits	360	0.4%	2,260	0.2%	100,850	0.3%

Source: DWP Longitudinal Study

Table 12.10 Employment by Occupation 2011

	Thanet		Kent		England	
	Number	% of all people 16-74 in employment	Number	% of all people 16-74 in employment	Number	% of all people 16-74 in employment
All Occupations	55,200		688,434		25,162,721	100%
Managers, directors and senior officials	5,489	9.9%	79,504	11.5%	2,734,900	10.9%
Professional occupations	7,794	14.1%	110,988	16.1%	4,400,375	17.5%
Associate professional and technical occupations	5,669	10.3%	87,041	12.6%	3,219,067	12.8%
Administrative and secretarial occupations	5,717	10.4%	80,621	11.7%	2,883,230	11.5%
Skilled trades occupations	7,174	13.0%	84,252	12.2%	2,858,680	11.4%
Caring, leisure and other service occupations	7,447	13.5%	67,451	9.8%	2,348,650	9.3%
Sales and customer service occupations	5,352	9.7%	58,242	8.5%	2,117,477	8.4%

	Thanet		Kent		England	
Process, plant and machine operatives	3,970	7.2%	46,284	6.7%	1,808,024	7.2%
Elementary occupations	6,588	11.9%	74,051	10.8%	2,792,318	11.1%

Source: 2011 Census Table KS608EW

12.5.10 Thanet has 20% less Higher and Intermediate managerial, administrative or professional households than the national average (**Table 12.10**) which translates into the lower proportions of social groups ABC1 than Kent or Nationally (**Table 12.11**). In turn, this is reflected in the profile of registered business (**Figure 12.4**).

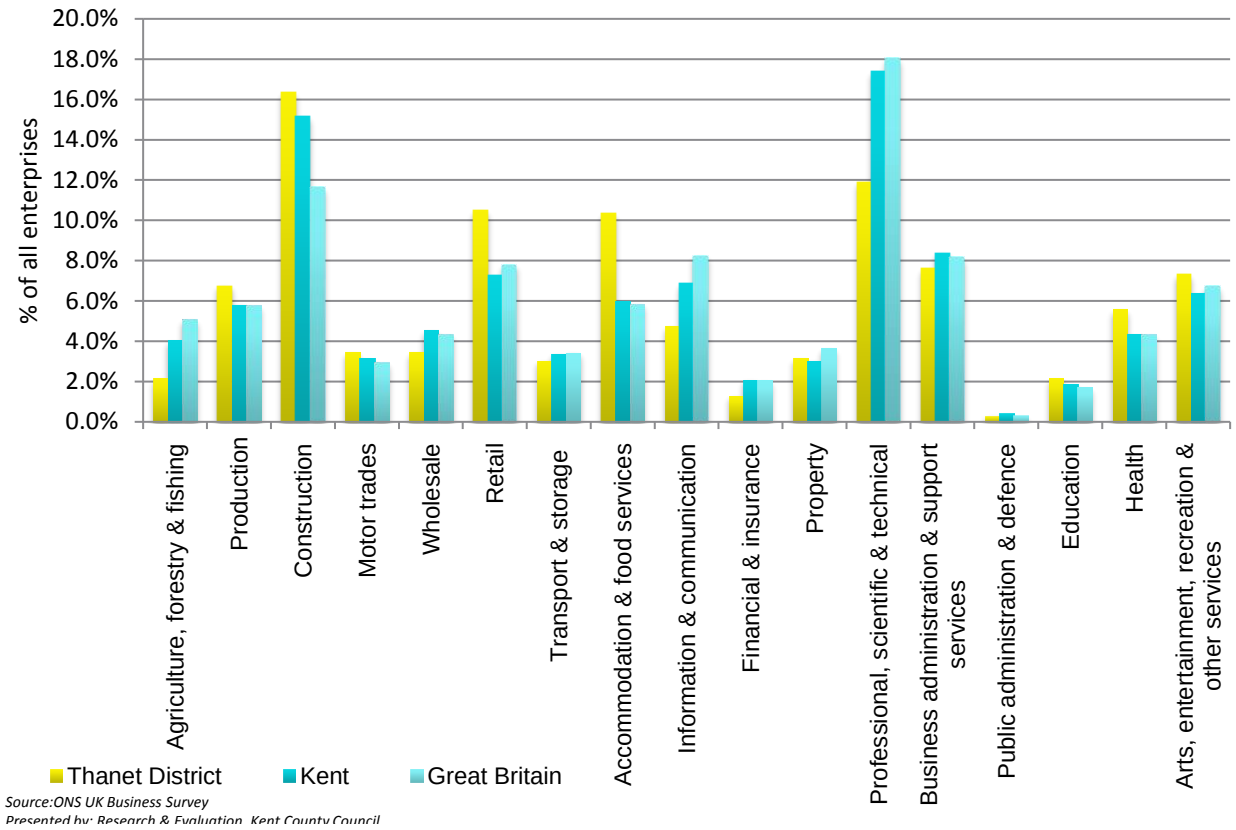
Table 12.11 Proportion of Workers by Social Group and Geography

Group	Thanet	Kent	England
AB	15.88%	22.42%	22.96%
C1	29.38%	31.89%	30.92%
C2	23.59%	22.46%	20.64%
DE	31.14%	23.22%	25.49%

Source: Census 2011

12.5.11 The profile shown in **Table 12.11** is also reflected in the average weekly earnings of the District (**Table 12.12**) which are notably lower than those for Kent and Nationally.

Figure 12.4 Registered Businesses by Geography 2015



Source: www.kent.gov.uk/__data/assets/excel_doc/0007/.../District_Profile.xls

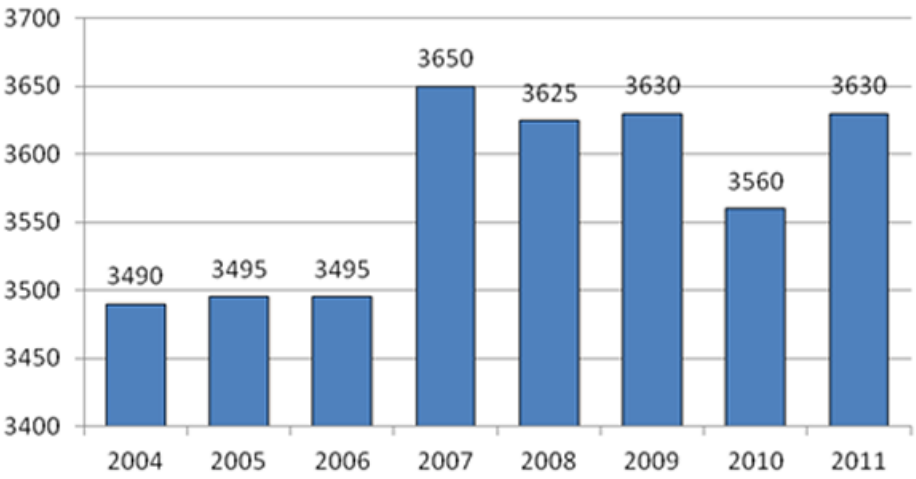
Table 12.12 Median weekly full-time earnings (£s) - workplace based (2015)

	Thanet District	Kent	Great Britain
Males	451.5	554.3	569.9
Females	374.5	424.3	471.5
Total	415.8	504.1	529.0

Source: NOMIS - Annual Survey of Hours & Earnings

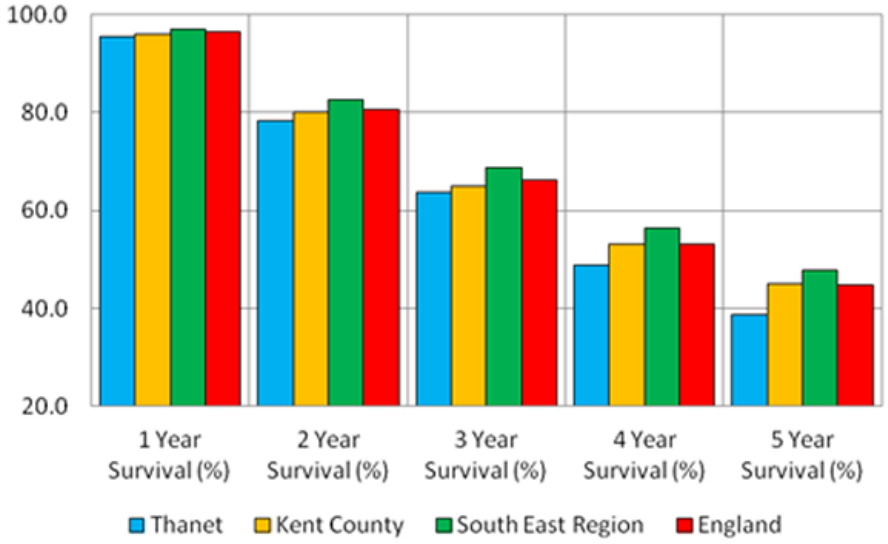
12.5.12 The Office for National Statistics data suggests that Thanet has approximately 3,500 VAT-registered businesses, a figure which has remained broadly steady (**Figure 12.5**), although 5-year survival rates are lower than Kent and Nationally (**Figure 12.6**).

Figure 12.5 Number of Active enterprises in Thanet 2004 - 2011



Source: http://www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=business+demography+release

Figure 12.6 Five- Year Survival Rates oft Enterprises by Geography



Source: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-283124

Thanet Economic and Employment Assessment – Headline Observations

12.5.13 The Assessment[51] summarises and assesses the implications for economic development of the various socio-economic characteristics of Thanet. Principal amongst these conclusions are:

12.5.14 Thanet's growth is currently below that of the South East and more in line with the UK as a whole

12.5.15 Within Thanet, the sectors which comprised the greatest contribution to Gross Value Added (GVA) include education, real estate, health and construction of buildings. The greatest growth over the last five years in Thanet has been in the

[51] Thanet District Council (2012) Economic and Employment Assessment

service sectors and particularly in sectors such as finance and real estate. The majority of manufacturing sectors have continued to decline during this time, as has agriculture forestry and fishing.

12.5.16 Thanet's business base is largely located in urban areas

12.5.17 There are some 5,000 businesses within Thanet. This figure is significantly higher than ONS data which suggests that there were 3,560 businesses in 2010. Around 80 per cent of the companies identified in Thanet are single site. Around 13 per cent are companies with headquarters in Thanet and multiple sites either in Thanet or elsewhere.

12.5.18 Home-working is relatively high in the district and is particularly popular in Margate and Ramsgate

12.5.19 A relatively high proportion of the businesses, particularly in 'urban wards' are home based. They account for over 5 per cent of businesses, ranking Thanet in third place in Kent only behind Canterbury and Tunbridge Wells. In addition around 9.4% of the working population in the district are home-based. In particular Margate and Ramsgate have high proportions of home-based businesses.

12.5.20 Key sectors within the business base include wholesale and retail and construction

12.5.21 Wholesale and retail and construction business comprise a quarter of all businesses. The next largest sectors are other service activities, accommodation and food services, followed by professional, scientific and technical and admin and support services.

12.5.22 Tourism & green sectors, comprise a sizeable proportion of total businesses

12.5.23 There are over 530 businesses within the tourism sector representing 11% of the business base Around 80 businesses have been identified in the primary green sector and 280 businesses in the broader secondary green sector. Combined, they represent seven per cent of the business base. Green businesses are more likely to be located in rural areas than other sectors, particularly secondary green sector businesses.

12.5.24 Businesses within the knowledge intensive sectors comprise a smaller proportion of the total than elsewhere

12.5.25 Thanet, despite its low base, has experienced strong growth within the knowledge intensive sectors over the last decade. Proportionally however, there still remain fewer businesses within knowledge intensive sectors in the district than other areas of Kent. At 18%, the proportion of knowledge intensive businesses compares to the England average of 23% per cent and the South East as a whole of 27%. The local economy in Thanet has been shown to be dominated by manufacturing with this sector representing 50% of the key commercial sectors in Thanet which mainly include: Transport and Logistics, Retail and Wholesale and Engineering.

12.5.26 Historically the district has had just above average proportion of growth firms, but growth potential is lower

12.5.27 Within the UK growth firms which have experienced employment growth of five per cent or more over the last three years account for 7% of businesses, in Thanet

they account for slightly more – 8%. The proportion of low growth or declining firms is however also higher at 8% compared to 7% within the UK. In terms of growth potential, Thanet is broadly in line with the UK, particularly for high growth potential.

12.5.28 Exporting potential is much lower in Thanet than the UK

12.5.29 Businesses that export make up only a small proportion of the UK economy yet are a key component of the growth strategy for the UK. Thanet is in line with the UK in terms of its current exports

12.5.30 An additional 3,100 jobs are likely to be created over the next two decades in Thanet with continued growth in the service sectors and declines within manufacturing

12.5.31 Net growth of £700 million in output over the next two decades is likely, taking the total to over £2 billion in 2031. The biggest growth will be in construction of buildings (net growth of £90 million), health (net growth of £90 million) and real estate (net growth of £70 million). The manufacturing sectors will experience the greatest losses, although these are not predicted to be as significant as the employment declines in these sectors pointing to enhanced productivity.

12.5.32 Caring, leisure and other service occupations will grow strongly, alongside professional occupations in which Thanet is currently under-represented

12.5.33 There will be a strong growth in the caring, leisure and other service occupations, as well as strong growth within the professional occupations. Based upon the existing occupation and skills profile this suggests that there could be challenges in ensuring that local residents are able to maximise the potential. This is particularly the case within professional services, in which Thanet is under-represented compared to the region and England.

12.5.34 Growth at Manston Airport could result in 2,000 additional jobs and up to 420 additional induced jobs as a result of the effect on the wider supply chain

12.5.35 Manston Airport is of regional significance. The employment growth anticipated by Manston Airport, to accompany passenger growth, is 2,000 direct jobs. The indirect (supply chain) effect of this job growth on Thanet is 1.05. So for every 1000 jobs created at Manston Airport, an additional 50 jobs will be created in Thanet through the industry supply chain. Around a third of these will be in air and water transport, a quarter will be in professional services and administrative and support services and just under a fifth are likely to be split across the manufacturing sectors particularly within metal products (6%). Overall, an uplift in direct and indirect job growth provides a significant proportion of the projected new jobs for Thanet as a whole.

12.6 The scope of the assessment, methodology and characteristics of the potential effects

Scope of the Assessment and Methodology

12.6.1 Drawing on the baseline data, the Environmental Statement will set out the direct and indirect effects of the development in respect of specific effects which could arise, including:

- Direct and indirect employment creation during construction and operation phases.
- Effects on businesses during construction and operation phases.
- Effects on the local and sub-regional economy.
- Effects on local receptors such as specific communities or groups within society, during construction and operation phases (in combination with the analysis of air quality, noise, landscape and visual, and traffic and transport effects).
- Cumulative effects in relation to both construction and operation.

12.6.2 For the purposes of this analysis, the spatial zone of influence (ZOI) is principally Thanet District, although economic effects could be wider. The temporal ZOI covers the construction phases (2 years) and the operation phase (20 years+).

12.6.3 In order to assess the scale and severity of effects, significance criteria will take account of the follow characteristics:

- Spatial extent (localised vs widespread with potential secondary effects).
- Coverage (groups, households, businesses affected).
- Duration (long term/permanent/short term/temporary).
- Frequency.
- Scope for mitigation.

12.6.4 The principal characteristics against which the overall magnitude of effects will be considered are set out in **Table 12.13**.

Table 12.13 Definitions of Magnitude

Degree of Effect	Definition of Magnitude
Large	An effect that is likely to constitute a permanent and widespread effect over and above the current baseline and significantly affect identified receptors.
Medium	An effect that is likely to change the baseline conditions and affect a moderate number of identified receptors.
Small	An effect that is likely to result in a small but perceptible change in the baseline conditions and affect a small number of identified receptors.
Negligible	An effect that does it result in any change in the baseline and/or is unlikely to measurably affect the well-being of identified receptors.

Note: these definitions might be refined in light of the availability of specific data and the sensitivity of specific receptors.

12.6.5 The relative sensitivity of identified receptors in relation to specific effects will be assessed against the criteria set out in **Table 12.14**.

Table 12.14 Definitions of Sensitivity

Degree of Sensitivity of Receptor	Definition
High	Individuals, groups and businesses that are likely to be particularly sensitive to economic change, positive or negative.
Medium	Individuals, groups and businesses likely to be reasonably sensitive to economic change, positive or negative.
Low	Individuals, groups and businesses that are unlikely to be sensitive to economic change, positive or negative.

12.6.6 In order to determine the overall significance of likely socio-economic effects, the significance of the effect will be combined with the sensitivity of the receptor as set out in **Table 12.15**.

Table 12.15 Determination of Overall Significance

		Sensitivity of Receptor		
		High	**Medium**	**Low**
Impact Magnitude	High	Major adverse/beneficial	Major adverse/beneficial	Moderate adverse/beneficial
	Medium	Major adverse/beneficial	Moderate adverse/beneficial	Minor adverse/beneficial
	Low	Moderate adverse/beneficial	Minor adverse/beneficial	Negligible effect
	Negligible	Minor adverse/beneficial	Negligible effect	Negligible effect

13. Traffic and Transport

This section presents the proposed scope of work for the Traffic and Transport assessment.

13.1 Introduction

13.1.1 This section outlines the proposed approach to measuring the traffic and transport effects which are likely to be associated with the development of Manston Airport. The need for the assessment arises from the likely effects of traffic generated by the Project on the local and sub-regional transport network.

13.2 Relevant Policy, Legislation and Guidance

13.2.1 The following documents contain policies which are of importance in establishing a reference point for the consideration of traffic and transport issues associated with the Project:

- The NPPF which sets out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. One of 12 core land use planning principles is that planning should: "Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable"
- NPPF Planning Practice Guidance (March 2014) (NPPF-PPG) which stipulates that the need for, scale, scope and level of detail required of a Transport Assessment or Transport Statement should be established as early in the development management process as possible as this may therefore positively influence the overall nature or the detailed design of the development.
- The Kent Local Transport Plan (LTP) which sets out the highway authority's aspirations for transport.
- The Institute of Environmental Management and Assessment (formerly the Institute of Environmental Assessment), Guidelines for the Environmental Assessment of Road Traffic (referred to as the IEMA Guidelines), 1993.Highways England,
- The Design Manual For Roads And Bridges (DMRB).

13.3 Main Sources of data used in preparing the scoping report

13.3.1 The principal sources of data which have informed chapter and which will be drawn upon for the EIA are:

- Department for Transport (DfT) traffic count data - http://www.dft.gov.uk/traffic-counts/cp.php?la=Kent

- Thanet bus map; and
- Google maps and Streetview.

13.4 Engagement with consultees

13.4.1 To date a preliminary meeting has taken place with Kent County Council setting out the broad proposals and starting discussions on the baseline conditions for the existing road network. Consultation with the local highway authority, Kent County Council, will be undertaken following the publication of this Scoping Report and as part of the future development of the assessment work and Preliminary Environmental Information Report (PEIR) as part of the DCO process.

13.5 Overview of baseline conditions

13.5.1 The Project site has good road access with links to Canterbury to the south west, Ramsgate to the east and Dover to the south. The site is in close proximity to two Primary Road Network (PRN) routes: the A299 which runs along the southern boundary of the site is a two lane dual carriageway which links to the M2 in the west; and the A28 which runs north east to southwest to the west of the site is a two lane dual carriageway which provides a link to Canterbury. Access to the site from the A299 is via the B2190 Spitfire Way and the B2050 Manston Road which runs east west through the site and links to the south western side of Ramsgate.

13.5.2 The main access to the site is currently in the form of a priority T junction off the B2050 Manston Road and consideration would need to be given as to whether the junction arrangement would need to be upgraded to accommodate an intensification of use, particularly if the focus of the airport is on freight transit.

13.5.3 Based on a high level review of traffic flows in the morning and evening peak periods, there does not appear to be road capacity issues, with the exception of localised congestion on the roads into/out of Ramsgate.

13.5.4 There are three bus services along the B2050 – the 11, 38 and 38A which run at hourly / two hourly intervals.

13.5.5 There is no cycle or pedestrian provision, however, given the location of the site, this may be considered acceptable by the local highway authority

13.6 The scope of assessment, methodology and characteristics of the potential effects

13.6.1 The study area for the traffic and transport assessment will be formally defined with the highway authority, although it is expected to include the B2050, A299 and local roads towards the Site and any Public Rights of Way (PRoW) which will be affected. The study area will cover route sections proposed for use by Project related traffic and which, based on professional judgement, have potential to be significantly affected (in relation to access, traffic and transport) as a result of the Project proposals.

13.6.2 The study area will be defined by the traffic routes to be taken by:

- general construction traffic – assumptions will be made on likely sources of construction materials and the most appropriate routeing will be identified;
- construction staff traffic –assumptions will be made on likely sources of construction staff and the most appropriate routeing will be identified;
- operational traffic – assumptions will be made on traffic origins and destinations.

13.6.3 Traffic count and personal injury accident (PIA) data will be sourced as required for highway sections within the study area so as further inform the baseline. Sensitive receptors will be identified through field survey, consultation with the highways authorities and interrogation of OS mapping. The following data sources will be used to inform this assessment.

- Traffic count surveys of the affected network, – locations of surveys to be agreed with KCC. Traffic count and speed surveys on the B2050 Manston Road in the vicinity of the existing site access have been undertaken.
- DfT traffic count data for the local area.
- PIA data for the study area – to be agreed with KCC.
- TEMPRO Version 6.2. will be used to determine traffic growth factors from the base year to the year of assessment

13.6.4 The traffic and transport assessment will consider:

- the highway route sections which are most likely to be used by traffic generated by the Project (i.e. the study area);
- the volume of traffic likely to be added to these routes as a result of the Project;
- potential effects upon highways (including PRoW) users, communities and safety as a result of changes in traffic levels; and
- the effects of the Project in isolation, and also cumulatively in combination with committed developments which may use routes within the study area for construction or operational traffic at the same time as the Project.

13.6.5 The assessment will use the methodology for assessing traffic and transport related environmental effects which is set out in the IEMA Guidelines, which identify the following receptors groups, locations and areas which should be considered for assessment, with the receptors identified as:

- those that are located alongside the road that are affected by the Project construction and operational traffic; and
- those that use the roads that are affected by the Project construction and operational traffic.

13.6.6 In addition, consideration will be given to the effects of the Project on bridleways, public footpaths and other public and private rights of way and mitigation measures identified where appropriate.

13.6.7 The key steps in this assessment are outlined below:

- Identification of appropriate study area (i.e. highway links where it is considered that the Project may create potentially significant effects).
- Identification of sensitive locations within the study area which are considered vulnerable to changes in traffic flow and profile.
- Determination of baseline traffic situation within the study area – based on findings of access study, field surveys, consultation (with KCC and other stakeholders as required) and traffic count surveys and accident data obtained from highway authority.
- Estimation of traffic generated by construction and operation of the Project.
- Consideration of likely distribution of vehicular trips across highway links within the study area, taking into account the location of local generators of traffic.
- An assessment of forecast construction related traffic and forecast operational traffic generation against the baseline, to determine the nature and significance of effects in line with IEMA Guidelines. This assessment will take into account the sensitivity of the receiving environment and magnitude of change against baseline to identify the level of effect.
- Identification of appropriate mitigation measures to avoid, reduce or offset any significant effects identified. This may include measures for incorporation in a traffic management plan.
- Professional judgement shall then be utilised to forecast residual effects following implementation of mitigation measures.

Significance Assessment and Criteria

13.6.8 In order to define the scale and extent of this assessment, the IEMA guidelines identify the following rules by which to undertake an assessment of potentially significant traffic and transport related environmental effects:

- Rule 1: Include roads where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%).
- Rule 2: Include any specifically sensitive areas where traffic flows are predicted to increase by 10% or more.

13.6.9 Sensitivity will be defined on the basis of road user groups, such as school children and the elderly, or areas where there is sizeable pedestrian activity but poor pedestrian facilities. A ‘sensitive’ area may therefore lie adjacent to a school, for example.

13.6.10 The magnitude of change is the proportional change in traffic anticipated to occur on the study area road network during construction. This calculation compares the forecast development traffic generation against the anticipated traffic baseline. As a guideline, the significance criteria is set out in **Table 13.1**, based upon the IEMA’s Rule 1 / Rule 2 criteria and the consideration that ‘Major’ and ‘Medium’ effects are significant in accordance with the EIA Regulations. Any effect described as ‘Minor’ or ‘Negligible’ will not be considered as ‘significant’ under the assessment.

Table 13.1 Significance Criteria

Significance of Effect	Percentage increase in: Total Traffic and *HGV Traffic*
Major (significant)	Greater than 60%.
Moderate (significant)	Greater than 30% and less than or equal to 60% *(Greater than or equal to 10% and less than 60% in defined 'sensitive' areas)*
Minor (not significant)	Greater than 10% and less than or equal to 30% *(Greater than or equal to 5% and less than 10% in defined 'sensitive' areas)*
Negligible (not significant)	Less than or equal to 10% *(Less than 5% in defined 'sensitive' areas)*

13.6.11 The significance of each effect of the Project will be considered against the criteria within the IEMA guidelines, where possible. However, the IEMA guidelines state that:

"…for many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources."

13.6.12 As such, professional judgement (led by best practice guidance) will also be applied in the assessment of effects so as to provide more meaningful conclusions, particularly in relation to the assessment of community and road safety effects which require local area knowledge.

Proposed Scope of Assessment

Summary of Potential Effects

13.6.13 The traffic and transport related environmental effects of vehicles to/from the Site during the construction phase and during operation will be considered. This will include Heavy Goods Vehicles (HGVs) - vehicles 3.5t gross weight (>3.5t), staff and visitors.

13.6.14 The IEMA Guidelines recommend that the following effects may prove potentially important when assessing environmental traffic effects: noise, vibration, visual effects, severance, driver delay, pedestrian delay, pedestrian amenity, accidents and safety, hazardous loads, air pollution, dust and dirt and ecological effects.

13.6.15 Given that no hazardous loads are anticipated, and dust, dirt and air pollution effects can be dealt with through the adoption of standard environmental best practice during construction, potentially significant effects that will be considered in the assessment of traffic and transport are as follows:

- Driver delay (e.g. congestion).
- Severance (perceived division that can occur in a community when it becomes separated by a major traffic artery).

- Pedestrian delay (effect upon pedestrians' ability to cross roads).
- Pedestrian amenity / fear and intimidation (effect upon the comfort / pleasantness of pedestrian journeys).
- Accidents and safety (effect upon safety of road users).

13.6.16 Noise, vibration, visual and ecological effects will be assessed elsewhere in the Environmental Statement.

Potential effects requiring further assessment

13.6.17 An assessment of the physical nature of the surrounding road network to be used by construction and operational traffic will be undertaken. This will appraise the likely effect and identify any works that are required to allow these routes to be utilised by construction and other traffic.

13.6.18 The traffic and transport assessment will consider the effects of the Project in isolation, and also cumulatively with committed and proposed developments which may use routes within the study area at the same time as the Project and in combination with other EIA topics.

Potential effects not requiring further assessment

13.6.19 Only those activities which lead to a threshold being exceeded will be considered as part of the EIA and mitigation opportunities identified, all other effects would be considered not significant and therefore not reported.

13.6.20 As identified above, given that no hazardous loads are anticipated, and dust, dirt and air pollution effects can be dealt with through the adoption of standard environmental best practice during construction.

13.6.21 It is anticipated that a Transport Assessment and Travel Plan will be required.

13.6.22 Mitigation measures will be identified, where appropriate. Mitigation is likely to include a Traffic Management Plan (TMP) which will consider traffic routeing, traffic management measures and highway alterations required to enable the construction and operation of the Project. This will be identified and agreed with the highway authority as necessary.

14. Summary of Scoped-Out Effects

This section presents a summary of those effects that it is proposed to scope out for any further assessment. Further information and details about the scoped-out effects can be found within the relevant technical chapters.

Table 14.1 Summary of potential effects that have been scoped out of the EIA

Topic	Scoped-out effects
General	**Potential effects as a result of the decommissioning phase of the airport**. It is considered that the airport will be operational long into the future and that therefore there will not be any requirement for decommissioning of the airport.
Air Quality	**Potential effects of odours on human receptors as a result of the operation of the airport.** In view of the relatively small size of the development, it is expected that if air quality is satisfactory, then odours are unlikely to be a significant concern, and have therefore been scoped out.
Biodiversity	**Potential effects on relevant habitats and species in watercourses/water bodies resulting from contamination caused by soil disturbance or the accidental spillage of chemicals during the construction and operation of the airport.** As part of the construction management plan and environmental management plan for the airport there will be sufficient and appropriate management and control measures in place to mitigate any pollution incident.
Ground & Surface Water	**Potential effects on local surface water quality via site run-off.** The site is above the highly permeable Chalk aquifer and also will have a permitted discharge to Pegwell Bay, therefore there are no local surface water features to receive direct site run-off.
Historic Environment	**Potential direct effects on heritage assets outside the proposed site boundary.** As direct effects arise from physical disturbance of assets, it follows that there will be no direct effects on heritage assets outside the proposed site boundary. **Potential indirect effects on designated heritage assets outside of the 1km study area.**
Land Quality	**Potential effects on human health from spills and leaks associated with mechanised plant during the construction phase.** Any spills or leaks are likely to be limited, and those that might occur will be managed and controlled by the use of best practice, which will include the use of appropriate PPE to avoid effects on human health. **Potential effects on human health from any contaminated land during construction activities.** No worker will be permitted to work at the site without adequate training in, and use of, appropriate PPE, and adoption of good site hygiene practices.
Landscape and Visual	**Potential effects upon National Landscape Character Area 113 – North Kent Basin.** This NLCA is too extensive to potentially sustain significant landscape effects from a development of the type and scale proposed at a single location such as Manston Airport. **Potential effects on any landscape character areas within the study area that are entirely outside the development ZTV**. Without a visual effects pathway it is highly unlikely that effects could be sustained by other potential effects pathways **Potential effects on any visual receptors within the study area but outside the development ZTV**. Without a visual pathway it is highly unlikely that effects could be sustained by other potential effects pathways.
Traffic and Transport	**Potential noise, vibration, visual and ecological effects as a result of the traffic and transport associated with the construction and operation of the airport**. These effects will be considered and assessed elsewhere within the relevant chapter of the Environmental Statement.

15. Outline Structure of the ES

15.1.1 The Environmental Statement (ES) will comprise the following information:

- ES Non-Technical Summary (NTS) – a summary of the key issues and findings of the EIA.
- ES Volume 1 – will comprise the full text of the EIA with chapter headings as follows:
  - 1. Introduction
  - 2. Project need and alternatives studied;
  - 3. Project description;
  - 4. Approach to preparing the ES;
  - 5. Policy overview;
  - 6. Air quality;
  - 7. Biodiversity;
  - 8. Ground and surface water;
  - 9. Historic environment;
  - 10. Land quality;
  - 11. Landscape and visual;
  - 12. Noise;
  - 13. Socio-economic;
  - 14. Traffic and transport;
  - 15. Combined and Cumulative effects;
  - 15. Summary of predicted effects.
- ES Volume 2 - Technical Appendices providing supplementary information for the various technical studies.

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Appendix A
Glossary of Abbreviations

Abbreviation	Description
AA	Appropriate Assessment
AAI	Area of Archaeological Importance
AC	The Airports Commission
AHLV	Area of High Landscape Value
ALC	Agricultural Land Classification
AMIE	Archives Monuments Information England
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AOS	Area of Search
APF	Aviation Policy Framework
AQMA	Air Quality Management Area
ATS	Air traffic services
ATZ	Aerodrome Traffic Zone
BAP	Biodiversity Action Plan: A strategy for conserving and enhancing wild species and wildlife habitats in the UK
BBS	Breeding Birds Survey
BFI	Baseflow Index
BGS	British Geological Survey
BMS	Biodiversity Mitigation Strategy
BMV	Best and Most Versatile
bn	Billion
BOA	Biodiversity Opportunity Area
BoCC	Birds of Conservation Concern

Abbreviation	Description
BoR	Book of Reference
BRES	Business Registration and Employment Survey
BS	British Standard
CAA	Civil Aviation Authority
CAP 168	Civil Aviation Publication 168 on licensing of aerodromes
CAP 670	Civil Aviation Publication 670 on air traffic services safety requirements
CAP 725	Civil Aviation Publication 725 on airspace change
CAP 772	Wildlife Hazard Management at Aerodromes
CBA	Cost Benefit Analysis
CCC	Canterbury City Council
CCS	Considerate Contractor's Scheme
CCTV	Closed Circuit Television
CDM Regulations	Construction (Design and Management) Regulations 2007
CEMP	Construction Environmental Management Plan
CFMP	Catchment Flood Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objective
CoCP	Code of Construction Practice
DAS	Design and Access Statement
dB	decibel
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DDC	Dover District Council
DEFRA	Department for the Environment, Food and Rural Affairs
DfT	Department for Transport

Abbreviation	Description
DMP	Drainage Management Plan
DMRB	Design Manual for Roads and Bridges
EA	Environment Agency
EASA	European Aviation Safety Agency, who certify airports
EC	European Commission
EcIA	Ecological Impact Assessment
EH	English Heritage
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EIA Regulations	Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
ELF	Extremely low frequency
EM	Explanatory Memorandum
ES	Environmental Statement
ESA	Environmentally Sensitive Area
EU	European Union
FRA	Flood Risk Assessment
GCR	Geological Conservation Review Site
GEP	Good Ecological Potential
GES	Good Ecological Status
GLVIA	Guidelines for Landscape and Visual Appraisal
GPLC	Guideline Principals of Land Contamination
GPS	Global positioning system
GW	Gigawatt (1000 million Watts)
GWTDE	Ground water dependant terrestrial ecosystem
HA	Highways Agency

Abbreviation	Description
Ha	Hectare
HE	Historic England
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HLC	Historic Landscape Characterisation
HMWB	Heavily Modified Waterbody
HRA	Habitat Regulations Assessment
Hz	Hertz
IAQM	Institute of Air Quality Management
ICAO	International Civil Aviation Organization
ICNIRP	International Commission on Non-Ionising Radiation Protection
IDB	Internal Drainage Board
IEA	Institute of Environmental Assessment
IEMA	Institute of Environmental Management and Assessment
ILS	Instrument Landing System
IMD	Index of Multiple Deprivation
IPC	Infrastructure Planning Commission - now replaced by PINS
IPCC	Intergovernmental Panel on Climate Change
JNCC	Joint Nature Conservation Committee
KCC	Kent County Council
km	Kilometre
kV	Kilovolt (1000 Volts)
KWT	Kent Wildlife Trust
LA	Local Authority

Abbreviation	Description
LAeq	Equivalent Continuous Level
LAQM	Local Air Quality Management
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Assessment
LDF	Local Development Framework
LGP	Long Grass Policy
Listed Building	A building of special architectural or historic interest which has been included on a list approved by the Secretary of State under the Planning (Listed Buildings and Conservation Areas) Act 1990 (known as the "Statutory List of Buildings of Special Architectural or Historic Interest")
LNR	Local Nature Reserve
LoD	Limits of Deviation
LPA	Local Planning Authority
LSOA	Lower Super Output Area
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
m	Metre
MAGIC	Multi-Agency Geographic Information for the Countryside
MSA	Mineral Safeguarding Area
MW	Megawatt (1 Million Watts)
NAQS	National Air Quality Strategy
NCA	National Character Area
NE	Natural England
NGR	National Grid Reference
NLCA	National Landscape Character Area
NNR	National Nature Reserve
NPPF	National Planning Policy Framework

Abbreviation	Description
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NSIP	Nationally Significant Infrastructure Project
NT	National Trust
NVC	National Vegetation Classification
OS	Ordnance Survey
PC	Parish Council
PCH	potential collision height
PEIR	Preliminary Environmental Information Report
PFRA	Preliminary Flood Risk Assessment
PILs	Persons with an interest in land
PINS	Planning Inspectorate
Planning Act	Planning Act 2008
PPA	Planning Performance Agreement
PPG	Pollution Prevention Guidance
PPS	Planning Policy Statement
Project	Manston Airport Project
PRoW	Public Right of Way
Ramsar	Sites designated under the Ramsar Convention. Designation covers all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities
RBMP	River basin Management Plan
RF	Radio Frequency
RIGS	Regionally Important Geological Site
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation

Abbreviation	Description
SCI	Site of Community Importance
SFRA	Strategic Flood Risk Assessment
SLA	Special Landscape Area
SM	Scheduled Monument
SMP	Soil Management Plan
SoCC	Statement of Community Consultation
SoCG	Statement of Common Ground
SoS	Secretary of State
SPA	Special Protection Area
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan
TA	Transport Assessment
TCF	Technical Construction File
TDC	Thanet District Council
TEP	The Environment Partnership
TMZ	Transponder Mandatory Zone, where aircraft must use transponders at lower heights than usual
TP	Travel Plan
TPO	Tree Preservation Order
UG	Underground
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
WFD	Water Framework Directive
WHO	World Health Organisation
WHS	World Heritage Site

Abbreviation	Description
WMP	Waste Management Plan
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility
ZVI	Zone of Visual Influence

Appendix B
Cumulative Effects Assessment 'Long List' of other development

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
1	F/TH/15/1256	Variation of conditions 6 and 20 of OL/TH/13/0624 for residential development including access, to allow an increase to 40 dwellings and alterations to site plan, Red House Farm Manston Court Road MARGATE Kent CT9 4LE	2.8	permission granted 22.04.2016	Tier 1
2	OL/TH/15/0187	Outline application for the redevelopment of the existing site for up to 120 dwellings including access, following demolition of existing buildings , Flambeau Europlast Ltd, Manston Road, Ramsgate, CT12 6HW	2.8	Awaiting Decision	Tier 1
3	R/TH/15/0250	Application for approval of access, appearance, landscaping, layout and scale pursuant to condition 1 of planning permission reference F/TH/12/0964 for the development of phase 5 of a mixed use urban extension comprising residential, community and commercial use, open space, infrastructure and new access. , Land North Of Haine Road Broadstairs And West Of Nash Road MARGATE Kent	2.9	Awaiting Decision	Tier 1
4	F/TH/16/0390	Variation of condition 20 of planning permisssion F/TH/12/0836 redevelopment of Newington Centre comprising erection of 54 two and three storey houses, 240sq m retail floorspace with 6no. flats, on 1st and 2nd floors and a single storey community 'gateway' information centre, to allow for a reduction in units to	3.1	permission granted 16.05.2016	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		49, and alterations to layout., The Centre Newington Ramsgate Kent CT12 6LB			
5	F/TH/15/0220	Installation of mezzanine floor of 1,017sqm for retail use, 8-9 Westwood Cross, Margate Road, Broadstairs, CT10 2BF	3.3	permitted	Tier 1
6	F/TH/16/0168	Erection of 10No general industrial units with access, parking and 1.8m boundary fence, Land South Of Invicta Way Ramsgate Kent	3.4	Awaiting Decision	Tier 1
7	F/TH/16/0127	Erection of 19no. general industrial units together with access, parking and 1.8m boundary fence , Land South Of Invicta Way Ramsgate Kent	3.4	permission granted 4.05.2016	Tier 1
8	F/TH/15/0538	Erection of 10No. General industrial units together with parking and 1.8M boundary fence , Land South Of, Invicta Way Manston Park Ramsgate (CT12 5FD)	3.4	permitted	Tier 1
9	F/TH/15/0125	Erection of 10 No. Part two storey part single storey light and general industrial units (totalling 970sqm) together with associated car parking, access and landscaping , Land South Of, Invicta Way, Manston Park, Ramsgate (CT12 5FD)	3.4	permitted	Tier 1
10	F/TH/14/0562	Erection of 21No. part single, part two and part three storey business and general industrial units (totalling 1680sq m),	3.4	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		together with associated car parking, access, and landscaping, Land South Of Invicta Way Ramsgate Kent (CT12 5FD)			
11	F/TH/14/0340	Revised Layout for unit C including subdivision to create two retail units and installation of mezzanine floor to provide two units of 735 sqm and 1208 sqm respectively, without compliance with condition 9 of planning permission F/TH/06/0237 to reduce the restriction on class A1 sales within Unit 5 (former Paul Simons unit), Westwood Gateway, Margate Road, Broadstairs, CT10 2QU	3.6	permitted	Tier 1
12	F/TH/16/0202	Variation of condition No 19 of planning permission F/TH/15/0501 for the erection of 2No. two storey buildings comprising a public house/restaurant and hotel with ancillary managers accommodation and associated works to allow for the extension and reconfiguration of car parking area , Canterbury Bell 479 Margate Road BROADSTAIRS Kent CT10 2QD	3.7	Granted on 25.04.2016	Tier 1
13	OL/TH/15/0020	Outline application for the erection of a block of 56no. extra care units, 56no. dwellings and community use building with retail unit, following demolition of existing buildings and structures, including access , Jentex Oil Depot Canterbury Road West RAMSGATE Kent CT12 5DU	3.8	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
14	OL/TH/15/0537	Outline application for the erection of 31 dwellings and retail unit, including access, Cliffsend Farm Cottages, Cliffs End Road, Ramsgate, CT12 5JG	4.2	permitted	Tier 1
15	F/TH/15/1297	Erection of 10No. two storey, 2-bed dwellings with associated parking following demolition of existing office building, Ivor Thomas Amusements Limited 100 Grange Road RAMSGATE Kent CT11 9PX	4.3	Awaiting Decision	Tier 1
16	F/TH/14/0742	Change of use of 4.2 ha of agricultural land to provide an extension to St John's Cemetery, St Johns Cemetery, Manston Road, Margate, CT9 4LT	4.4	Awaiting Decision	Tier 1
17	F/TH/15/0353	Application for variation of condition 2 attached to planning permission F/TH/11/0893 for the change of use of nurse's home to 29no. flats with erection of 5 storey extension to allow alterations to internal layout to existing building, Former Nurses Home Royal Sea Bathing Hospital 38, Canterbury Road Margate,(CT9)	4.6	permitted	Tier 1
18	F/TH/15/0181	Erection of 19 no. single storey light industrial units (Use Class B1) together with formation of vehicular access, associated parking and external alterations to existing building , Unit X, Continental Approach, Margate, CT9 4JG	4.8	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
19	F/TH/15/0291	Erection of 8no. Two and three storey dwellings and 2no. Roof terraces folowing demolition of existing buildings , 41-43 Victoria Road, Margate CT9 1	5.2	permitted	Tier 1
20	F/TH/14/0422	Demolition of existing side extension, to facilitate the redevelopment of 13 No. self-contained apartments together with associated car parking without compliance with conditions 4 and 6 of planning permission F/TH/05/0905 to relocate bay on front elevation, alter windows, doors and dormer windows and add gables to rear elevation , 67 Victoria Road, Margate, CT9 1NA	5.2	permitted	Tier 1
21	F/TH/16/0244	Variation of condition to attach to planning permission F/TH/15/0141 for the change of use of agricultural land to sports field and formation of astro pitch, with flood lighting in association with the school, together with change to land level, to allow the formation of a practice hockey pitch with associated flood lighting., St Lawrence College College Road RAMSGATE Kent CT11 7AF	5.3	Awaiting Decision	Tier 1
22	F/TH/15/0983	Change of use from retail to 3No. 3-bed flats, 8No. 2-bed flats and 2No. 1-bed flat, together with erection of second floor and roof extension, insertion of 6No. dormer windows to front elevation and 3No. dormer windows to rear elevation, installation of balconies to rear elevation and external alterations to ground floor front elevation without compliance of conditions 2,4,6. 11 and 13 of planning permission F/TH/14/0660 to alter internal layout, external alterations to window and fascia,	5.3	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		materials to rear elevation to render and boundary walls design , 69 -73 King Street RAMSGATE Kent CT11 8NX			
23	F/TH/15/0368	Erection of three storey building to accommodate 32no. flats with associated car parking, following demolition of existing building , Quex Court, Powell Cotton Drive, Birchington, CT7 0EZ	5.3	permitted	Tier 1
24	F/TH/16/0546	Change of use from agricultural land to sports fields along with the creation of 2no. Rugby pitched, 1no. Football pitch and 4no. Tennis courts, St Lawrence College College Road RAMSGATE Kent CT11 7AF	5.31	Awaiting Decision	Tier 1
25	OL/TH/16/0376	Outline application for the erection of 48No. dwellings comprising of 9No. 2-bed dwellings, 8No. 2-bed flats, 28No. 3-bed and 3No. 4-bed dwellings including access layout and scale, Land Rear Of 2 To 28 Kingston Avenue MARGATE Kent	5.4	Awaiting Decision	Tier 1
26	F/TH/15/0278	Erection of four storey building accomodating 13no. flats wiith associated parking and landscaping following demolition of existing building , 44 Canterbury Road, Margate, CT9 5BG	5.4	permitted	Tier 1
27	F/TH/15/0160	Erection of 11No. 2 Bed dwellings with formation of vehicular access from Westbrook Road without compliance with condition 2 of planning permission F/TH/13/0966 to amend roof materials , Royal Sea Bathing Hospital Canterbury Road MARGATE Kent (CT9 5)	5.5	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
28	L/TH/16/0522	Application for Listed Building Consent for internal alterations to create 36 en suites bathrooms to existing bedrooms with associated drainage, St Augustines Abbey St Augustines Road RAMSGATE Kent CT11 9PA	5.6	Awaiting Decision	Tier 1
29	F/TH/14/0616	Change of use of first, second and third floors and part of ground and basement floors from amusement arcade and bingo hall to 3No. 3-bed maisonettes and 4No. 4-bed maisonettes, installation of railings to front and rear at first floor level to create balconies, erection of dormer windows to rear roof slope and installation of windows and doors to front and rear elevations, 36-42 Marine Terrace, Margate, CT9 1XJ	5.6	permitted	Tier 1
30	F/TH/16/0293	Erection of 2No. three storey buildings to accommodate 10No. self contained flats, with associated access and parking, The Orchard Lyndhurst Road RAMSGATE Kent CT11 8EA	5.7	Awaiting Decision	Tier 1
31	F/TH/16/0003	Erection of 4 storey building to accommodate 19.No.2 bed flats and 3No. 3 bed flats with associated landscaping , 67 - 69 Northdown Road MARGATE Kent CT9 2RJ	5.9	Awaiting Decision	Tier 1
32	R/TH/14/1085	Application for reserved matters of outline application OL/TH/13/0370 for the erection of part single, three and four storey buildings for a mixed use development of live-work space, comprising 25 artists apartments, Sopers Yard Store, King Street, Margate, CT9 1QE	5.9	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
33	F/TH/15/0087	Erection of four storey detached building containing 12No. flats following demolition of existing building, 139-141 High Street, Ramsgate, CT11 9TY	6	permitted	Tier 1
34	F/TH/15/1261	Erection of part 3, part 4 storey building containing 12No. 2-bed flats, together with access and parking following demolition of existing bungalow, 8 Beach Avenue BIRCHINGTON Kent CT7 9JS	6.1	Awaiting Decision	Tier 1
35	OL/TH/16/0394	Outline application with some matters reserved (appearance, landscaping & scale) for mixed development of 140 houses, 70 bedroom residential care home, scout hut and recreational facilities., Former British Gas Site Northdown Road BROADSTAIRS Kent CT10 2UW	6.12	Awaiting Decision	Tier 1
36	OL/TH/15/1303	Outline application for the erection of 157 dwellings with associated open space and parking provision, with consideration of access and scale , St Lawrence College College Road RAMSGATE Kent CT11 7AF	6.2	Awaiting Decision	Tier 1
37	F/TH/14/0656	Erection of 2no. two bed semi detached dwellings and a three storey building comprising of 6no. three bed terrace dwellings with associated parking and access leading to Albion Road, following demolition of existing buildings without compliance with conditions 3 and 7 of planning permission F/TH/08/0969 to allow for revised joinery and window details , 20 Albion Road, Broadstairs, CT10 2UP	6.2	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
38	OL/TH/14/0536	Outline application for erection of hotel with spa, gym, swimming pool, restaurant and bar, terrace and outdoor seating area with steps from promenade to Fort Hill and sea defence plinth, including layout, scale and access , Rendezvous Hotel, The Rendezvous, Margate, Kent, CT9 1HG	6.2	permitted	Tier 1
39	F/TH/15/0299	Erection of 12no. Houses with associated parking following demolition of existing buildings , 16-22 Goodwin Road, Margate, CT9 2HG	6.5	permitted	Tier 1
40	OL/TH/15/0956	Outline application for the erection of 28No. 3 to 5 bed dwellings with associated access from Cliffside Drive , Land Adjacent Holy Trinity School 99 Dumpton Park Drive BROADSTAIRS Kent CT10 1RR	6.8	permission refused 27.05.2016	Tier 1
41	F/TH/14/1170	Change of use from casino to public house (1,803sqm) with terrace, and unit/s for use as retail, financial and professional services, restaurants and cafés, drinking establishments or hot food takeaway (1,176sqm) , Royal Victoria Pavilion Harbour Parade RAMSGATE Kent CT11 8LS	6.9	permission granted on13.04.2016	Tier 1
42	F/TH/16/0423	Change of use from Public House to 4No. 1-bedflats, 3No. 2-bed flats and 4No. 3-bed flats with associated parking, together with micro pub on ground floor and the erection of a first floor extension, 20 Beach Road Westgate On Sea Kent CT8 8AD	7	Awaiting Decision	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
43	12/01017/A	Non material amendments to conditions 3, 4, 6, 16, 21 & 23 of planning ref: DOV/12/01017, Site at Former Richborough Power Station, Ramsgate Road, Sandwich, CT13 9NL	7.1	permitted	Tier 1
44	F/TH/14/0455	Erection of two-storey building to accommodate 22No. hotel bedrooms without compliance with condition 2 of planning permission F/TH/13/0500 to allow the installation of air conditioning units and 2.1m high fenced enclosure, The Promenade Brewers Fayre, Station Road, Margate, CT9 5AF	7.2	permitted	Tier 1
45	R/TH/16/0128	Application for the approval of appearance, layout and scale pursuant to condition 1 of planning permission reference F/TH/13/0760 for the installation of 3.1km underground high voltage DC cable from Pegwell Bay to Former Richborough Power Station, together with erection of converter station building, substation building, spare parts building, storage unit, outdoor electrical equipment for substation and for converter station, associated temporary construction compounds, and fence to boundary of substation and converter station , Richborough Power Station Sandwich Road RAMSGATE Kent	7.3	Permission granted 24.05.2016	Tier 1
46	16/00109	Reserved matters application pursuant to outline application DOV/13/00759 for the details of the layout, scale and appearance of the converter station (23.2m high) and substation (12.06 m high), as part of the NEMO Link UK ? Belgium electrical interconnector. (This is a duplicate of the application submitted to Thanet District Council for which some of the development falls within the administrative boundary of Dover District	7.4	permission granted 10.05.2016	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		Council)., Part of Former Power Station Site, Ramsgate Road, Sandwich, CT13 9NL			
47	13/00759/B	Non-material amendments to planning permission DOV/13/00759 to enable schemes relating to conditions 22 (Site Waste Management Plan), 23 (Incident Management Plan) and 24 (Landscaping) to be phased, Part of Former Power Station Site, Ramsgate Road, Sandwich, CT13 9NL	7.4	decided	Tier 1
48	13/00759/A	Non-material amendment to planning permission DOV/13/00759 - revision of ground levels, Part of Former Power Station Site, Ramsgate Road, Sandwich, CT13 9NL	7.4	decided	Tier 1
49	13/00794	Solar Farm Development , Land to the South of the River Stour, Ramsgate Road, Sandwich, (CT13 9NL)	7.4	permitted	Tier 1
50	13/00759	Installation of 720m of underground high voltage direct current (HVDC) cable, temporary construction compound, erection of security fencing, construction of access road and hard landscaping (This is part of a duplicate of an application submitted to Thanet District Council for - Installation of 3.1km underground high voltage direct current (HVDC) cable from Pegwell Bay to former Richborough Power Station, being part of a 130km HVDC electrical interconnector with an approximate capacity of 1000 megawatts (MW) extending from Zebrugge (Belgium) to the former Richborough Power Station site, together with outline application for the erection of converter station	7.4	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		building (max height 30.8m), substation building (max height 15m) outdoor electrical equipment for substation (max height 12.7m) and for converter station (max height 11.8m), underground cables from substation and converter station and construction of internal roads, including access and landscaping, together with associated temporary construction compounds)., Part of Former Power Station Site, Ramsgate Road, Sandwich, CT13 9NL			
51	12/01017	Redevelopment of a 1.22 ha (3.02 acre) part of the Richborough Power Station site to create a 42.4 MW capacity sui generis Peaking Plant Facility with associated areas for parking, access, landscaping and associated works, including 4 x 35 metres high exhaust stacks, Former Richborough Power Station, Ramsgate Road, Sandwich, CT13 9NL	7.4	permitted	Tier 1
52	F/TH/16/0280	Change of use and extension of 45 Sea Road to 9 No. two bed flats and 2 No. one bed flats; Change of use and extension of 51 Sea Road to 7 No. two bed flats; Erection of 2 No. three and four storey buildings containing 14 No. two bed flats and 1 No. one bed flat; Erection of 7 No. three storey houses fronting St. Clements Road (together with basement parking), following demolition of 47 and 49 Sea Road, without compliance with the plans condition attached to F/TH/10/0525 to allow for alterations to design and layout, 45 - 51 Sea Road Westgate On Sea Kent CT8 8QN	7.5	Awaiting Decision	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
53	15/00136	National Grid's Proposed Richborough Connection Project, Richborough Connection Project	7.5	permitted	Tier 1
54	L/TH/16/0413	Application for Listed Building Consent for change of use of Grade II listed building from residential institution (Class C2) to residential (Class C3) consisting of 4No 2 bedroom, 6No 3 bedroom and 2No 4 bedroom flats, 1No 2 bedroom detached cottage, parking areas, garden wc/store, new entrance signs and gates along with the part demolition of existing classroom block and small roof extension., 125 Canterbury Road Westgate On Sea Kent CT8 8NL	7.56	Awaiting Decision	Tier 1
55	16/00044	Erection of a guyed steel lattice mast (324m in height) with 9 anchor points, installation of telecommunications and associated equipment, site compound, secure fencing, single storey equipment structure, and associated works., Site at former Richborough Power Station, Ramsgate Road, Sandwich, CT13 9NL	7.7	Registered	Tier 1
56	L/TH/16/0029	Application for listed building consent for internal alterations to facilitate change of use to 12No. flats, Port Regis Nursing Home Convent Road BROADSTAIRS Kent CT10 3PR	7.8	WITHDRAWN	Tier 1
57	F/TH/16/0028	Change of use of part existing residential institution to 12No. flats together with erection of 2No. two storey dwellings, Port Regis Nursing Home Convent Road BROADSTAIRS Kent CT10 3PR	7.8	WITHDRAWN	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
58	F/TH/16/0028	Change of use of part existing residential institution to 12No. flats together with erection of 2No. two storey dwellings Open for Comment , Port Regis Nursing Home Convent Road BROADSTAIRS Kent CT10 3PR	7.8	WITHDRAWN	Tier 1
59	F/TH/16/0424	Erection of 2 No. part three storey and part four-storey buildings containing 12 No 3 bedroom flats, 1 No 4 bedroom flat and 1 No 2 bedroom flat together with parking, Sheridans Cliff Road BROADSTAIRS Kent CT10 3QZ	7.9	Awaiting Decision	Tier 1
60	F/TH/16/0424	Erection of 2 No. part three storey and part four-storey buildings containing 12 No 3 bedroom flats, 1 No 4 bedroom flat and 1 No 2 bedroom flat together with parking , Sheridans Cliff Road BROADSTAIRS Kent CT10 3QZ	8	Awaiting Decision	Tier 1
61	F/TH/15/1245	Erection of a 67m high wind turbine following removal of existing , Wind Turbine At Former Richborough Power Station Sandwich Road RAMSGATE Kent CT12 5FH	8.2	permitted	Tier 1
62	F/TH/15/0142	Erection of three storey building containing 10no. self-contained flats following demolition of existing building, with formation of parking area to rear , Cambay Lodge, 91 Kingsgate Avenue, Broadstairs, CT10 3LW	8.3	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
63	14/00475	Installation of 410 solar panels to western facing roofslope and 390 to eastern facing roofslope, Stevens and Carlotti, Pembroke Works, Ramsgate Road, Sandwich, CT13 9ST	8.3	permitted	Tier 1
64	F/TH/15/0770	Erection of 17No. dwellings with associated parking and access from Manor Road, Land Rear Of Manor Hall And Heritage Park Manor Road St Nicholas At Wade BIRCHINGTON Kent	8.6	Permission granted 19.05.2016	Tier 1
65	F/TH/15/1204	Erection of 39No. dwellings with formation of vehicular access to Manor Road and associated parking and landscaping, Land Adjacent And Rear Ashbre Manor Road St Nicholas At Wade BIRCHINGTON Kent	9.2	Awaiting Decision	Tier 1
66	13/00783	Outline application for the redevelopment of the site to provide a foodstore with associated car parking, petrol filling station (to include associated kiosk and car washing facilities), access and servicing arrangements and landscaping (to include removal of existing surface infrastructure), Discovery Park, Enterprise Zone, Ramsgate Road, Sandwich, CT13 9ND	9.8	decided	Tier 1
67	15/00430	Erection of a B2 Industrial Unit with ancillary offices, secure vehicular service yard, car parking and creation of access road, Discovery Park, Land West of, Ramsgate Road, Sandwich, CT13 9ND	10	decided	Tier 1
68	15/00430	Erection of a B2 Industrial Unit with ancillary offices, secure vehicular service yard, car parking and creation of access road,	10.5	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		Discovery Park, Land West of, Ramsgate Road, Sandwich, CT13 9ND			
69	14/00058	Outline application for the redevelopment of site to include: demolition of some existing buildings (and associated infrastructure); change of use of some existing buildings (from B1 to use classes: B2, B8, Sui Generis (Energy) and D1 uses); the provision of new commercial (use classes: A3/4, B1, B2, B8, C1, D1 and Sui Generis) and residential (use class: C3) development; associated site preparation/enabling, infrastructure, and landscaping works; and provision of car parking (with some matters reserved), Discovery Park, Ramsgate Road, Sandwich, CT13 9ND	10.5	decided	Tier 1
70	16/00045	Erection of a 4230sqm research, development and manufacturing building, ancillary office floorspace (Class B2), car park and servicing area, Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	10.6	permission granted 22.04.2016	Tier 1
71	15/01205	Erection of a biomass combined heat and power plant with fuel storage and associated works, Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	10.6	unknown	Tier 1
72	15/01206	Variation of Conditions 2, 5, 7, 8, 9, 10, 11 and 17 of planning permission DOV/14/00091 for the use of land for additional log storage processing area and wood chip store in association with	10.6	unknown	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		biomass combined (application under Section 73), Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND			
73	15/01205	Variation of Conditions 2, 6, 7, 9, 10, 11, 12, 13 and 20 of planning permission DOV/13/00701 to allow amendments to documents and plans for the erection of a biomass combined heat and power plant with fuel storage and associated works (application under Section 73), Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	10.6	unknown	Tier 1
74	15/00788	Variation of condition 2 of planning permission DOV/13/00701 for amendments to the approved documents (Supporting Statement - relating to the Waste Incineration Directive in respect of the total annual boiler feed) (section 73 application), Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	10.6	decided	Tier 1
75	15/00588	Development of a waste management facility for the sorting of a skip waste, Land South of Stonar Cut, Ramsgate Road, Sandwich, CT13 9NW	10.6	unknown	Tier 1
76	14/00091	The use of land for additional log storage processing area and wood chip store in association with biomass combined, Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	10.6	decided	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
77	13/00701	Erection of a biomass combined heat and power plant with fuel storage and associated works, Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	10.6	decided	Tier 1
78	13/00701	Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND, Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	10.6	decided	Tier 1
79	14/00437	Storage of Hazardous Substances , East Kent Waste Recovery Facility, Discovery Park, Sandwich, CT13 9FN	11.1	permitted	Tier 1
80	14/00359	Installation of overhead network cables, Sir Roger Manwood School, Manwood Road, Sandwich, CT13 9JX	12.7	permitted	Tier 1
81	15/00115	Photovoltaic solar farm, grid connection, grid connection cable, access and associated works, Marshborough Farm, Marshborough, Woodnesborough, CT3 2BZ	13.2	permitted	Tier 1
82	14/00842	Outline application for the erection of 73 residential dwellings and related infrastructure, together with the creation of meadow-land (existing buildings to be demolished) (all matters reserved) , Land at Salvatori, North and South of, Grove Road, Preston, CT3 1EF	13.6	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
83	15/01225	Erection of ten dwellings and associated garages, parking and vehicular access, Land adjoining Mill Field, New Street, Ash, CT3 2BD	13.9	Registered	Tier 1
84	16/00201	Scoping Opinion under the Environmental Impact Assessment Regulations 2011 (as amended) for the erection of a 305m high communications mast, Kings End Farm, Richborough, Sandwich, CT13 9JH	14.3	decided	Tier 1
85	14/00972	Erection of a two storey science building (existing building to be demolished), Sandwich Technology School, Sandwich Centre, Dover Road, Sandwich, CT13 0FA	15.5	permitted	Tier 1
86	15/00749	Outline application of the erection of up to 32 dwellings with public open space, paddocks and car park for village hall (with some matters reserved), Bisley Nursery, The Street, Worth, CT14 0DD	15.6	permitted	Tier 1
87	14/00727	Installation of 16 ground mounted solar panels , Land adjacent to The Old Chapel, Shatterling, CT3 1JP	17	permitted	Tier 1
88	15/00599	Reserved matters application for A) Full application for change of use and conversion of two engine sheds to six live/work units and B) Outline application for the erection of nineteen dwellings, 2352m² of B1(c) accommodation, construction of vehicular access, associated car parking and landscaping (existing buildings/structures to be demolished) for the layout, scale and	17.1	permitted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		appearance of the B1 (C) accommodation buildings (pursuant to Condition 33 of approved outline permission DOV/12/00460) , Hammill Brickworks, Hammill Road, Woodnesborough, CT13 0EJ			
89	15/01100	Erection of 15 care units (Use Class C2), comprising of 8 semi-detached, 1 detached and 6 apartments; conversion and extension of Goose Barn to provide communal facilities to include manager's office, guest suite and activities room; provision of vehicular and cycle parking together with internal access arrangement works and junction improvements; and associated landscape and tree works, Part of Wingham Court, Hawarden Place, Canterbury Road, Wingham, CT3 1EW	17.2	Registered	Tier 1
90	14/00916	Construction of a reservoir , Land at Royal St Georges Golf Club, Guilford Road, Sandwich Bay, CT13 9PB	17.3	permitted	Tier 1
91	16/00442	Erection of nine detached dwellings, change of use and conversion of the existing public house into a single residential dwelling, erection of a building to be used as a shop, creation of vehicular access and associated works, Three Tuns, The Street, Staple, CT3 1LN	19	Awaiting Decision	Tier 1
92	16/00135	Outline application for the erection of dwellings with some matters reserved (existing caravan and outbuilding to be demolished), Willow Tree Cottage, The Old Fairground, High Street, Wingham, CT3 1BU	19.63	Permission granted	Tier 1

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
93	F/TH/16/0245	Erection of four storey science block with delivery access, St Lawrence College, College Road, Ramsgate CT11 7AF		Permitted	Tier 1
94	EN020017	National Grid, Proposed 400kV electricity transmission connection between Richborough and Canterbury in Kent to connect the proposed new UK to Belgium interconnector (Known as a Nemo Link)	2.8	Pre Examination-Accepted for Examination on 11/02/16	Tier 2
95	EN010036	Vattenfall, proposed development comprises the erection of 10 to 17 wind turbines with a maximum tip height of 145 metres, monopile foundations, and underwater cabling to connect the turbines together and to export the electricity generated. The export cables will come ashore close to Hampton Pier where they will connect to the onshore underground electricity cables in a transition pit. A full list of the works that are comprised in the proposed development is contained within the Project Design Statement	18	Decided 20/02/13	Tier 2
96	TR010006	Highways England, New Junction and Associated Improvement - South of Ashford	36	Pre-application	Tier 2
97		AXA Real Estate & DMI Properties (Ashford) Ltd, new highway from a new junction with the A2070 trunk road to the east to a new junction 10a of the M20 to the west. The project is the first phase of the Highway Agency's M20 J10a project, which is currently in abeyance due to lack of funding. This project is being developed by the promoters who are providing the shortfall in	36	Withdrawn	Tier 2

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
		funding to allow it to proceed. As well as relieving congestion on the A2070 and M20 the highway will serve a development at Sevington that is also being developed by the promoters			
98	Thanet Emerging Local Plan	Allocated Employment Site, Laundry Road Industrial Estate	0.346	Emerging Local Plan	Tier 3
99	Thanet Emerging Local Plan	Allocated Employment Site, Manston Park	0.5	Emerging Local Plan	Tier 3
100	Thanet Emerging Local Plan	Allocated for Road improvements, Improvements to the dual carriageway standard to the A256 and A299 between Richborough, Lord of the Manor and Mount Pleasant, Minster	0.828	Emerging Local Plan	Tier 3
101	Thanet Emerging Local Plan	Allocated Employment Site, Haine Road Industrial Estate	2.02	Emerging Local Plan	Tier 3
102	Thanet Emerging Local Plan	Allocated Employment Site, Manston Road Industrial Estate, Ramsgate	2.11	Emerging Local Plan	Tier 3

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
103	Thanet Emerging Local Plan	Allocated Employment Site, EUROKENT Business Park	2.31	Emerging Local Plan	Tier 3
104	Thanet Emerging Local Plan	Allocated for 38 Units, Rear of 2-50 Queens Gate Road & 1-51 Wilfred Road	2.89	Emerging Local Plan	Tier 3
105	Thanet Emerging Local Plan	Allocated for 800 Units, Land Adjacent to Westwood	3	Emerging Local Plan	Tier 3
106	Thanet Emerging Local Plan	Allocated for 1020 Units, Land Adj Westwood Centre	3.01	Emerging Local Plan	Tier 3
107	Thanet Emerging Local Plan	Allocated Employment Site, Whitehall Road Industrial Estate	3.3	Emerging Local Plan	Tier 3
108	Thanet Emerging Local Plan	Allocated Employment Site, Thanet Reach Business Park	3.32	Emerging Local Plan	Tier 3

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
109	Thanet Emerging Local Plan	Allocated Employment Site, Westwood Industrial Estate	3.34	Emerging Local Plan	Tier 3
110	Thanet Emerging Local Plan	Allocated for 13 Units, Land Adjacent to Annes Close	3.53	Emerging Local Plan	Tier 3
111	Thanet Emerging Local Plan	Allocated Employment Site, Crompton's Site, Poorhole Lane	3.66	Emerging Local Plan	Tier 3
112	Thanet Emerging Local Plan	Allocated Employment Site, Pysons Road Industrial Estate	3.94	Emerging Local Plan	Tier 3
113	Thanet Emerging Local Plan	Allocated for 11 Units, Adjacent to 9 Minnis Road	3.97	Emerging Local Plan	Tier 3
114	Thanet Emerging Local Plan	Identified for expansion of the Port to increase shipping levels, Port of Ramsgate	4	Emerging Local Plan	Tier 3

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
115	Thanet Emerging Local Plan	Identified fordevelopment for a mixture of leisure, tourism, retail and residential, Ramsgate Waterfront	4.2	Emerging Local Plan	Tier 3
116	Thanet Emerging Local Plan	Allocated for 17 Units, Corner of Dumpton Park Drive. & Honeysuckle Road	4.3	Emerging Local Plan	Tier 3
117	Thanet Emerging Local Plan	Allocated for an Education Use, Newlands Farm	4.6	Emerging Local Plan	Tier 3
118	Thanet Emerging Local Plan	Allocated for Amusement park use, Dreamland, Marine Terrace, Margate, Kent CT9 1XJ	4.98	Emerging Local Plan	Tier 3
119	Thanet Emerging Local Plan	Allocated Employment Site, Dane Vale Industrial Estate	5.2	Emerging Local Plan	Tier 3
120	Thanet Emerging Local Plan	Allocated for 15 Units, Rear of 4-28 St Peter's Park Road	5.22	Emerging Local Plan	Tier 3

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
121	Thanet Emerging Local Plan	Allocated Employment Site, Hedgend Industrial Estate	5.27	Emerging Local Plan	Tier 3
122	Thanet Emerging Local Plan	Allocated for Residential Use, 67-69 Northdown Road, Margate	5.76	Emerging Local Plan	Tier 3
123	Thanet Emerging Local Plan	Allocated for 14 Units, Adjacent to 60 Harold Road & rear of 40-56 Harold Road	5.77	Emerging Local Plan	Tier 3
124	Thanet Emerging Local Plan	Allocated for 9 Units, Rear 59-65 Harold Road	5.79	Emerging Local Plan	Tier 3
125	Thanet Emerging Local Plan	Allocated for 12 Units, Adjacent to 15 Dalby Square	6	Emerging Local Plan	Tier 3
126	Thanet Emerging Local Plan	Allocated for 30 Units, 29 Ethelbert Crescent	6.06	Emerging Local Plan	Tier 3
127	Dover Local Plan	Allocated for 120 Units, St Barts Road, Sandwich	8.27	Local Plan	Tier 3

Id	Application Reference	Applicant and brief description	Distance from project (km)	Status	Tier
128	Dover Local Plan	Allocated for 60 Units, Land adjacent to the Sandwich Technology School, Deal Road, Sandwich	8.5	Local Plan	Tier 3

Appendix C
Figures

625000 626000 627000 628000 629000 630000 631000 632000 633000 634000 635000 636000 637000 638000 639000 640000

173000 172000 171000 170000 169000 168000 167000 166000 165000 164000 163000 162000 161000 160000

N

Margate
Cliftonville
Westbrook
Garlinge
Northdown
Kingsgate
Reading Street
Birchington
Potten Street
Woodchurch
Acol
Isle of Thanet
Kent International Airport
Manston
Mount Pleasant
Haine
Lydden
Westwood
Fairfield
Bromstone
Broadstairs
St Peter's
Northwood
West Dumpton
Dumpton
Whitehall
Newington
Ramsgate
Nethercourt
Chilton
Pegwell
Cliffs End
Minster
Durlock
Way
Monkton
Hoo
Sarre
St Nicholas at Wade
West Stourmouth
East Stourmouth
Westmarsh
Preston
Elmstone
Ware
Lower Goldstone
Upper Goldstone
Cooper Street
Hoaden
Cop Street
Sandwich Bay

A28 A253 A299 A256 A254 A255 B2050 B2051 B2052 B2053 B2054 B2055 B2014

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Key

Development Boundary

Study Area (0.5, 1, 2, and 5km)

LONDON

Canterbury

0 500 1,000 2,000 Metres

Scale at A3: 1:50,000

Client

RiverOak Investment Corp LLC

RIVEROAK INVESTMENT CORP., LLC

38199 Manston Airport DCO EIA

amec foster wheeler

Site Location and Study Areas
Figure 1.1

June 2016 38199-Lon001[B].mxd GARDO

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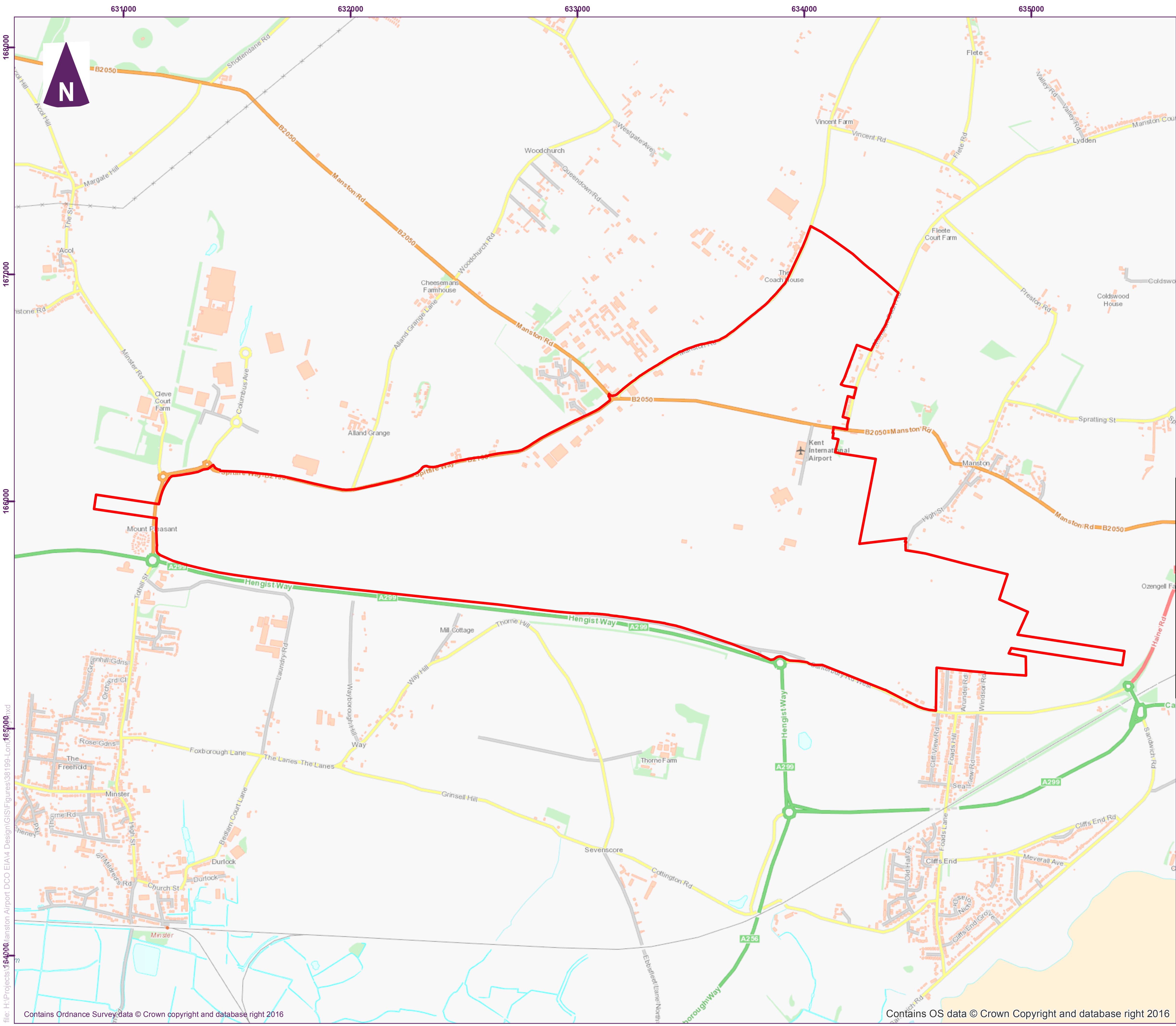

631000
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Manston Rd
Shottendane Rd
Margate Hill
Acol Hill
The St
Acol
Woodchurch
Westgate Ave
Queendown Rd
Woodchurch Rd
Cheesemans Farmhouse
Alland Grange Lane
Alland Grange
Minster Rd
Cleve Court Farm
Columbus Ave
Spitfire Way
Vincent Farm
Vincent Rd
Flete
Flete Rd
Valley Rd
Lydden
Fleete Court Farm
The Coach House
Preston Rd
Coldswood House
Kent International Airport
Manston
High St
Spratling St
Mount Pleasant
Hengist Way
A299
Mill Cottage
Thorne Hill
Way Hill
Laundry Rd
Waybourough Hill
Foxborough Lane
The Lanes
Grinsell Hill
Thorne Farm
Canterbury Rd West
Haine Rd
Ozengell Farm
Rose Gdns
The Freehold
Minster
Bedlam Court Lane
Durlock
Church St
St Mildred's Rd
High St
Sevenscore
Cottington Rd
A256
Ebbsfleet Lane North
Cliff View Rd
Foads Hill
Arundel Rd
Windsor Rd
Sea View Rd
Foads Lane
Cliffs End
Cliffs End Rd
Cliffs End Gro
Old Hall Dr
Beech Grove
Sandwich Rd
Mevrall Ave
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Key

Development Boundary

0 150 300 600 Metres

Scale at A3: 1:16,000

Client

RiverOak Investment Corp LLC

RIVEROAK INVESTMENT CORP., LLC

38199 Manston Airport DCO EIA

amec foster wheeler

Site Plan
Figure 1.2

June 2016 38199-Lon008[B].mxd GARDO

631000 632000 633000 634000 635000

168000 167000 166000 165000

N

Isle of Thanet

Woodchurch

Woodchurch Road

Margate Hill

B2050

Manston Road

The Street

Acol

Minster Road

Cheesemans Farmhouse

Pouces Nursery

The Coach House

Cleve Court Farmhouse

Alland Grange

Rose Farm

Spitfire Way

Hengist Way

A299

Mount Pleasant

Telegraph Hill

Mill Cottage

Toothill Street

Way Hill

Thorne Hill

Foxborough Lane

The Lanes

Minster

Way

Grinsell Hill

Cottington Road

Bedlam Court La

High Street

Durlock

Chapel House

Canterbury Road West

Foads Hl

Cliffs End

Cliffs End Road

Flete

Vincent Farmhouse

Vincent Road

Flete Road

Manston Court Road

Lydden

Fleete Court Farm

Preston Road

Spratling Stre

Kent International Airport

Manston

Ozeng Farmho

Coldswe Hous

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Key

- Development Boundary

Existing Airport Infastructure

- Air Traffic Control
- Apron
- Car Park
- Cargo Handling Facilities
- MRO Facilities
- Museums
- Passenger Terminal Building
- Radar Tower
- Runway
- Taxiway

0 150 300 600 Metres

Scale at A3: 1:15,000

Client

RiverOak Investment Corp LLC

RIVEROAK INVESTMENT CORP., LLC

38199 Manston Airport DCO EIA

amec foster wheeler

Existing Site Infastructure
Figure 1.3

June 2016 38199-Lon009[A].mxd GARDO

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N

KEY

- Landside Infrastructure
- Cargo Facilities
- Airside Infrastructure
- Passenger Facilities
- Maintenance, Repair and Overhaul Facility
- Runway
- Secondary Business Infrastructure

1. Radar
2. Highway Improvement
3. Highway Improvement
4. Very High Frequency Direction Finding Aerial
5. Air Traffic Control
6. Fire Rescue Service
6a. Alternative Location for Fire & Rescue Service
7. Business aviation
8. New Search and Rescue Facility
9. Fire Training Ground
10. Air Traffic Services, Very High Frequency AM Transmitter owned by Ministry of Defence, maintained by defence estates
11. New Instrument Landing Services and Approach installation

50m SCALE 1:2500

P03	Boundary swapped for DCO application boundary.	KH	CJ	30.06.16
P02	Abbreviated text in key changed.	KH	CJ	22.06.16
P01	First Issue.	KH	CJ	14.06.16
Rev	Description	By	Ckd	Date

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Client RIVER OAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Title Figure 2.1 Zoning Plan

Status	Scale	Date Created
Preliminary	1:2500 @A1	14.06.2016
Project Leader	**Drawn By**	**Checked by**
GD	KH	CJ

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0261	P03	S0
Project Number / Originator - Zone - Level - Type - Role - Drawing Number		

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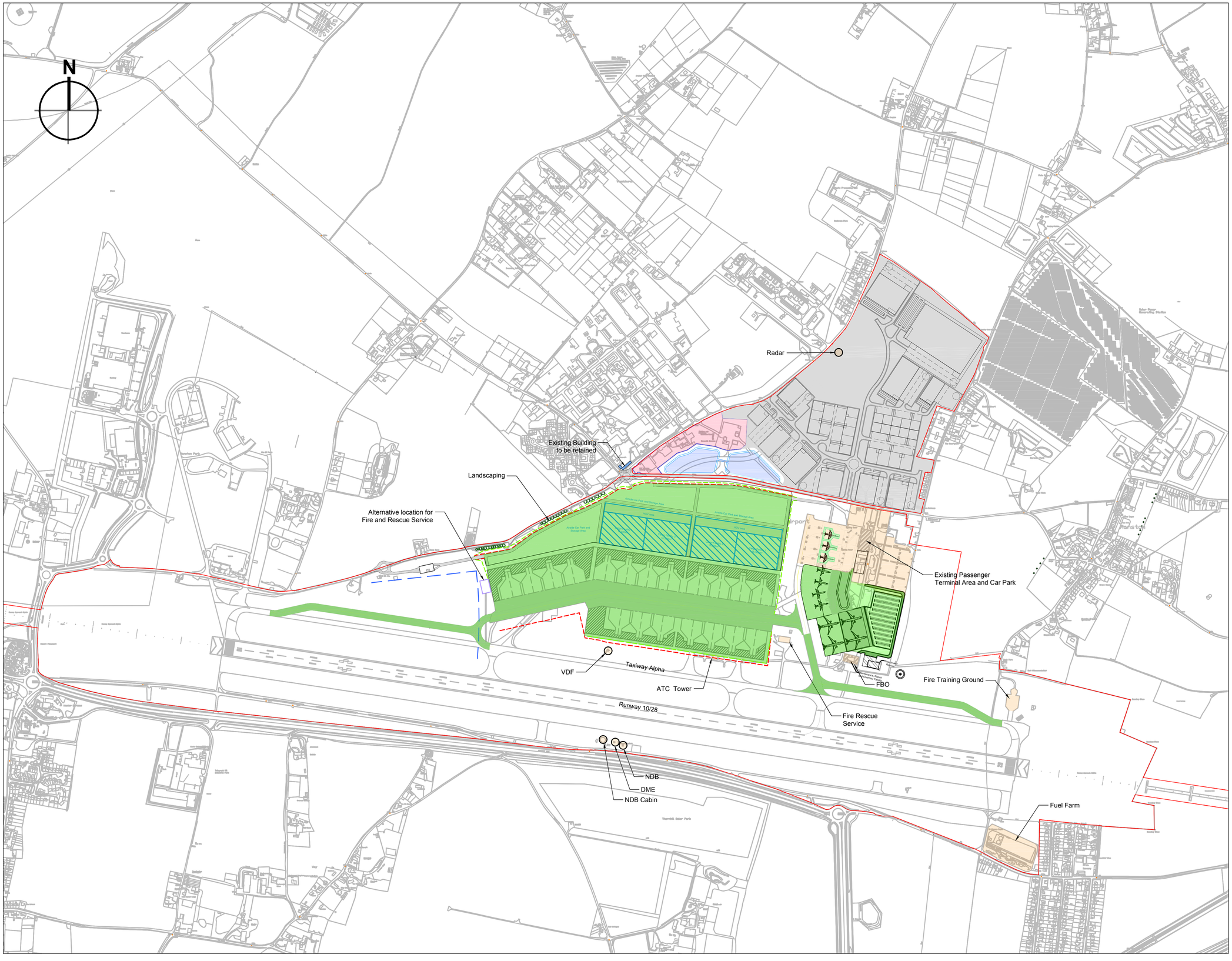

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Legend

- Affected Area
- New airfield infrastructure
- Drainage infrastructure
- Museum area
- Existing airfield assets

Rev	Description	By	Ckd	Date
P02	Hatching and legend amended	RS	CJ	23.06.16
P01	First Issue.	JLE	GD	09.06.16

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Client RIVER OAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Title **Figure 2.2**
Proposed Layout
General Arrangement
Overall Plan

Status	Scale	Date Created
Preliminary	6,000 @A1	03/06/2016
Project Leader	**Drawn By**	**Checked by**
GD	JLE	GD

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0320	P02	S0

Project Number | Originator - Zone - Level - Type - Role - Drawing Number

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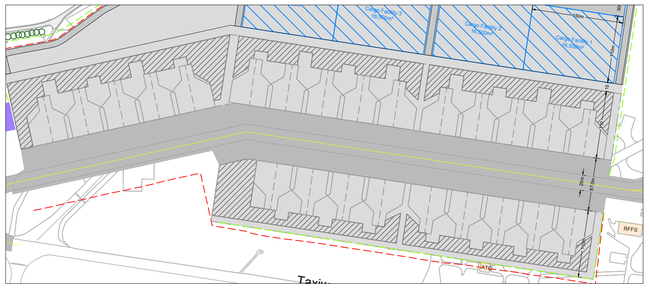
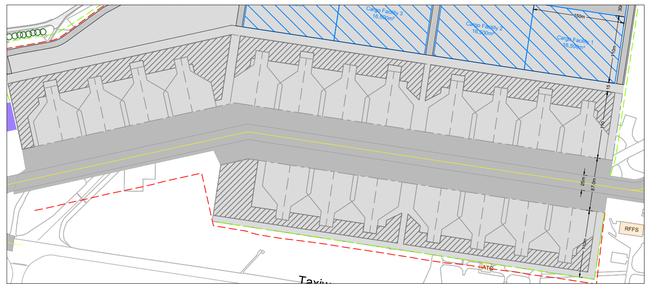
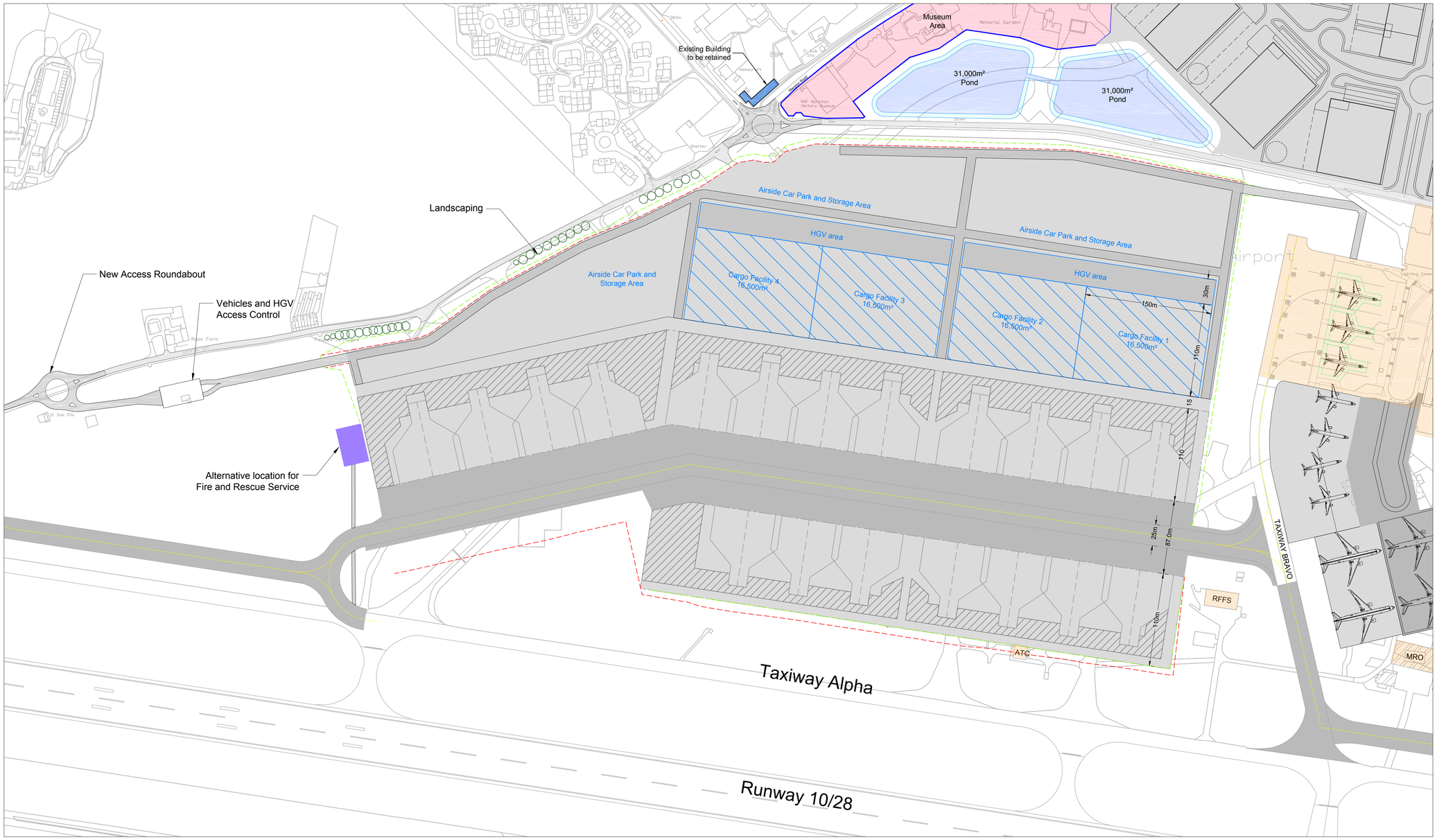


Code D Aircraft Configuration (24 positions)
Scale 1:5000



Code E Aircraft Configuration (19 positions)
Scale 1:5000

Code F Aircraft Configuration (6 positions)
Scale 1:5000



Cargo Area. Plan View
Scale 1:2500

Notes

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Proposed Option

Characteristics:

Number of Code E Stands:	19 (6 Code F)
Cargo Building:	4 x 16,500 = 66,000 m²
Storage and park area:	120,000 m²
Taxiway + Apron Area:	280,000 m²

Note:

Code F stands may be increased if necessary. The proposed configuration maximize the handling and storage areas beside the stands.

Rev	Description	By	Ckd	Date
P01	First Issue.	JLE	GD	09.06.16

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Client RIVEROAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Title **Figure 2.3**
Proposed Layout
General Arrangement
Cargo Area

Status	Scale	Date Created
Preliminary	Shown @A1	03/06/2016
Project Leader	Drawn By	Checked by
GD	JLE	GD

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0322	P01	S0

Project Number | Originator - Zone - Level - Type - Role - Drawing Number

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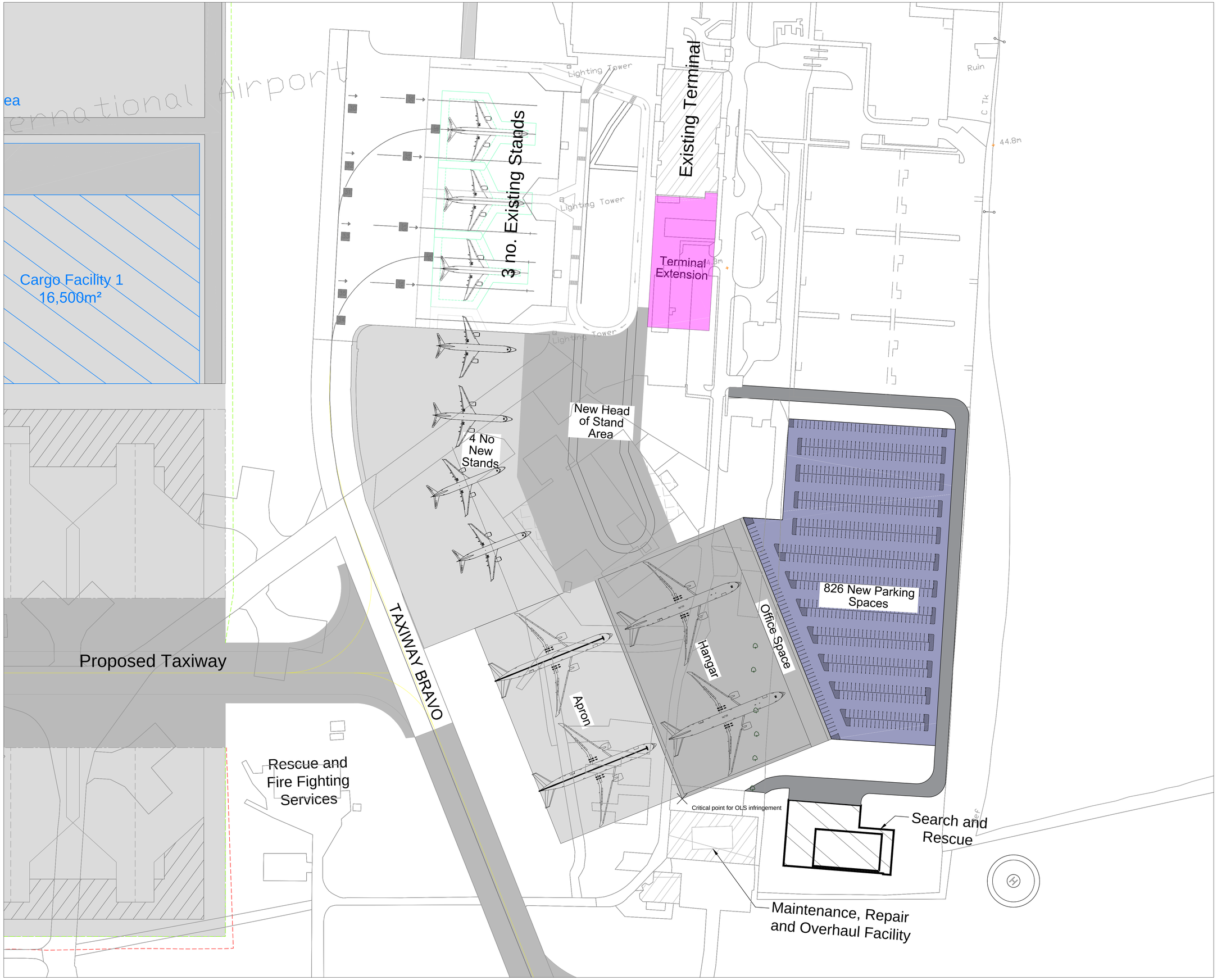

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KEY

- Area of new car parking to hangar and terminal extension
- Terminal Extension

Rev	Description	By	Ckd	Date
P03	Abbreviated text changed.	KH	CJ	22.06.16
P02	Road added & safeguarded areas removed.	KH	CJ	16.06.2016
P01	First Issue.	KH	CJ	02.06.16

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Client RIVEROAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Title **Figure 2.4**
Proposed Layout
General Arrangement
Passenger Area

Status	Scale	Date Created
Preliminary	1:1000 @A1	02.06.2016
Project Leader	Drawn By	Checked by
GD	KH	CJ

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0321	P03	S0

Project Number | Originator - Zone - Level - Type - Role - Drawing Number

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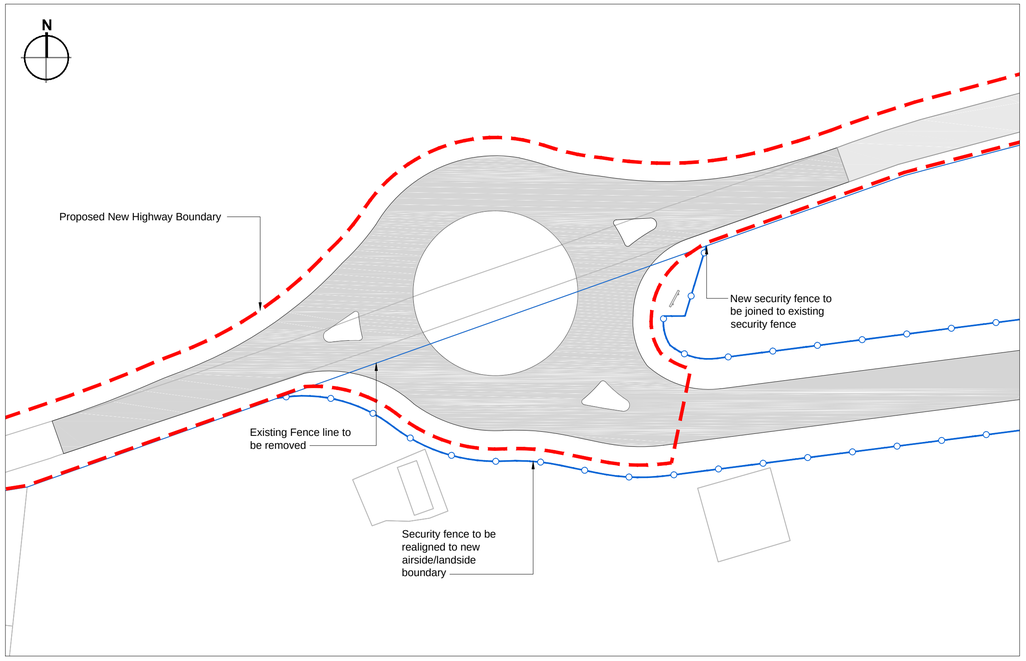
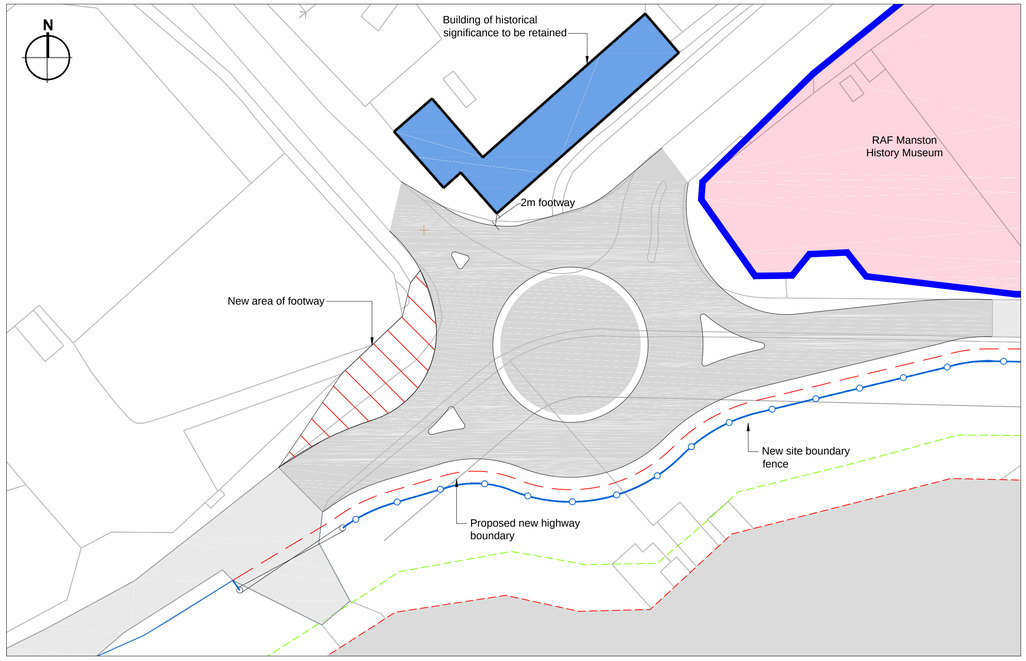
Legend

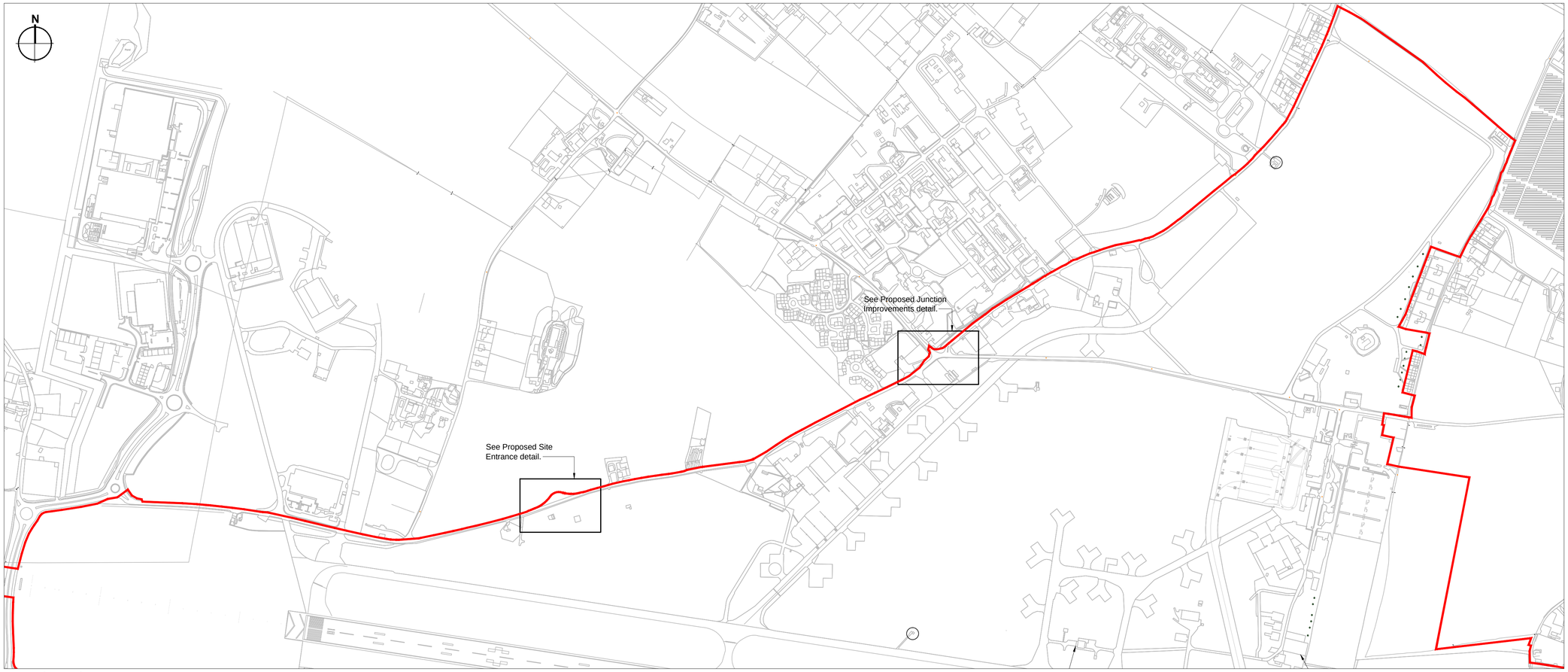
- Highway Boundary
- Security Fence



Proposed Site Entrance
Scale 1:500



Proposed Junction Improvements
Scale 1:500



Location Plan
Scale 1:5000

10m SCALE 1:500

100m SCALE 1:5000

Rev	Description	By	Ckd	Date
P02	Hatching and text removed, boundary changed.	KH	CJ	22.06.2016
P01	First Issue.	JLE	GD	09.06.16

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Client RIVEROAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Figure 2.5
Title Proposed Highway Improvements

Status	Scale	Date Created
Preliminary	As Shown @A1	13/06/2016

Project Leader	Drawn By	Checked by
GD	CJ	GD

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0343	P02	S0

Project Number | Originator - Zone - Level - Type - Role - Drawing Number

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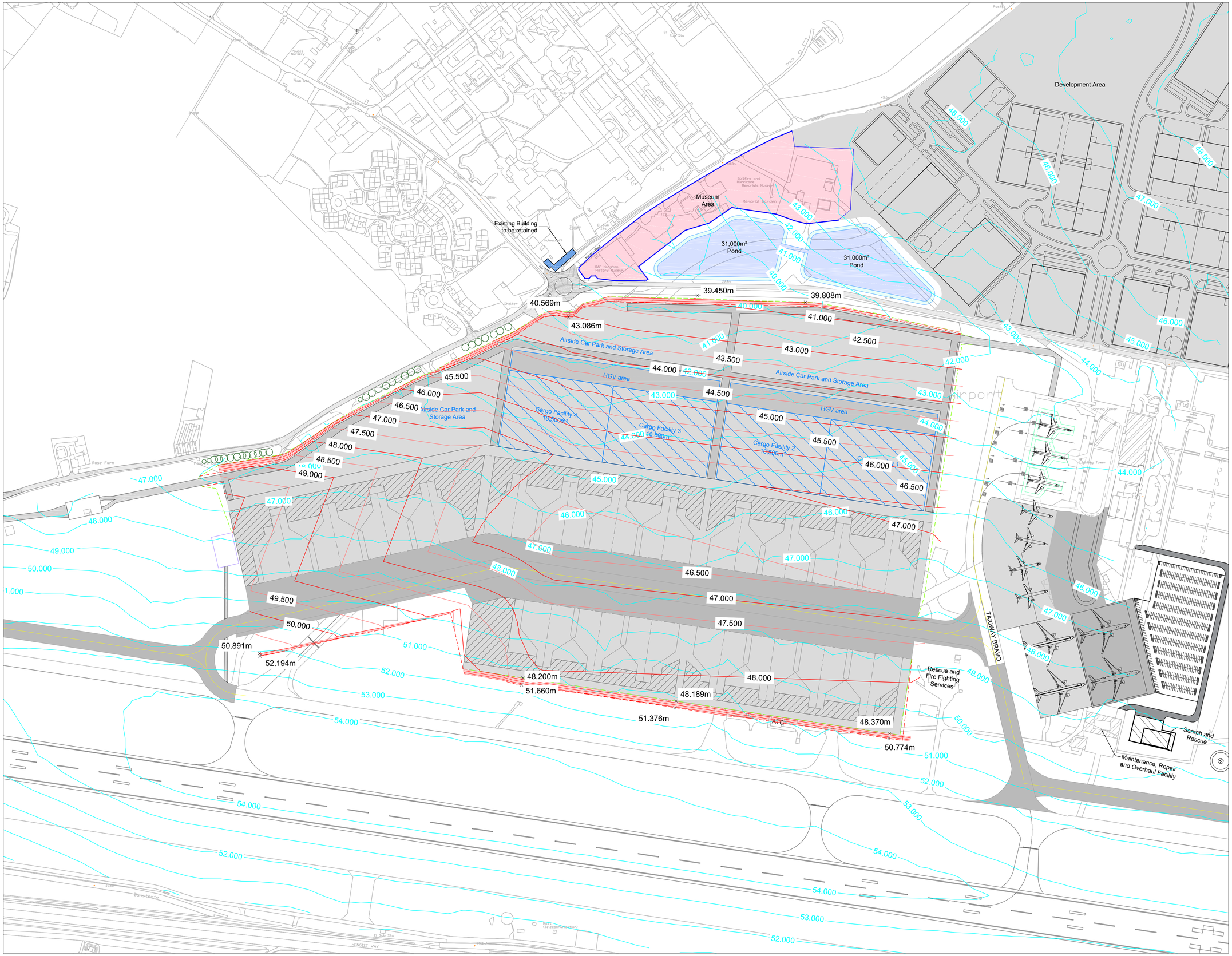

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Legend:

Existing Levels

- Major contours (1.0m)

Proposed Levels

- Major Contour (1.0m)
- Minor Contour (0.5m)

Rev	Description	By	Ckd	Date
P02	Drawing status revised from Uncontrolled	KH	CJ	29.06.16
P01	First Issue.	KH	CJ	09.06.16

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Client RIVER OAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Title Figure 2.6 Proposed Contours

Status	Scale	Date Created
Preliminary	2,500 @A1	27/05/2016
Project Leader	**Drawn By**	**Checked by**
GD	KH	JLE

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0330	P02	S0

Project Number | Originator - Zone - Level - Type - Role - Drawing Number

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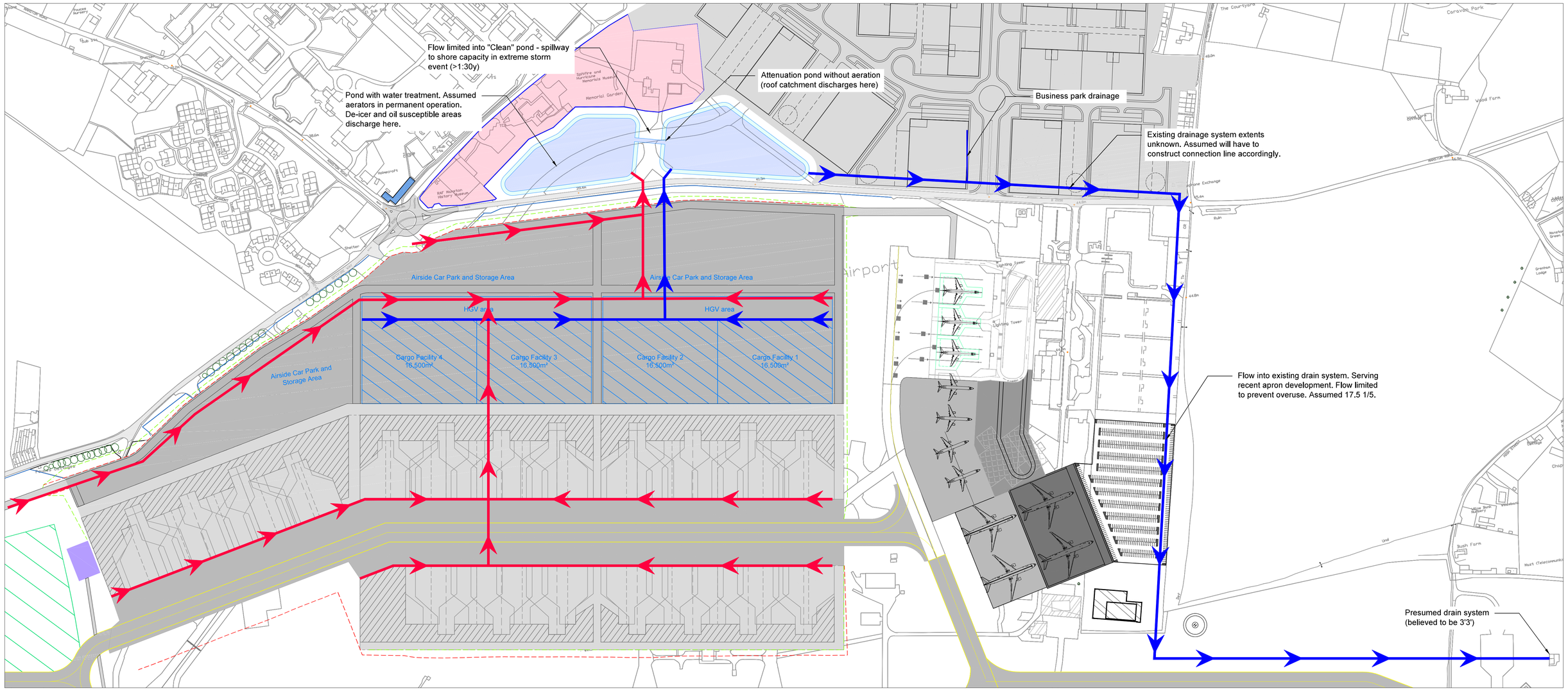

Drainage Layout of Proposed Option

Scale 1:2500

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KEY

"Clean" water runoff catchment from roof areas only (Business park inc)

"Contaminated" flow from Aprons, Taxiways and Roads

50m SCALE 1:2500

Rev	Description	By	Ckd	Date
P01	First Issue.	KH	CJ	03.06.16

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Client RIVEROAK INVESTMENT CORP., LLC

Project Manston Airport Masterplan

Figure 2.7
Title Outline Drainage Layout

Status	Scale	Date Created
Preliminary	1:2500 @A1	03.06.2016
Project Leader	Drawn By	Checked by
GD	KH	CJ

Document Number	Revision	Suitability
NK018417 - RPS-MSE-X-DR-C-0350	P01	S0

Project Number | Originator + Zone + Level + Type + Role + Drawing Number

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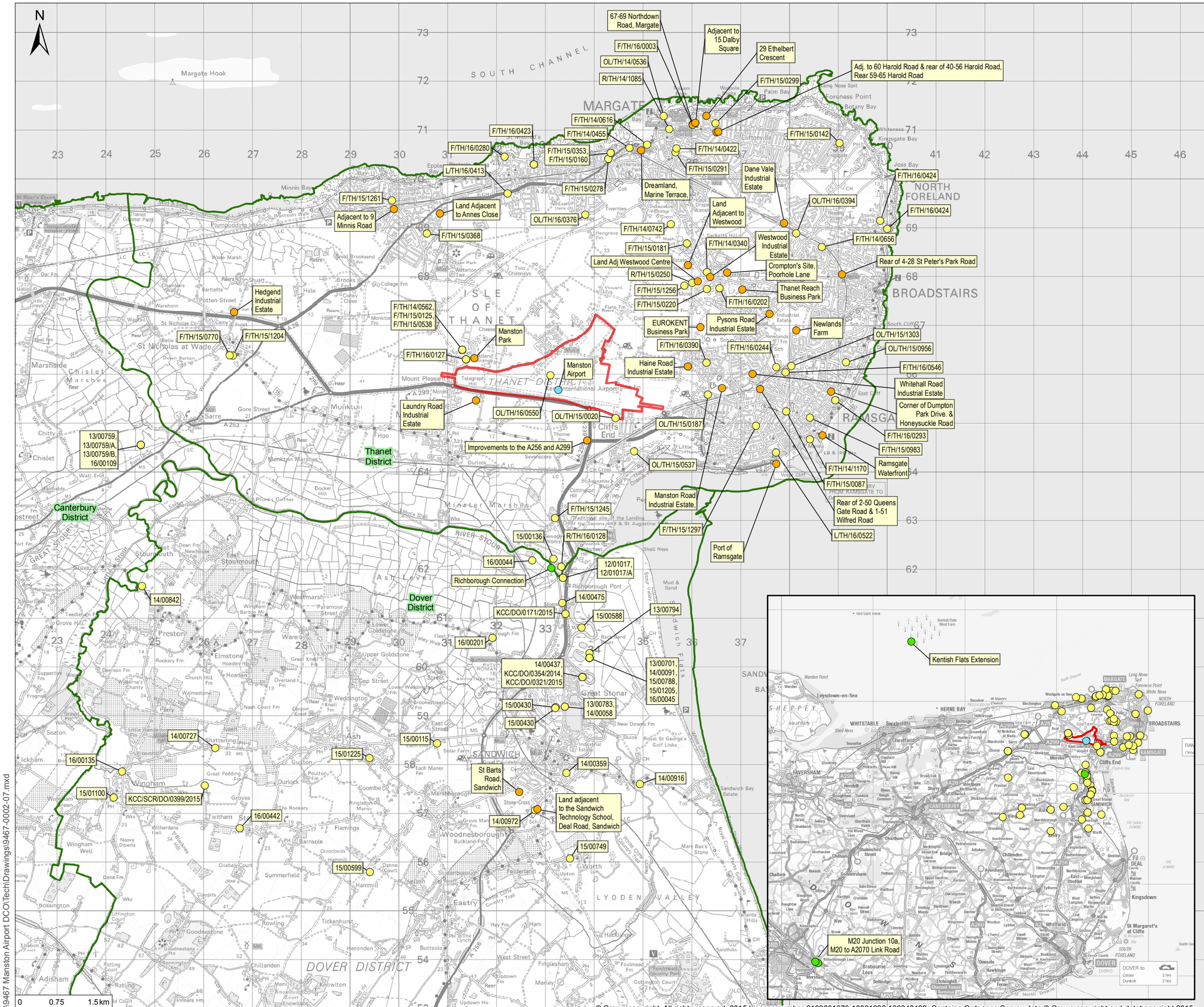

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Legend

- DCO Application Boundary
- Local authority boundary
- Tier 1 Other Development (permitted & submitted applications)
- Tier 2 Projects on the PINS Programme of Projects (with Scoping Report)
- Tier 3 projects on the PINS Programme of Projects (with no scoping report)
- Tier 3 Sites Identified in the relevant Development Plan
- OL/TH/15/0537 — Planning application or planning permission reference number

Note:
Please see separate RPS schedules for full details of the planning applications/permissions for the sites identified

Rev	Description	Date	Initial	Checked

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Client: Amec Foster Wheeler

Project: Manston Airport

Title: Figure 4.1 Cumulative Effects Assessment - Other Developments

Status	Drawn By:	PM/Checked By
FINAL	MS	
Job Ref	**Scale @ A3**	**Date Created**
OXF9467	1:75,000	JUN 16
Figure Number		**Rev**
1		-

rpsgroup.com/uk

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O:\9467 Manston Airport DCO\Tech\Drawings\9467-0002-07.mxd

610000 620000 630000 640000

170000 160000 150000

N

Key

- Development Boundary
- SPA
- SSSI
- NNR
- RAMSAR
- SAC

0 1,000 2,000 4,000 Metres

Scale at A3: 1:100,000

Client

RiverOak Investment Corp LLC

RIVEROAK INVESTMENT CORP., LLC

38199 Manston Airport DCO EIA

amec foster wheeler

Designated Sites of Nature Conservation Importance
Figure 6.1

June 2016 38199-Lon010[B].mxd GARDO

630000

N

Key

- Development Boundary
- Study Area (1 and 2km)
- 1. Ramsgate Causeway Enclosure
- 2. Southern Water Weatherlees Hill Pipeline
- 3. Cliffs End Farm
- 4. Thanet Way Duelling
- 5. Thanet Earth
- Grade II Listed Building
- Grade II* Listed Building
- Conservarion Area
- Scheduled Monument

LONDON

Canterbury

0 1,000 2,000

Scale at A3: 1:30,000

Client

RiverOak Investment Corp LLC

RIVEROAK INVESTMENT CORP., LLC

38199 Manston Airport DCO EIA

amec foster wheeler

Designated Sites of Historic Environment Importance Figure 8.1

June 2016 38199-Lon011[A].mxd GARDO

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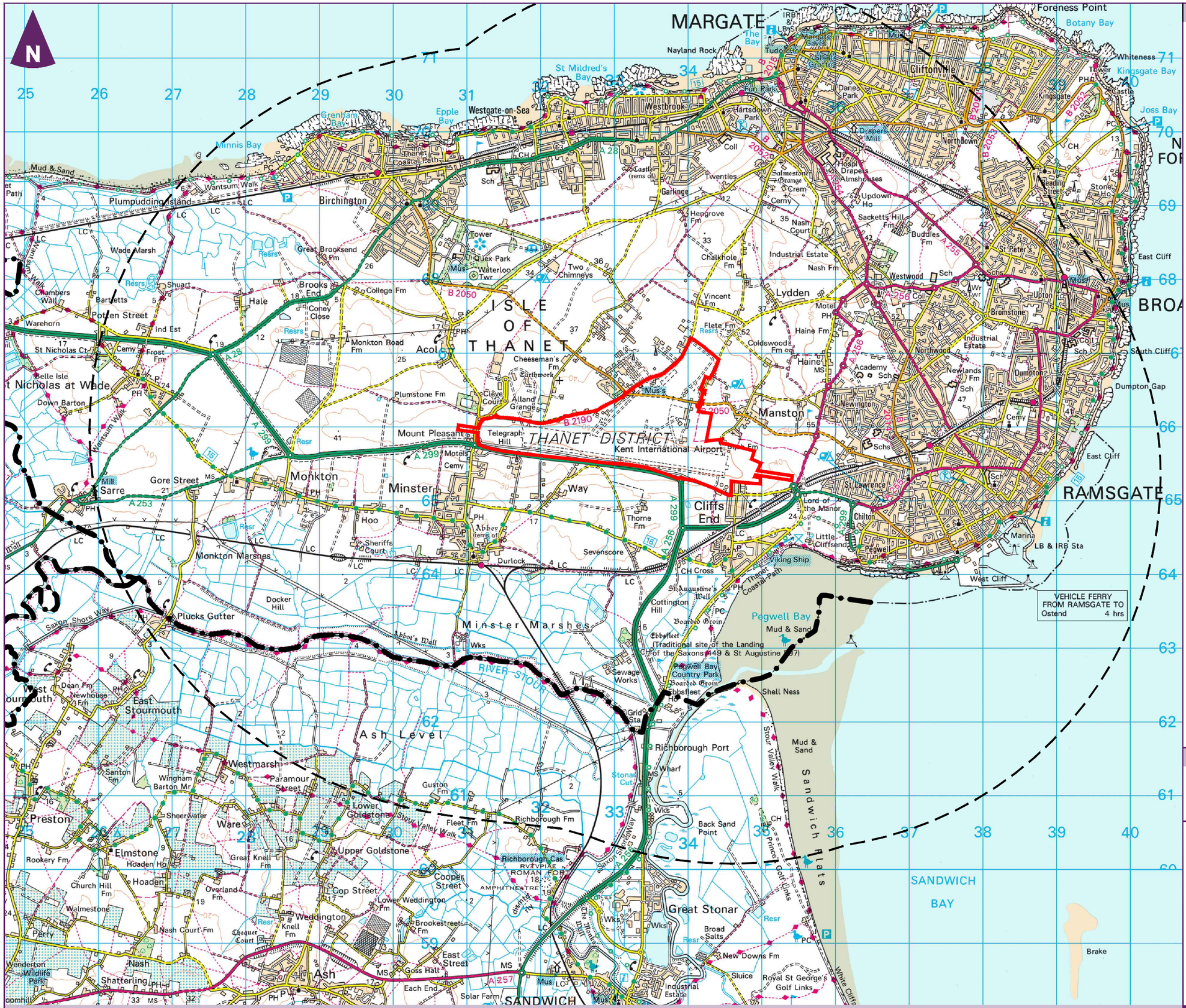


Key

- Application Boundary
- The LVIA Study Area - 5km buffer from Application Boundaries
- Local Authority Boundaries

0 km 3 km

Scale 1:50,000 @ A3

Client

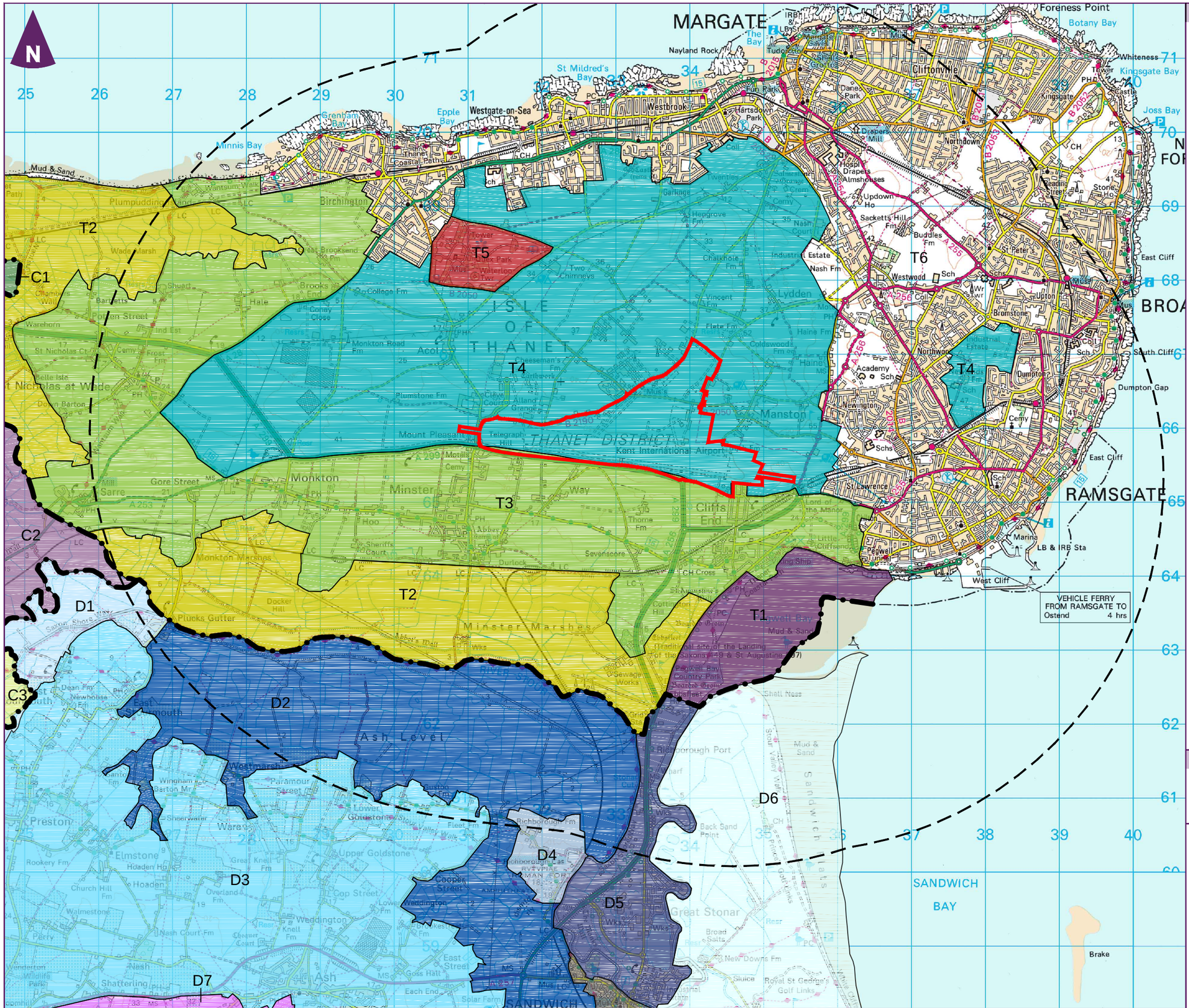
RIVER OAK INVESTMENT CORP., LLC

Manston Airport DCO EIA
Scoping Report

amec foster wheeler

Figure 10.1
Site Location and 5km Study Area

June 2016 38199-Lon10.dwg parkr



Key

Application Boundary

The LVIA Study Area - 5km buffer from Application Boundaries

Local Authority Boundaries

Thanet LCA

- T1 Pegwell Bay
- T2 The Former Wantsum Channel
- T3 The Former Wantsum North Shore
- T4 The Central Chalk Plateau
- T5 Quex Park
- T6 The Urban Coast

Dover LCA

- D1 Little Stour Marshes
- D2 Ash Level
- D3 Preston and Ash Horticulture Belt
- D4 Richborourgh Castle
- D5 The Sandwich Corridor
- D6 Sandwich Bay
- D7 Staple Farmlands

Canterbury LCA

- C1 3 Chislet Arable Belt
- C2 8 Reculver Coastal Fringe
- C3 31 Little Stour Valley

0 km 3 km

Scale 1:50,000 @ A3

Client

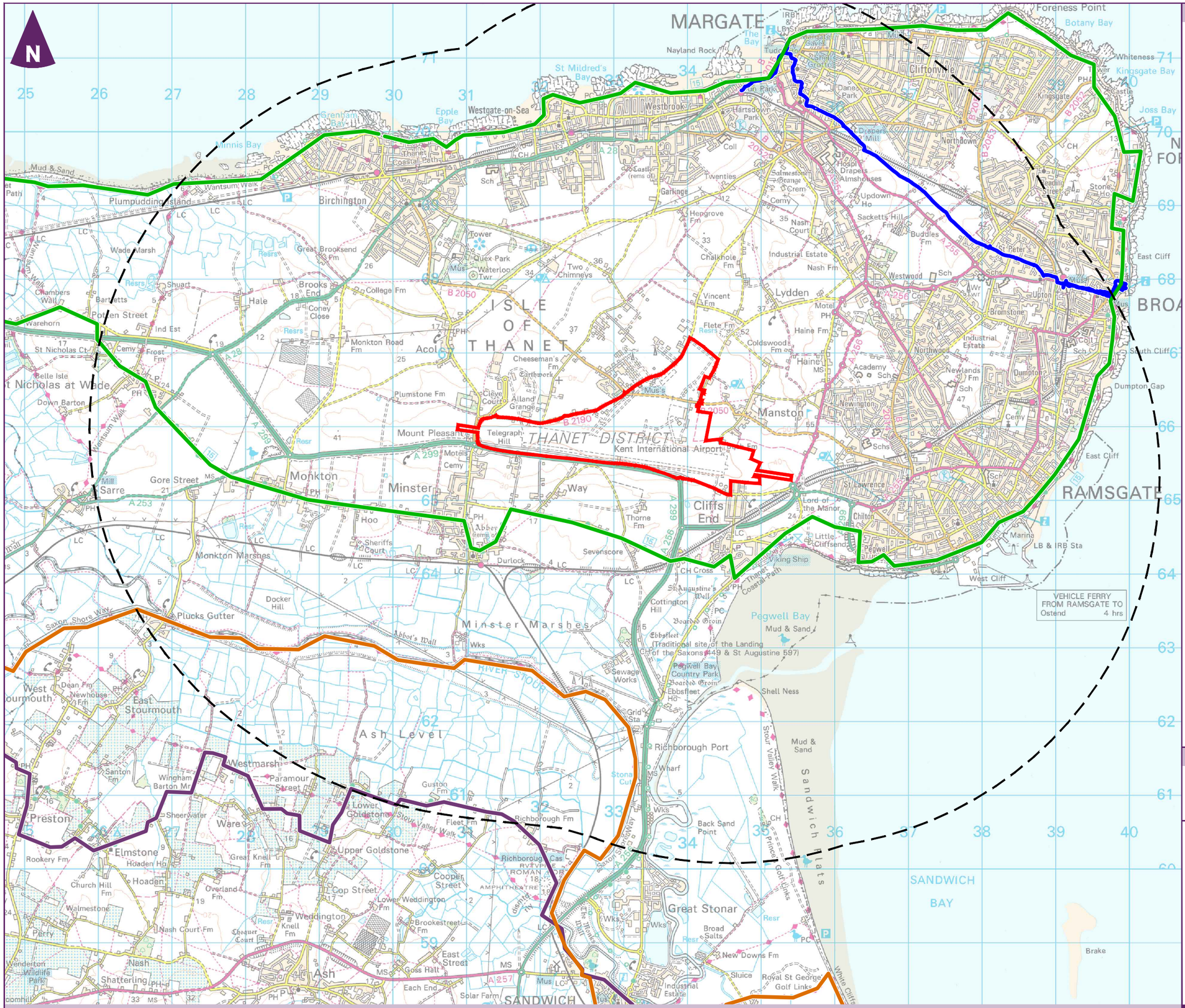
RIVEROAK INVESTMENT CORP., LLC

Manston Airport DCO EIA Scoping Report

amec foster wheeler

Figure 10.2
Local Landscape Character Areas

June 2016 38199-Lon11.dwg parkr



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Client

RIVER OAK INVESTMENT CORP., LLC

Manston Airport DCO EIA
Scoping Report

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Figure 10.3
Long Distance Walking and Cycling Routes

June 2016

38199-Lon12.dwg parkr