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Chalgrove Airfield EIA Scoping Report

Homes and Communities Agency

October 2017

Quality information

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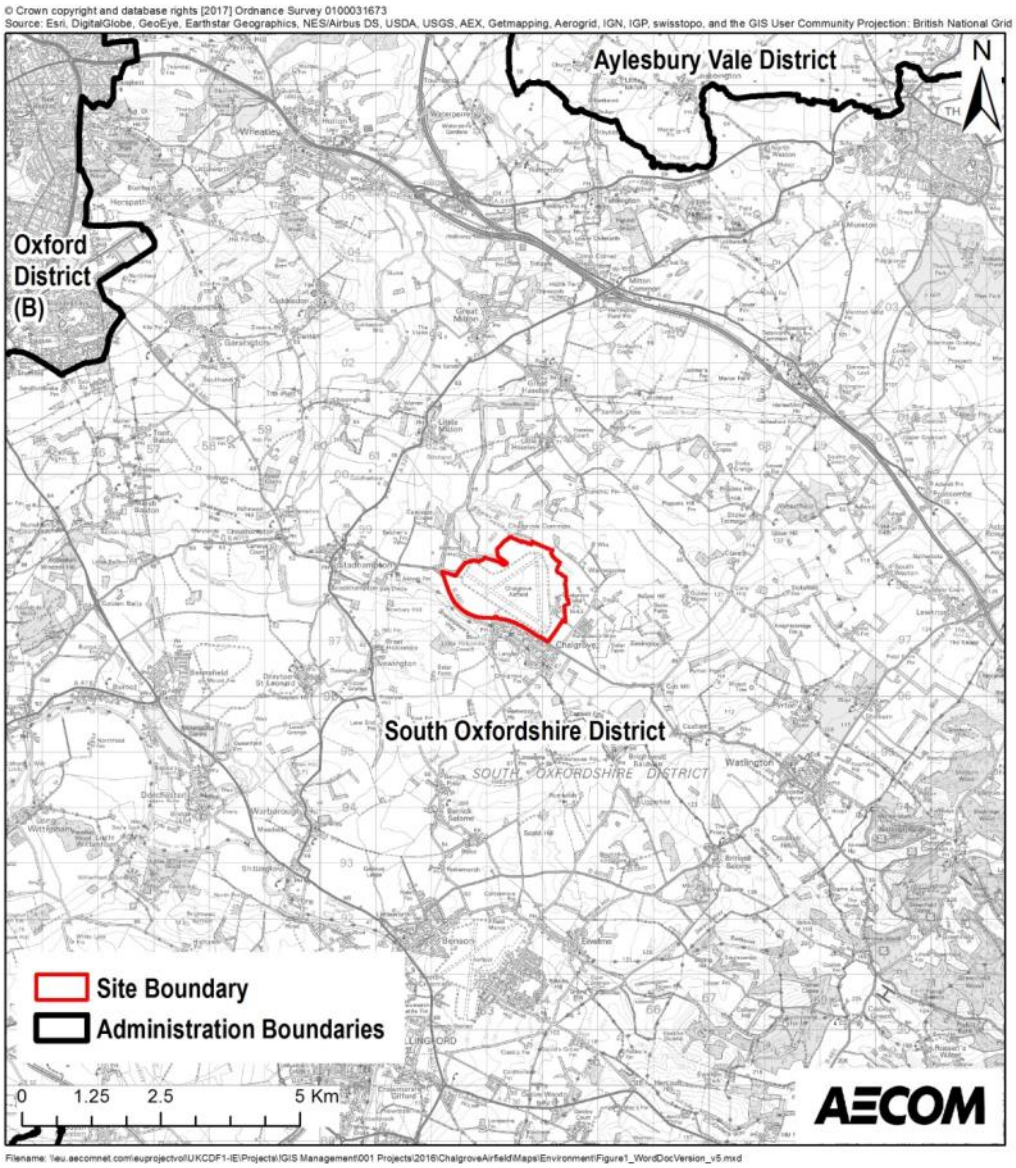
1. Introduction

1.1 Introduction

AECOM has been commissioned by the Homes and Communities Agency (HCA) (hereinafter referred to as 'the Applicant') to prepare this Scoping Report to inform the scope and content of an Environmental Impact Assessment (EIA) to support an Outline Planning Application (with all matters reserved except for access), for a residential led mixed use development (the 'Proposed Development') at Chalgrove Airfield, South Oxfordshire ('the Site'). The Site is approximately 254 hectares (ha) in area and is centred on National Grid Reference SU 63520 97592. **Figure 1-1** shows the location of the Site.

Figure 1-1: Site Location



The Applicant is proposing to submit an Outline Planning Application with all matters reserved except for access. The Application will comprise up to 3,000 new residential units, a local centre, up to 5 hectares of employment land (including existing occupiers), sites for two primary schools and a secondary school, the consolidation of runways on Site and the construction of a new runway,

creation of new formal and informal public open space providing land for playing fields, and open green space together with cemeteries and associated vehicular, pedestrian and cycle access, drainage and landscaping works.

Given the scale of the development, the location of the Site and the potential for likely significant environmental effects, an Environmental Statement (ES) will be submitted alongside the planning application. AECOM has been commissioned to undertake the EIA on behalf of the Applicant in line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') (Ref 1.1).

1.2 Request for a Scoping Opinion

This Scoping Report accompanies a written request to South Oxfordshire District Council (SODC) for a Scoping Opinion pursuant to the EIA Regulations. In accordance with Regulation 15(2) of the EIA Regulations (Ref 1.1), this report includes:

Regulation 15(2) of the EIA Regulations	Location within this document
"a plan sufficient to identify the land"	Figure 1-1 and Figure 3.1
"a brief description of the nature and purpose of the development, including its location and technical capacity"	Section 4
"an explanation of the likely significant effects of the development on the environment"	Section 7
"Such other information or representations as the person making the request may wish to provide or make".	Section 1 to 9

1.3 Scoping Report Content

The structure of this Scoping Report is as follows:

- **Section 2** provides an overview of the planning and legislative context for the Proposed Development, outlines the purpose of the development, describes the related assessments to be undertaken and the approach to identifying any other permits and consents required;
- **Section 3** provides a description of the existing Site, the surroundings and key environmental receptors;
- **Section 4** describes the Proposed Development, and includes an overview of the key construction, demolition and operational activities;
- **Section 5** describes the design development and the approach to the consideration of alternatives that will be adopted in the ES;
- **Section 6** describes the EIA methodology, including the approach to considering inter-relationship and cumulative effects;
- **Section 7** presents the baseline studies undertaken to date, the approach to assessment and potential environmental effects for all topics that are proposed to be scoped in to the EIA;
- **Section 8** details the environmental topics that are proposed to be scoped out of the EIA; and
- **Section 9** presents the proposed structure of the ES.

2. Planning Context

2.1 Planning and Legislative Context

Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that planning applications should be determined in accordance with the Development Plan unless material considerations indicate otherwise. In this case, the Development Plan for South Oxfordshire District Council (SODC) comprises:

- Saved policies from the SODC Local Plan 2011 (Ref 2.1); and
- SODC Core Strategy (2012) (Ref 2.2).

In addition to the adopted development plan, the National Planning Policy Framework (NPPF) (Ref 2.3) will be a material planning consideration in the determination of the planning application for the proposed development of the Site.

SODC are currently preparing a new Local Plan, which once adopted will replace the Saved Policies of the 2011 Local Plan and the Core Strategy. SODC currently expect to adopt the emerging Local Plan in the summer of 2018. As a result it is likely that the policies contained within the emerging Local Plan will be given substantial weight in the determination of the planning application for the proposed development of the Site by the time that the planning application is determined.

In addition to the emerging local plan, at a Parish level, Chalgrove Parish Council are currently preparing a Neighbourhood Development Plan. The emerging Neighbourhood Plan applies to the area surrounding (and including) Chalgrove village, which includes the Site. It is not clear when the Neighbourhood Plan will be adopted, but it will be considered a material consideration in the determination of the planning application for the proposed redevelopment of the Site.

2.1.1 National Planning Policy Framework

The NPPF (Ref 2.3) was published in March 2012 and provides the basis for the Government's planning policy guidance. It effectively reinforces the Government's message for authorities to adopt a presumption in favour of sustainable development. Relevant paragraphs are identified below.

Paragraph 7	Paragraph 49	Paragraph 111
Paragraph 10	Paragraph 50	Paragraph 128
Paragraph 14	Paragraph 52	Paragraph 129
Paragraph 17	Paragraph 69	Paragraph 132
Paragraph 32	Paragraph 70	Paragraph 134
Paragraph 38	Paragraph 73	
Paragraph 47	Paragraph 103	

2.1.2 Saved policies from the SODC Local Plan 2011

On December 13th 2012 the South Oxfordshire Core Strategy (Ref 2.2) was adopted by SODC. This partially replaced a number of policies in SODC's Local Plan 2011 (Ref 2.1).

Relevant saved policies are:

Saved policy C4	Saved policy CON11	Saved policy CON13
Saved policy C6	Saved policy CON12	

2.1.3 Planning Practice Guidance (PPG) (March 2014)

The PPG contains revised and updated planning practice guidance. Relevant paragraphs are identified below.

Paragraph 001 Design.

Paragraph 001 Rural Housing – a statement assessing housing need and allocating sites should be considered at a strategic level and through the local plan and/or neighbourhood plan process. The same paragraph also confirms that the NPPF recognises different sustainable transport policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

2.1.4 South Oxfordshire Core Strategy 2012

The SODC Core Strategy (Ref 2.2) identifies the issues and directions of growth for new development up to the year 2027 and was adopted in 2012. Relevant policies are identified below.

Policy CS1	Policy CHS4	Policy CSQ4
Policy CSM1	Policy CST1	Policy CSG1
Policy CSM2	Policy CSEN1	Policy CSB1
Policy CSEM2	Policy CSEN3	Policy CSI1
Policy CSH2	Policy CSQ2	
Policy CSH3	Policy CSQ3	

2.1.5 Emerging SODC Local Plan 2033

The emerging Local Plan set out SODC's vision for South Oxfordshire up to 2033. Once adopted, the plan will supersede the policies contained within the adopted Local Plan and Core Strategy and will form the adopted Development Plan for the determination of planning applications in the District. Relevant policies are identified below.

Policy STRAT1	Policy EMP2	Policy TRANS2
Policy STRAT9	Policy EMP3	Policy TRANS3
Policy H1	Policy EMP10	Policy TRANS4
Policy H11	Policy INF1	
Policy H13	Policy TRANS1	

2.2 Determining the Need for Environmental Impact Assessment

The EIA Regulations set out that a proposed development is, or has the potential to be EIA development if it falls within either one of two categories of projects, in Schedule 1 or Schedule 2 of the Regulations. In respect of Schedule 1 developments an EIA is required in every case. In respect of Schedule 2 developments an EIA is required only if a project is likely to give rise to significant environmental effects.

The Proposed Development falls within Schedule 2 of the EIA Regulations, section 10 (b) "*Urban development projects, including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas*".

For all developments which fall under Schedule 2, the need for an EIA is determined on the basis of set criteria as follows:

- It is to be carried out in part or all of a sensitive area (as defined in Part 1 of the EIA Regulations); OR
- It meets or exceeds the applicable threshold criteria for that class of development in Schedule 2, which in this case is as follows:

(i) The development includes more than 1 hectare of urban development which is not dwelling/house development; or

(ii) the development includes more than 150 dwellings; or

(iii) the overall area of the development exceeds 5 hectares; AND

- It is likely to have significant effects on the environment by virtue of factors such as its nature, size or location.

The Proposed Development will include up to 3,000 new residential units, 5 ha of employment land and extends to 254 ha, therefore exceeding the threshold criteria. Given the scale and nature of the Proposed Development, there is considered to be the potential for likely significant environmental effects to arise as a result of the scheme. The Proposed Development is therefore considered to be 'EIA Development' under the provisions of the EIA Regulations.

2.3 Project Need

The Strategic Housing Market Assessment (SHMA) (Ref 2.4) for Oxfordshire concludes that up to 93,560 – 106,560 additional homes are needed across Oxfordshire in the period 2011-2031 (between 4,678 – 5,328 homes per annum). This is based on meeting the housing need identified, supporting committed economic growth and improving housing affordability as required by Government.

The emerging SODC Local Plan (Second Preferred Options, March 2017) (Ref 2.5) seeks to build upon the existing settlement hierarchy and actively create a pattern of development central to the area. It identifies strategic levels of growth at three locations connecting the central area of the District at Culham (2,100 units), Chalgrove and Berinsfield (2,500 units).

SODC's Local Plan Strategic Policy 1 provides for major development at Chalgrove including necessary infrastructure and community facilities. To ensure that this growth could be planned in SODC, as part of the overall strategy for the District, the Council have included a strategic allocation for up to 3,000 homes at land at Chalgrove Airfield (STRAT 9).

The strategic allocation will be expected to deliver:

i) A scheme in accordance with an agreed comprehensive masterplan, including full integrated water management plan;

ii) A layout and form that respects the setting of the Listed Buildings and Registered Battlefield beyond the site;

iii) Appropriate vehicular, cycle and pedestrian access including safe and attractive connections with nearby communities;

iv) High quality public transport facilities and connections within and adjacent to the site;

v) Appropriate landscaping and an integrated network of green infrastructure; and

vi) Where feasible, opportunities for district heating and low carbon on site energy generation.

(South Oxfordshire Local Plan Second Preferred Options March 2017) (Ref 2.5)

2.4 Related Assessments

The related assessments described below will be contained within reports separate to the ES, and submitted as part of the application. Notwithstanding, relevant information from the reports will inform and be included within the respective ES chapters (see **Section 9**).

2.4.1 Transport Assessment

A Transport Assessment (TA) will be undertaken to assess the potential impacts of the Proposed Development upon the surrounding transport network. The TA will include existing traffic flow data and accident data for the area surrounding the Site. Footway, footpath, cycleway and any other public rights of way will be identified and assessed against the standards that could be expected for the purpose that they serve. Public transport information will also be obtained. The TA will determine the likely levels of additional transport movements from the Site, including those made by private car, walking, cycling and public transport.

The ability of the existing transport infrastructure will be assessed to determine whether or not it is capable of accommodating the additional transport movements. Standard Department for Transport recommended software will be used to assist with these assessments. Where there are any significant changes in transport movements, the impact upon safety and convenience will be assessed to determine the need for environmental or safety improvements.

2.4.2 Framework Travel Plan (FTP)

The scope of this document will include establishing a baseline of sustainable transport opportunities and mode shares, setting out targets and detailing the measures and management structures which will need to be put in place to achieve meaningful mode shift away from private car usage. It will also include protocols for monitoring and evaluation.

2.4.3 Water Framework Directive (WFD) Assessment

The Water Framework Directive (WFD) (Ref 2.6) was transposed into law in England and Wales by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (Ref 2.7). Two 'daughter' directives, one aimed at protecting groundwater, the second aimed at reducing pollution of surface water (rivers, lakes, estuaries and coastal waters) by pollutants on a list of priority substances, have been adopted at European level. The requirements of the WFD will be taken into account in the planning of all new activities that may impact on the water environment.

To meet the requirements of the WFD, the competent authority (the Environment Agency) has set Environmental Objectives for each water body. A default objective in all surface water bodies is to prevent deterioration in the 'Chemical Status' and either the 'Ecological Status' (for natural water bodies) or the 'Ecological Potential' (for heavily modified or artificial water bodies). For groundwater bodies, the default objective is to prevent deterioration in 'Chemical Status' and 'Quantitative Status'.

There are two surface water bodies (described in **Section 7)** within or immediately downstream of the Site (Chalgrove Brook and Haseley Brook). The assessment of potential effects on the water environment from the Proposed Development would be supported by a Preliminary WFD Assessment (pWFD), the scope of which will be agreed in consultation with the Environment Agency.

2.4.4 Flood Risk Assessment

As the Proposed Development exceeds 1 ha, a separate Flood Risk Assessment (FRA) will be prepared in consultation with the Environment Agency. In accordance with the NPPF, the FRA will assess the flood risk both to and from the Proposed Development and demonstrate how that flood risk, from all sources, would be managed over the lifetime of the Site, taking into account the effects of climate change, including sea-level rise. In accordance with the NPPF, the FRA will consider potential sources of flooding from: fluvial; coastal; groundwater; surface water resulting from intense rainfall (pluvial) events; sewers (also resulting from intense pluvial events); and non-natural water bodies (i.e. canals and reservoirs), either from individual or multiple sources.

2.4.5 Energy Statement

An Energy Statement will be produced and will present the energy baseline to allow for evolution of design during the master planning process. A high level feasibility assessment of a range of low and zero carbon energy technologies will also be carried out.

2.4.6 Sustainability Statement

A Sustainability Statement will be produced to respond to the relevant Key Design Objectives as set out in the SODC Design Guide as well as demonstrate compliance with policy DES8 (Ref 2.8) which requires that new homes are designed to a water efficiency level of 110 litres /head /day.

2.4.7 Arboricultural Impact Assessment

To understand the implications of the Proposed Development on trees within the Site, an Arboricultural Impact Assessment (AIA) will be undertaken. This will be based on an arboricultural survey in accordance with British Standard (BS) 5837: 2012 – Trees in relation to design, demolition and construction (Ref 2.9).

The AIA will evaluate any direct and indirect effects of the Proposed Development and where necessary recommend mitigation. It will take into account the impacts of any tree loss required and any further activities proposed in the vicinity of the retained trees.

2.4.8 Habitats Regulation Assessment

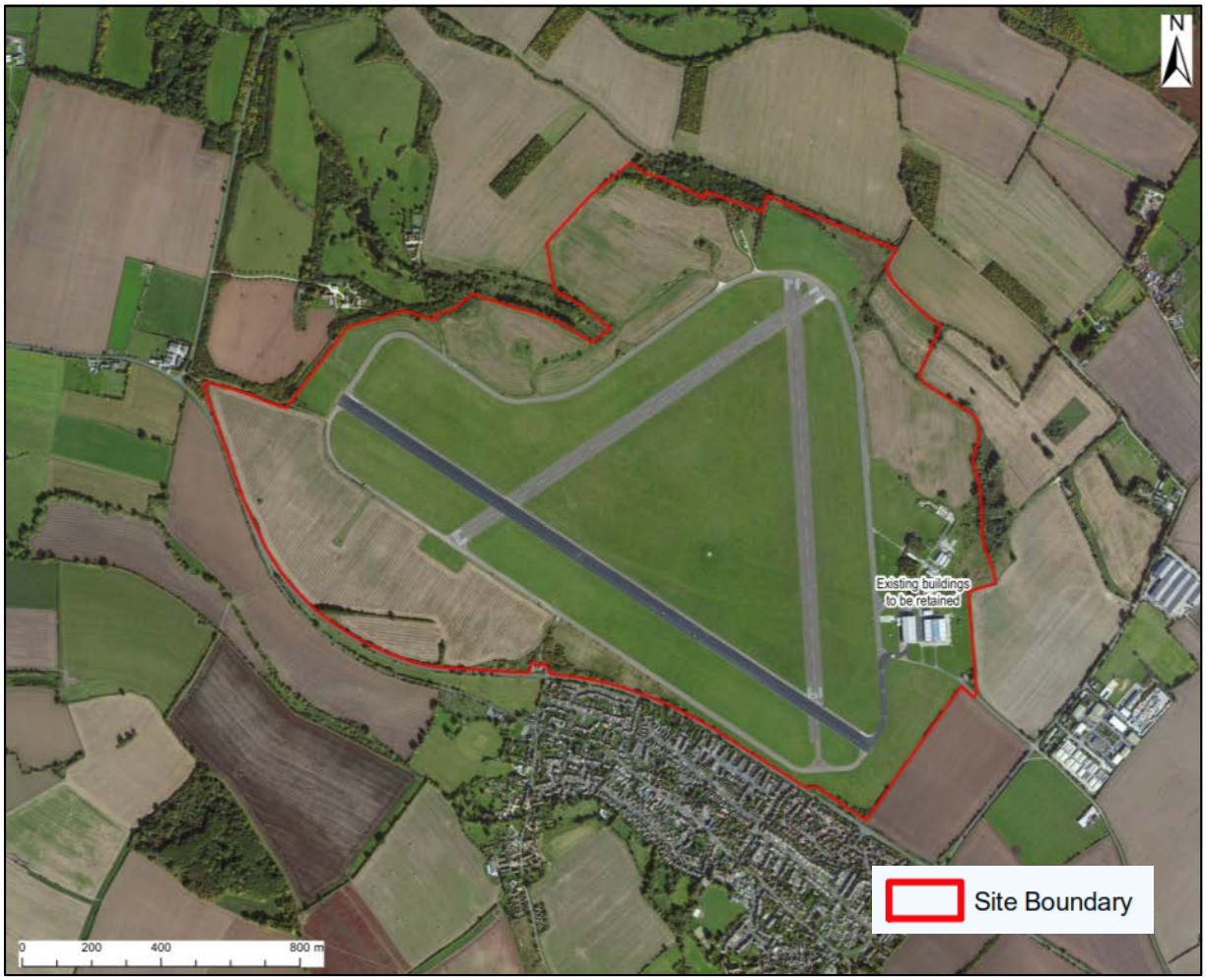
The closest European Sites are Little Wittenham Special Area of Conservation (SAC), Aston Rowant SAC and Chilterns Beechwoods SAC. On the basis of the nature of the Proposed Development and its distance to each of these sites (6.4 km to the closest), no Likely Significant Effects (LSEs) are expected either during the construction or operational phases. However, this will be examined in detail in a Habitats Regulation Assessment (HRA) Screening Assessment that will accompany the planning application.

3. Description of the Existing Environment

3.1 Site Location

The Site (defined by the red line in **Figure 3-1**) is approximately 254 ha in area. The Site is located within South Oxfordshire, directly north of the village of Chalgrove, northeast of the B480 and approximately 13 km to the east of central Oxford.

Figure 3-1: Site Boundary



3.2 Site Description

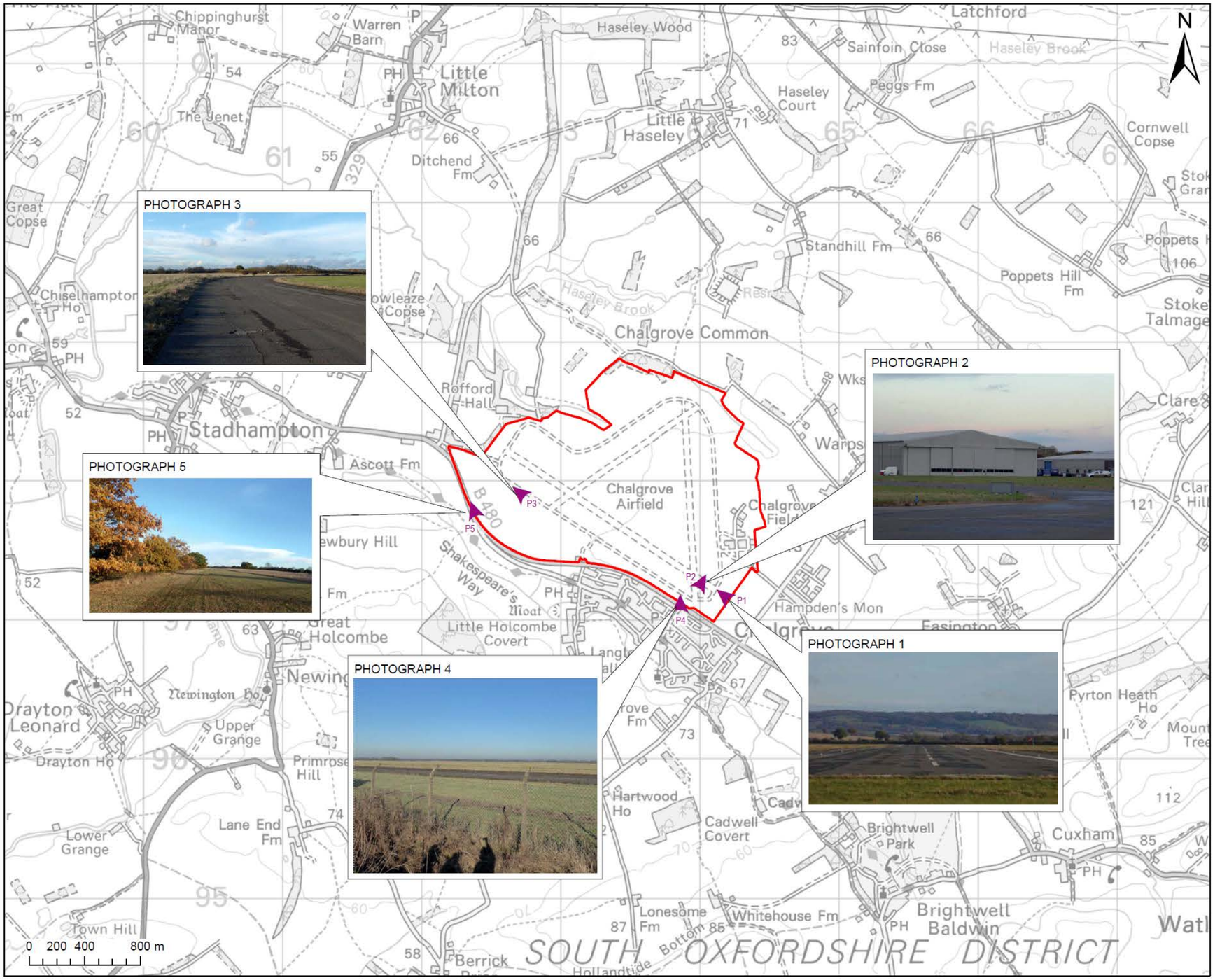
Historically the Site was a former Second World War airfield, however today it is used for occasional public transportation of passengers or for flying instruction. The Site contains three runways and a track surrounded by security fencing with amenity grassland covering the remainder of the Site. Several existing buildings are located towards the eastern boundary of the Site, including the war-time T-2 hangers.

In terms of topography, the airfield sits in lower lying flat land, located between the Chiltern Hills to the east, and higher ground of the Oxford Green Belt to the west. Its use as an active airfield means that the Site is relatively flat, and has no cover by way of overhead services or mature vegetation, other than at the site boundaries (**Figure 3.1**).

Existing built structures on the Site are limited. The hard-surfacing of the three runways and outer 'peri' track form the main built character elements, alongside buildings to the east associated with the operations of Martin Baker Aircraft Co Limited (MBACL). The combined built elements create a total

coverage of approximately 30ha. The Site is fenced and there is currently no public access or public use of the area. **Figure 3-2** provides an overview of selected viewpoints (Photographs 1 to 5) within the Site.

Figure 3-2: Photographs of the Site



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Project Title:

CHALGROVE AIRFIELD

Client:

HOMES AND COMMUNITY AGENCY (HCA)

LEGEND

Photograph location and direction

Site Boundary

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3.3 Site Surroundings

In terms of surroundings, the village of Chalgrove is located to the south of the Site. Monument Business Park is located to the east of the Site which includes a variety of business and starter units both large and small. To the north and west lies a mix of open rural and agricultural fields, with several farms and residential properties.

3.4 Sensitive Environmental Receptors

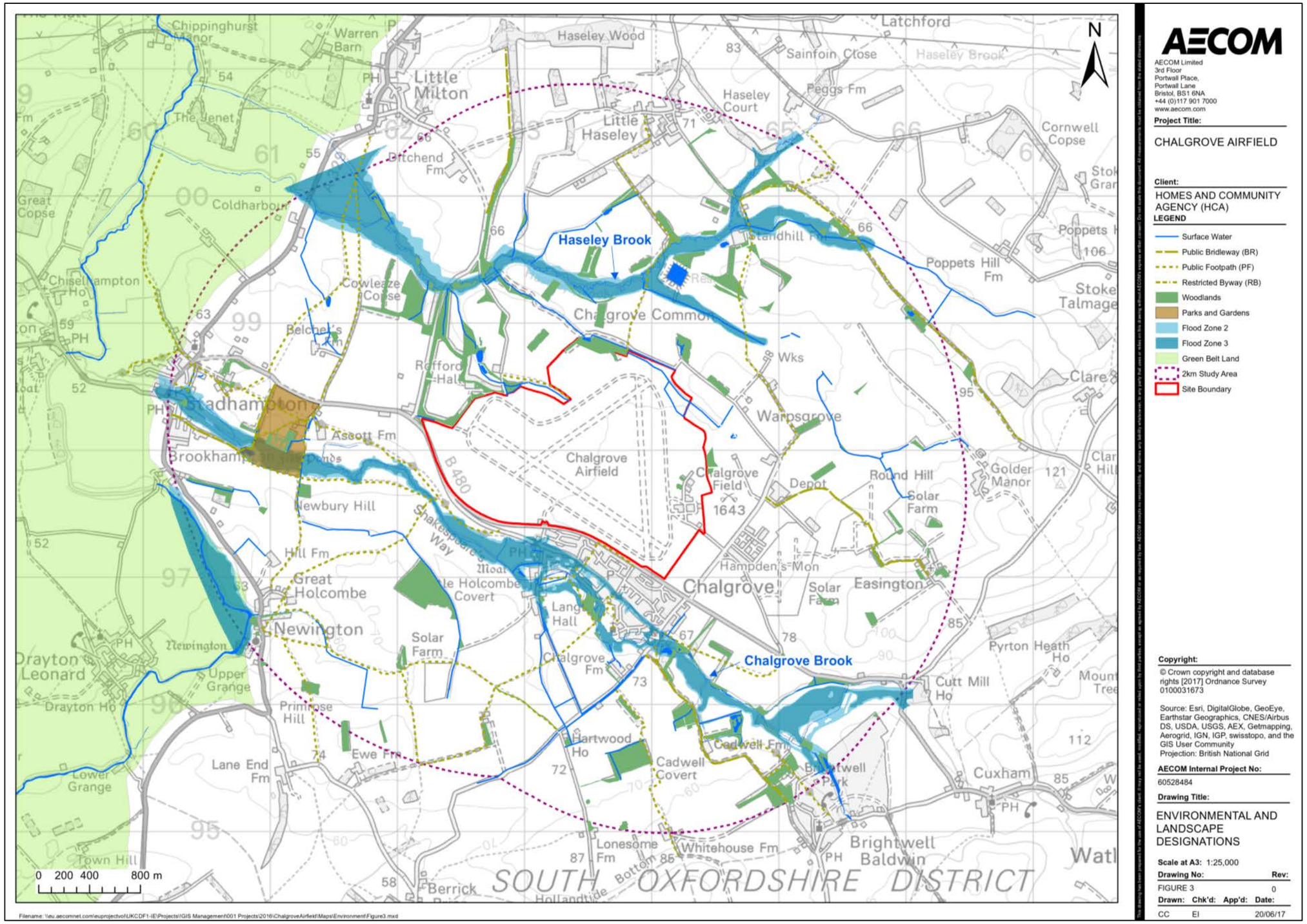
Potentially sensitive receptors have been identified (recognising that this is not an exhaustive list at this stage) and are described below with reference to **Figure 3-3** and **Figure 3-4.**

- Residential Receptors
  - The village of Chalgrove is located directly south of the site boundary.
  - Nearby residential communities in close proximity to the Site include:
    - Stadhampton (approx. 2.5 km west);
    - Brookhampton (approx. 2.5 km west);
    - Drayton St Leonard (approx. 3.2 km southwest);
    - Newington (approximately 2 km southwest);
    - Brightwell Baldwin (approx. 2.5 km southeast);
    - Cuxham (approx. 3.5 km southeast);
    - Easington (approx. 2 km east);
    - Little Haseley (approx. 2 km north); and
    - Little Milton (approx. 3 km northwest).
  - A number of farms and single properties in the surrounding area (within 200m to 1.5km of the Site boundary);
- Business Receptors
  - Monument Business Park is located approximately 500 m to the east of the Site.
- Ecological Receptors
  - Spartum Fen Sites of Special Scientific Interest (SSSI) is located approximately 3 km north of the Site.
  - Knightsbridge Lane SSSI is located approximately 4 km east of the Site.
- Arboricultural Receptors
  - No Tree Preservation Orders or Conservation Areas within or immediately adjacent to Site.
  - Areas of deciduous woodland are located within and adjacent to the Site.
- Hydrological/flood risk, geological and hydrogeological
  - The Site is located entirely within Flood Zone 1 (low probability) as classified by the Environment Agency and is therefore considered to be land having a less than 1 in 1,000 annual probability of river or coastal flooding.
  - The Site is split into three natural catchments which discharge to adjacent watercourses at the south and west of the Site: one discharging to the Chalgrove Brook and two discharging to local watercourses prior to flowing into the Haseley Brook.
- Landscape Receptors
  - The Chilterns Area of Outstanding Natural Beauty (AONB) is located approximately 4 km east of the Site.
  - The Oxford Green Belt is located approximately 3.5 km west of the Site.

- Cultural Heritage
  - There are thirty five heritage assets recorded within a 1 km radius of the Site centre:
    - Seventeen of these are 'designated', and comprise of 15 listed buildings (Grade I and Grade II listed), the Chalgrove Conservation Area (designated 1992) and the Registered Battlefield of Chalgrove (1643);
    - The remaining 18 assets are 'non-designated, dating from the Roman period to the 20th century and include the finding of Roman and medieval coins and the hangar on Chalgrove Airfield.
  - There are three Scheduled Monuments within a 5 km radius of the Site centre:
    - Chislehampton Bridge Scheduled Monument, approximately 3.5 km west;
    - Ice house at Ascott Lane Scheduled Monument, approximately 2.2 km west; and
    - Church Piece Cemetery Site Scheduled Monument, approximately 5 km southwest.
- Traffic and Transport
  - There are no local public rights of way within the Site itself, however there are several in the vicinity of the Site including Shakespeare's Way which runs to the south of the Site (**Figure 3.3**).
  - Local routes in proximity to the Site include the B480, which connects the Site to the wider motorway network (M40) via the A329 and B4009.

The key environmental receptors are discussed further within **Section 7** of this Report under the relevant topic heading.

Figure 3-3: Environmental Designations



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Project Title:

CHALGROVE AIRFIELD

Client:

HOMES AND COMMUNITY AGENCY (HCA)

LEGEND

- Surface Water
- Public Bridleway (BR)
- Public Footpath (PF)
- Restricted Byway (RB)
- Woodlands
- Parks and Gardens
- Flood Zone 2
- Flood Zone 3
- Green Belt Land
- 2km Study Area
- Site Boundary

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ENVIRONMENTAL AND LANDSCAPE DESIGNATIONS

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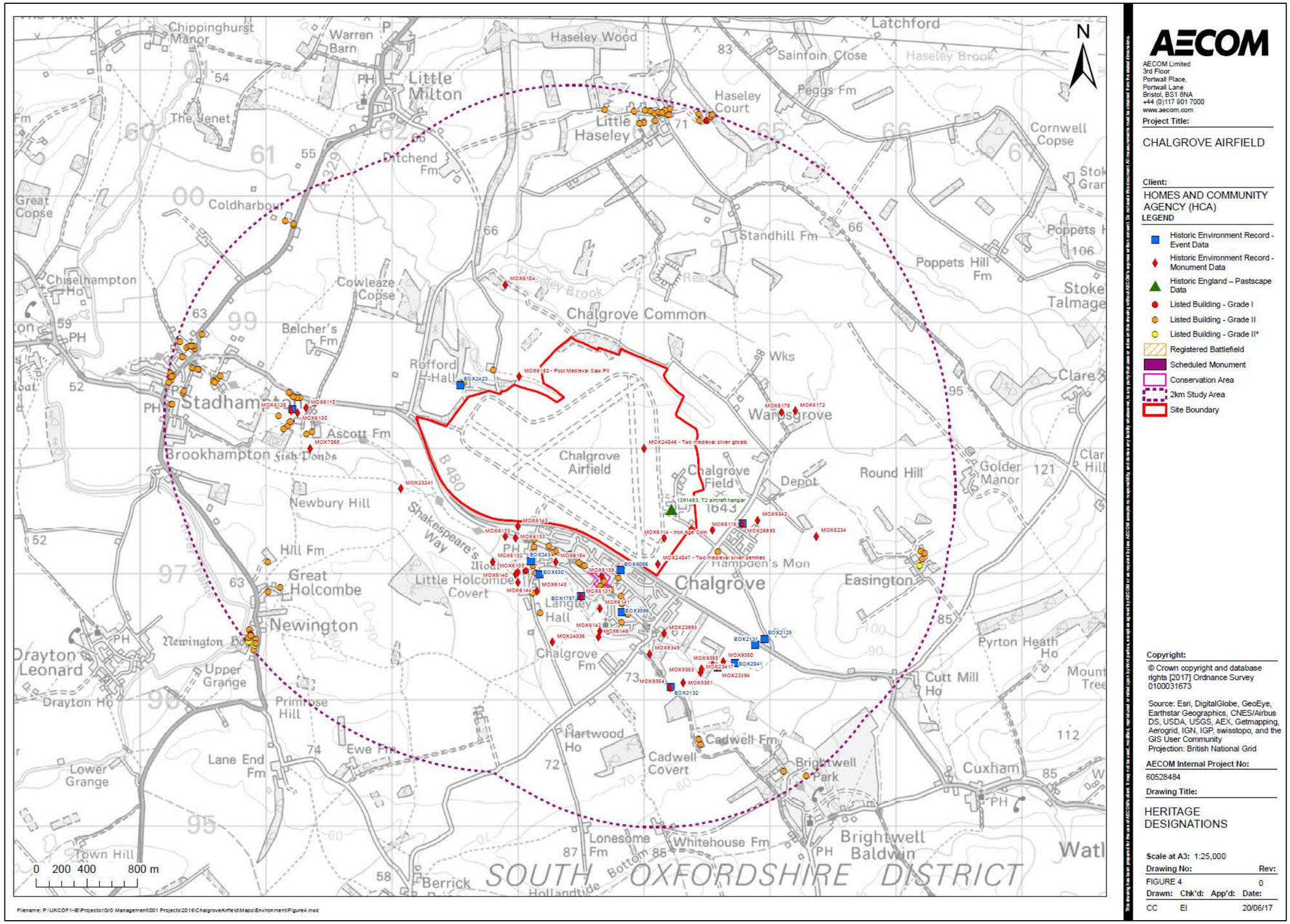
Figure 3-4: Heritage and Archaeology Designations



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Project Title:

CHALGROVE AIRFIELD

Client:

HOMES AND COMMUNITY AGENCY (HCA)

LEGEND

- Historic Environment Record - Event Data
- Historic Environment Record - Monument Data
- Historic England – Pastscape Data
- Listed Building - Grade I
- Listed Building - Grade II
- Listed Building - Grade II*
- Registered Battlefield
- Scheduled Monument
- Conservation Area
- 2km Study Area
- Site Boundary

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Projection: British National Grid

AECOM Internal Project No:

60528484

Drawing Title:

HERITAGE DESIGNATIONS

Scale at A3: 1:25,000

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FIGURE 4			0
Drawn:	Chk'd:	App'd:	Date:
CC	EI		20/06/17

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4. Proposed Development

4.1 Proposed Development

The Proposed Development comprises:

- Up to 3,000 dwellings;
- Up to 5 ha of employment land (including existing occupiers);
- The consolidation of runways on Site and the construction of a new runway;
- Sites for 2 primary schools;
- A secondary school;
- Local centre;
- Formal and informal public open space;
- Green infrastructure;
- Sustainable Urban Drainage systems;
- Highway infrastructure;
- Footpaths, cycleways; and
- Drainage and landscaping works.

An illustrative layout has been developed for the purposes of this EIA Scoping Report as presented in **Figure 4.1**. Whilst it is possible that there would be changes to elements of this illustrative layout, there is sufficient information available to allow scoping of likely environmental effects to take place.

The submission will comprise an outline planning application, to be accompanied by an illustrative masterplan which will guide and demonstrate the principles of a detailed scheme as phases come forward.

The details of a large development project of this scale and complexity will not be set out in detail at the outline stage. The details, with the exception of access, will be reserved following the grant of outline planning consent. These will be submitted at a later stage for consideration by SODC. However, the outline planning consent will reflect and be committed to the proposals as described and assessed in the EIA. This commitment will not preclude some flexibility in regard to the scheme, although the options will be within the remit of the outline consent.

Within the ES, a set of parameter plans will be provided to allow a 'worse case' assessment of effects. The development parameter plans will include:

- A land use plan, which places the development proposed within the Site boundary in a spatial context;
- A building heights plan, which defines the upper boundaries of the built envelope;
- Residential development densities;
- Access and primary circulation routes, pedestrian and cycle links, public rights of way; and
- A green infrastructure plan to show the provision of open space and landscaping.

A landscaped buffer zone will be factored into the parameter plan between onsite heritage assets (including the Registered Battlefield to the north-east) and the area to be developed (**Figure 4.1**) Furthermore, trees, hedgerows, and the watercourse located in the northern part of the Site will be factored in to the developable parameters and retained where possible.

4.2 Phasing

The Proposed Development will broadly be staged into three phases described below:

- Phase 1: Parcel of land within the south west area of the Site to include approximately 750 homes;

- Phase 2: Parcel of land to the north of Phase 1 to include approximately 1,110 homes ; and
- Phase 3: Parcel of land to the south east area of the Site to include approximately 1,150 homes.

Table 4-1 indicates housing delivery rates for each phase from 2021 to 2033.

Table 4-1: Indicative Housing Delivery Rates

Phase	Year	Number of homes	Cumulative (Total Number of Homes)
Phase 1	2021	50	50
	2022	150	200
	2023	200 and first primary school	400
	2024	200	600
	2025	150	750
Phase 2	2026	200 and secondary school	950
	2027	450	1,400
	2028	200	1,600
	2029	250	1,850
Phase 3	2030	275	2,125
	2031	325	2,450
	2032	300 and second primary school	2,750
	2033	250	3,000

4.3 Access

The main route of the B480 would be taken through the new development. At the western end of the Site, the B480 would be diverted through the development and to make the route to Chalgrove Village a secondary route to reduce traffic through the village (**Figure 4.1**). At the eastern end of the site, the diversion of the B480 into the Site is relatively straightforward and would occur just after the existing allotments. This would involve the existing B480 being downgraded and turned into a 'green' lane for pedestrians and cyclists with increased tree planting (see **Figure 4.1**).

4.4 Landscaping

The landscape and planting proposals will be developed in conjunction with the architecture and civils work to ensure an integrated design. The proposals will be informed by the EIA and in consultation with the relevant stakeholders to deliver an appropriate level of landscape, visual and ecological value.

4.5 Construction Phase

The ES will provide information with regard to the construction programme, together with proposed construction activities and methods, and their anticipated duration. Information will be provided on, but not limited to, site preparation, construction logistics, including site access and egress; materials and waste management; welfare facilities; anticipated heavy goods vehicle (HGV) movements; information on foundation depths; construction plant schedules; anticipated site compound locations; and working hours.

Estimates of the quantities of materials to be generated during the site clearance and construction phases will be considered, and an estimate of the peak periods of daily HGV movements will be provided.

The ES will define and assess the potential effects of a reasonable worst-case scenario. The peak period or level of activity will be assessed in terms of traffic, noise and air quality effects. The peak period will be defined on the basis of the maximum number of HGV movements and an indication of

the location of plant and equipment onsite in relation to the excavation, site clearance and construction boundary.

The construction phase mitigation measures identified as a result of the environmental assessment will be presented in the ES for future inclusion within a Construction Environmental Management Plan (CEMP), to be agreed with SODC and discharged as necessary. It is likely that specific mitigation measures will be defined to reduce effects specifically on or arising from:

- Site preparation and construction traffic and workforce presence onsite;
- Working close to neighbouring boundaries;
- Site access and egress;
- Noise and vibration;
- Soil removal;
- Water usage and Site drainage;
- Energy usage and monitoring;
- Emission of dust and other pollutants; and
- Waste generation, management and disposal.

5. Design Development and Consideration of Alternatives

5.1 Design Development

An extensive investigation and understanding of the Site and the surrounding area has taken place, including an Enquiry by Design (EbD) style community design event which was held in January 2017. The information gathered, and responses received during the consultation event have informed an initial masterplan review.

EbD is a planning tool that is designed to bring together key stakeholders to collaborate on a project, which is then developed through a workshop. The product is a master-planning vision shared by everyone linked to the development.

The EbD comprised a combination of stakeholder presentations and design events in The Lambert Arms Hotel, public exhibitions and presentations in Chalgrove Village Hall and client/consultant design sessions.

An EbD report was produced and presents the masterplan and the process by which it has been prepared. The report includes details of the evolution of the masterplan and the design principles which underpin it.

Other stakeholder workshops were undertaken in advance of the EbD as part of the wider strategic transport strategy. Pre-EbD testing was also undertaken to establish the area required for MBACL to continue operations onsite. This work has helped define the developable area within the Site.

The optioneering and design development process that has been followed will be presented in further detail in the ES as part of the design development and consideration of alternatives section.

5.2 Consideration of Alternatives

Schedule 4 of the EIA Regulations states that an ES should include:

“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.

The EIA process provides an opportunity to consider alternative development options with their respective environmental impacts before a final decision is taken on the design. In accordance with EIA Regulations and statutory guidance, the ES will describe those alternatives that were considered by the Applicant Team and architects, including:

- ‘*Do nothing scenario’* – the consequences of no development taking place;
- ‘*Alternative sites’* – consideration of alternative locations for the development and the rationale behind the selection of the preferred site; and
- ‘*Alternative designs’* – the ES will summarise the evolution of any proposed design, modifications which have taken place to date, and the environmental considerations which have led to those modifications. A summary of the main alternatives considered, such as alternative use mixtures, floor heights and bulking, and materials used will be presented together with a justification for the final design.

6. EIA Approach and Methodology

6.1 Overarching Approach to the EIA

Schedule 4 of the EIA Regulations requires the ES to include a description of the 'likely significant effects' of the development on the environment. This should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development', as well as a description of the forecasting methods used to assess the effects on the environment.

Schedule 4 also identifies a number of aspects of the environment that should be considered, namely 'population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors'. A description of how these aspects will be considered and assessed in the EIA is included in the following sections.

Issues that are scoped into the EIA are judged likely, without effective mitigation, to have the potential to cause significant effects. Issues that are scoped out of the EIA are those which it is considered are not likely to lead to significant effects, regardless of mitigation. Where insufficient information is available in relation to a particular issue to make a reasonable judgement at this stage, a precautionary approach is adopted and that issue is scoped in. The decision to scope out issues is based upon factors such as a high degree of development-receptor separation, the lack of impact pathways or the known low value or low sensitivity of impacted resources/receptors.

6.2 Determination of the Scope

6.2.1 Spatial scope

The geographic extent of the study area varies depending on the environmental topic and specific receptors under consideration for that topic. For each topic the study area will be defined in the ES and will be of sufficient size to encompass the spatial extent over which impacts relevant to that topic and the related receptors might occur.

6.2.2 Temporal Scope

The assessment will have regard to the programme and will evaluate the environmental effects of the Proposed Development at the key stages of construction and operation. These are, where appropriate, then assessed against the situation prevailing before the Proposed Development would commence (i.e. the current baseline).

6.2.3 Scoping of Issues

The emphasis of Schedule 4 of the EIA Regulations is on the "main" or "significant" environmental effects to which a development is likely to give rise. The ES should be proportionate and not be any longer than is necessary to assess properly those effects. This Scoping Report scopes out a number of environmental topics on the basis of the current design (see **Section 8**). The ES will further scope out environmental receptors and effects on the basis of the nature and scale of the final Proposed Development and consultation. Justification for issues scoped out will be provided.

6.3 Assessment of Effects and Determining Significance

Schedule 4 of the EIA Regulations requires that a description of the likely significant effects is provided in the ES. However, it should be noted that in the context of the general methodology used for this assessment the terms 'impact' and 'effect' are distinctly different, whereby the impacts of the Proposed Development may or may not result in significant effects on the environment depending on the sensitivity or value of the receptor.

Assessments broadly consider the magnitude of impacts and value/sensitivity of resources/receptors that could be affected in order to classify effects. The classification of effects requires consideration of:

- whether the impacts are beneficial or adverse;
- impact duration (short, medium or long-term);
- impact nature (direct or indirect, reversible or irreversible);
- whether the impacts are permanent or temporary;
- the extent and complexity of the impact; and
- whether a particular impact occurs in isolation or is cumulative or interactive with another impact.

For each environmental topic which fully or in part utilises the methodology, the categories of resource/receptor sensitivity (Table 6-1) and magnitude of impact (Table 6-2) will be described and defined. The following sections provide the generic criteria for the definition of resource/receptor sensitivity, impact magnitude and scale of effect. Within Section 6 of this EIA Scoping Report, each environmental topic area provides further detail on the approach to the assessment and references the standards and guidelines that will be used for the definition of impact magnitude and resource/receptor sensitivity. Environmental topics will broadly follow the approach set out in the following sections and any deviations from this approach are explained and justified where appropriate.

6.3.1 Receptor Sensitivity

Table 6-1 sets out the generic guidelines for the assessment of sensitivity.

Table 6-1 Generic Guidelines for the Assessment of Sensitivity

Value/ sensitivity	Guidelines
High	Value: Feature/receptor possesses key characteristics which contribute significantly to the distinctiveness, rarity and character of the site/receptor (e.g. designated features of international/national importance, such as World Heritage Sites, Areas of Outstanding Natural Beauty (AONB), Special Areas of Conservation (SACs), Special Protection Area (SPAs), Ramsar sites, Sites of Special Scientific Interest (SSSIs), Scheduled Ancient Monuments, Air Quality Management Areas, Grade I and Grade II* Listed Buildings). Sensitivity: Feature/receptor has a very low capacity to accommodate the proposed form of change.
Medium	Value: Feature/receptor possesses key characteristics which contribute significantly to the distinctiveness and character of the site/receptor (e.g. designated features of regional or county importance, such as County Wildlife Sites (CWSs), Local Biodiversity Action Plans (BAP), Conservation Areas, Grade II Listed Buildings, Heritage Coast and Special Landscape Areas etc.). Sensitivity: Feature/receptor has a low capacity to accommodate the proposed form of change.
Low	Value: Feature/receptor only possesses characteristics which are locally significant. Feature/receptor not designated or only designated at a district or local level (e.g. local nature reserve, locally Listed Buildings). Sensitivity: Feature/receptor has some tolerance to accommodate the proposed change.
Very Low	Value: Feature/receptor characteristics do not make a significant contribution to local character or distinctiveness. Feature/receptor not designated. Sensitivity: Feature/receptor is generally tolerant and can accommodate the proposed change.

6.3.2 Magnitude

Table 6-2 sets out the generic guidelines for the assessment of magnitude.

Table 6-2: Generic Guidelines for the Assessment of Magnitude

Magnitude	Guidelines
High	Large-scale changes over the whole development area to key characteristics or features of the particular environmental aspect's character or distinctiveness.
Medium	Medium-scale changes over the majority of the development area to key characteristics or features of the particular environmental aspect's character or distinctiveness.
Low	Noticeable but small-scale changes over part of the development area, to key characteristics or features of the particular environmental aspect's character or distinctiveness.
Very Low	Noticeable, but very small-scale change, or barely discernible changes, over a small part of the development area, to key characteristics or features of the particular environmental aspect's character or distinctiveness.

Broadly, short to medium-term temporary effects are considered to be those associated with the construction and demolition phase and long-term effects are those associated with the operational phase. It should be noted that these are generic timeframes. Each topic will consider if these are appropriate for the effects and sensitive receptors under consideration.

6.3.3 Significance

Table 6-3 details the matrix used for the classification of effects and Table 6-4 sets out the generic definitions of effect.

Table 6-3: Classification of Effects

Magnitude	Value and sensitivity of receptor			
	Very Low	Low	Medium	High
Very low	Negligible	Negligible	Minor	Minor
Low	Negligible	Minor	Minor	Moderate
Medium	Minor	Minor	Moderate	Major
High	Minor	Moderate	Major	Major

Table 6-4: Generic Effect Definitions

Effect	Description
Major	Effects, both adverse and beneficial, which are likely to be important considerations at a national to regional level because they contribute to achieving national/regional objectives, or, which are likely to result in exceedance of statutory objectives and/or breaches of legislation.
Moderate	Effects that are likely to be important considerations at a regional and local level.
Minor	Effects that could be important considerations at a local level.
Negligible	An effect that is likely to have a negligible or neutral influence, irrespective of other effects.

Following the classification of an effect using this methodology, a clear statement is then made as to whether that effect would be 'significant' or 'not significant'. As a general rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant (as detailed by the shading in Table 6-3). However, professional judgement will also be applied where necessary, including taking account of whether the effect is permanent or temporary.

6.4 Mitigation and Residual Effects

The ES will include a description of the measures envisaged to prevent, reduce and, where relevant, offset any significant adverse effects. The approach adopted will take the form of a hierarchy, whereby priority is given to preventing effects, and then (if this is not possible) to reducing or abating them followed, if necessary, through repair (restoring or reinstating), replacement or compensation. Each of these means of reducing potentially significant effects falls under the broad heading of 'mitigation'.

Mitigation opportunities will be identified throughout the evolution of the design of the Proposed Development and the EIA process, whereby significant adverse effects will be fed back into the design process to verify whether they can be avoided or otherwise mitigated in accordance with the hierarchy. Where it is possible at this stage of the design process, mitigation opportunities have been identified in the relevant topic sections.

As the design is currently under development, it is possible to incorporate a number of mitigation measures into the scheme design. These measures are referred to as 'embedded' mitigation measures (which are those that are required regardless of any EIA, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices).

Once mitigation is part of the design, impacts and effects will be assessed from that point and not before. Not only will this allow the EIA to avoid considering impact assessment scenarios that are unrealistic in practice, but will also allow the benefits of the iterative design process to be realised.

Following the impact assessment process, 'additional' mitigation measures will be identified. Additional measures are intended to address identified likely significant adverse effects but would not be built in to the final design.

The ES will then report on the anticipated effects of the Proposed Development following the implementation of mitigation measures. These are known as 'residual effects'. A clear statement will be made as to whether the residual effects are 'significant' or 'not significant'.

6.5 Inter-relationships and Cumulative Effects

As required by the EIA Regulations, the assessment will also have regard to inter-relationships and cumulative effects. Whilst the technical chapters will address the environmental effects for each environmental discipline, the ES will also consider:

Inter-relationships that occur between the individual environmental effects of the Proposed Development and have the potential to combine together on resources/receptors and lead to significant effects. The assessments undertaken as part of the EIA will determine the extent to which inter-relationships would give rise to significant effects. Inter-relationship effects will be described within the relevant ES topic chapters.

Cumulative effects that arise as a result of the Proposed Development in combination with other foreseeable large scale developments and/or projects in the vicinity of the Site.

6.5.1 Approach to Cumulative Assessment

Each EIA topic will consider significant effects only (as identified through their main assessment) within the assessment of cumulative effects. Therefore, following the classification of an effect using the established methodology, a clear statement will be made as to whether that effect is 'significant' or 'not significant' as described above.

On this basis, major and moderate residual effects from the main (i.e. the Chalgrove Airfield) assessment will be scoped in to the cumulative assessment. Minor residual effects are to be examined in order to understand the potential for cumulative effects. Where there is potential for cumulative effects (for example, based on the location of the impact or the sensitivity of the receptor), minor residual effects will be scoped in to the cumulative assessment. Where there is no potential for cumulative effects, minor residual effects are to be scoped out of the cumulative assessment (**Table 6.1**).

Table 6.1: Screening Criteria for Inclusion of Effects from the Main Assessment in the Cumulative Assessment

Residual Impact (from the Chalgrove Airfield Assessment)			
Negligible	***Minor***	***Moderate***	***Major***
Scoped Out of cumulative assessment	Reviewed for potential cumulative effects	Scoped in to cumulative assessment	Scoped in to cumulative assessment

The purpose of the above approach is to focus the assessment on those receptors that have the potential to be impacted by in-combination effects.

6.5.2 Schemes for Inclusion in the Cumulative Assessment

Working with the EIA topic leads, a cumulative Study Area has been defined as a 15km radius around the centre point of the Airfield site boundary. Within this area, schemes reviewed comprise approved applications, submitted applications not yet determined and refused applications subject to appeal procedures not yet determined.

On the basis of their scale and proximity to the Proposed Development, the following schemes will be considered within the cumulative assessment. It should be noted that the Transport Assessment (TA) will include a larger number of committed development schemes. For all other topics, consideration will be given to the potential for cumulative effects to the extent possible based on the information publicly available at the time of undertaking the assessment.

Table 6.2 Cumulative Schemes

Scheme	Status	Form	Summary	Reference
Land west of Marley Lane Chalgrove OX44 7TF	Approved	Outline	An outline application, with all matters reserved except for access, for up to 200 dwellings, a building for community use (D2 Use), open space, a sustainable drainage system, and associated infrastructure, at land west of Marley Lane, Chalgrove.	P17/S0094/O
Land east of Chalgrove	Planning. Refused and appealed.	Outline	Outline planning application for the erection of up to 120 residential dwellings and space for a community facility (Use Class D1/D2) with associated highways, landscaping and open space, with all matters reserved except access.	P16/S4062/O
Monument Road, Chalgrove	Pre-Planning	Pre-planning	Residential land and public open space.	Pre-planning
Berrick Road	Chalgrove Farm, Berrick Road	Pre-planning	100-120 residential units	Pre-planning
Harrington New Settlement	Scoping		Outline planning for around 6,500 dwellings, employment and education land, transport hub, energy centre and green infrastructure.	P17/S1799/SCO

Scheme	Status	Form	Summary	Reference
Land to the east of Newington Road	Land to the east of Newington Road Stadhampton	Outline	Outline planning permission for residential development of up to 65 dwellings and associated works including means of access, with all other matters (relating to appearance, landscaping, scale and layout) reserved.	P14/S4105/O
Watlington Neighbourhood Development Plan Site Allocations	Numerous sites which have been allocated as part of the Neighbourhood Development Plan. Sites are at various planning stages.			
Pyrton Neighbourhood Development Plan Site Allocations	Numerous sites which have been allocated as part of the Neighbourhood Development Plan. Sites are at various planning stages.			

6.6 Consultation

HCA is committed to engaging with key stakeholders and the local community on its proposals. Pre-application consultation with statutory consultees including the Environment Agency, Natural England and Historic England will be undertaken during the course of the pre-application period in order to consult on:

- The scope of the impact assessment (where further discussion is required and following receipt of SODC's Scoping Opinion); and
- The assessment of potential environmental effects and mitigation measures, where required.

7. Environmental Topics to be Scoped into the ES

The following sections provide an outline of the potential environmental effects associated with the Proposed Development that will be considered as part of the EIA. The methodology and assessment criteria that will be used to assess the potential significance of the effects arising from the identified impacts are outlined alongside consideration of potential mitigation measures that may be implemented. These topics have been identified through a review of existing information, baseline studies and preliminary review of the emerging design and nature of the Proposed Development.

7.1 Transport

7.1.1 Baseline Environmental Conditions

The following traffic survey data has been collected:

- Automatic Traffic Counts (ATCs) undertaken on key links between Saturday 21st May 2016 and Friday 27th May 2016; and
- Junction Turning Counts (JTCs) undertaken across key junctions on Thursday 26th May 2016, covering both the AM (07:00 – 10:00) and PM (16:00 – 19:00) peak periods.

This data will form the basis of the baseline from which potential impacts of the Proposed Development will be assessed. Supplementary data may be collected if required.

In addition a series of Specialised Goods Vehicle Counts (SGVCs) were undertaken to ascertain the number of HGVs travelling through the study area and routes taken. These were conducted on Friday 6th October 2016, covering the 12-hour period between 07:00 and 19:00. This will inform the development of the HGV and construction strategies and together with the surveyed HGV levels from the ATC and JTC Surveys undertaken in May 2016 provide a comprehensive data set of HGV flows which will form the baseline for HGV traffic flows on the network to ensure a consistent approach.

7.1.2 Potential Environmental Effects

Potential environmental effects are likely to occur during all phases of the development. During the construction phase, the peak workforce numbers will be identified and an assessment undertaken of the potential effect of construction workers travelling to site. Construction deliveries, including HGV movements will also be assessed.

During the operational phase it is likely that the majority of the traffic will be attributed to the introduction of 3,000 new homes, the employment area and associated services.

7.1.3 Assessment Methodology

The Traffic and Transport Chapter of the ES will be supported by a TA and a Framework Travel Plan (FTP), which will be included as an Appendix. The TA will provide a detailed assessment of the development proposals and the proposed transport package. The report will consider relevant planning policy, a review of the existing situation, accident analysis, the potential trip generation of the development, including during construction, and how this will affect the surrounding highway network. A transport mitigation strategy will be included in the TA to ensure that any potential effects are reduced.

7.1.3.1 Baseline

The Traffic and Transport Chapter will include an assessment of baseline conditions within the identified study area. This comprises an appraisal of the existing Site accessibility by all modes and will provide a policy context to the development proposals with a review of relevant national and local policy documents, such as the National Planning Policy Framework (2012) (Ref 2.3), the SODC Development Plan (2011) (Ref 2.1) and emerging Local Plan (Ref 2.5). A baseline level of traffic will be established from survey data collected in 2016.

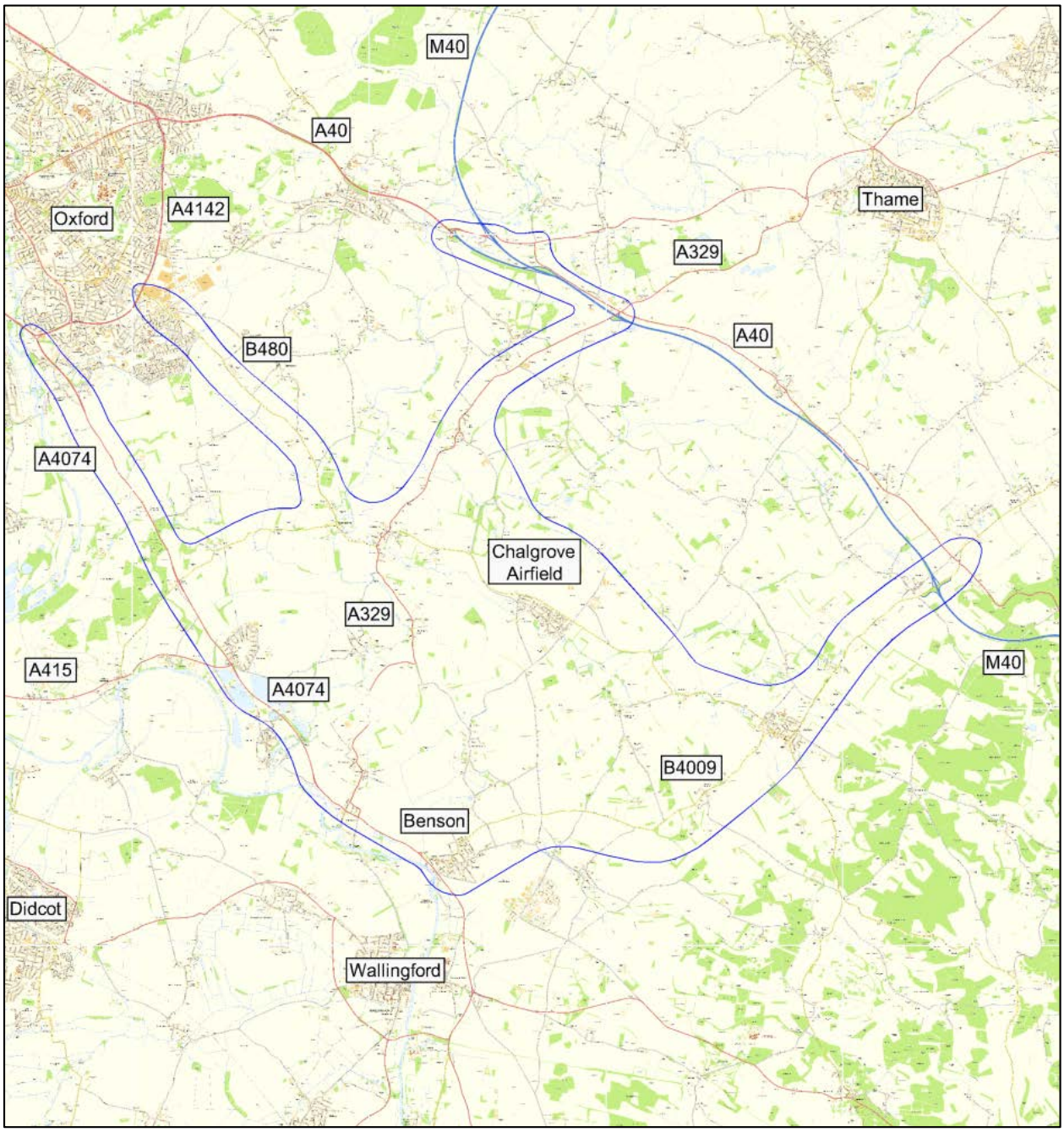
The 2016 baseline traffic data will be "growthed" to an opening year of 2020 and a future year of 2033, representing the end of the Local Plan period, utilising National Transport Model (NTM) growth forecasts with local adjustments derived from the Department for Transport's (DfT) TEMPRO system.

Five years of full personal injury accident data will be obtained from SODC and will cover the study area shown in **Figure 7.1.**

Figure 7-1. This data will be used to assess the current road safety conditions in the area.

The Proposed Development will have a wide sphere of influence and an appropriate study area has been identified to take account of this. The study area comprises what we loosely define as the 'sub-region', which is an area bordered by the Oxford Ring Road to the north, the A40 to the east, the B4009 to the south and the A4074 to the west. The sub-region and the roads within that are considered part of the proposed study area are marked by the blue boundary shown on **Figure 7.1**.

Figure 7-1: Sub-Region and Study Area



7.1.3.2 Construction

The assessment of the impact of the construction phase will cover the expected construction programme, working hours and days; the methods of construction, and the resulting broad quantities of materials required, and anticipated labour resourcing; and a works phasing strategy with a view to understanding what materials will be required and when, and the number of resulting deliveries throughout the construction period, including consideration of:

- Type, size, frequency and number of construction vehicles;
- Construction workforce transport arrangements – to include the number of staff and shift patterns and modes of travel; and
- Construction traffic access strategy, in order that routes to the Proposed Development Site can be determined.

The focus of the traffic impact assessment in the Traffic and Transport Chapter will be on changes in link flows with the addition of development traffic to the baseline. A number of links have been identified within the study area, shown at **Appendix A**. A classification of link sensitivity has been made in line with IEMA guidelines as described earlier.

Detailed modelling will be undertaken as part of the TA. A spreadsheet model will be prepared, presenting the traffic flows within the study area for each of the assessment scenarios, as well as the key components that make up the scenarios (e.g. trip assignment of the Proposed Development land uses). The spreadsheet model will be included in the technical appendices of the TA and will be used to inform the ES assessment.

Traffic flows from the spreadsheet model will be used to identify the absolute and percentage impacts of the development on the identified links. It will also be used to undertake capacity analysis of existing junctions within the spreadsheet model network and the proposed Site access junctions. The capacity assessment will utilise the industry-standard modelling software, including Junctions 9 (for priority junctions and roundabouts) and LinSig (for signal controlled junctions). The capacity analysis will be presented in the TA.

7.1.3.3 Operation

Operational traffic flows will be assessed for an opening year of 2020 and a future year of 2033 representing the end of the Local Plan period.

A qualitative assessment of the potential environmental effects, both beneficial and adverse, of the Proposed Development on pedestrians, cyclists, public transport users will be undertaken.

7.1.3.4 Significance Criteria

The assessment of traffic impacts will be carried out in accordance with the Institute of Environmental Assessment (IEA) guidelines for the Environmental Assessment of Road Traffic (Ref 7.1). The IEMA Guidelines identify a number of environmental effects, including driver delay, accidents and safety, noise, dust and dirt, pedestrian delay, pedestrian amenity, community severance, vibration, and air quality. The IEMA Guidelines suggest two rules can be used to identify the appropriate extent of the assessment area, as follows:

- Rule 1 – Include road links where traffic flows would increase by more than 30% (or the number of HGVs would increase by more than 30%); and
- Rule 2 – Include any other specifically sensitive areas where traffic flows would increase by 10% or more.

Potential traffic effects are considered to be of major, moderate, minor or negligible significance. The IEMA Guidelines identify general thresholds for traffic flow increases for each of the significance categories, shown in Table 7-1 below.

Table 7-1: Impact Criteria

Significance	Change in total traffic flow or numbers of HGVs	Definition
Major	>90%	These effects are likely to be important considerations at a regional or district scale and, if adverse, are potential concerns to the project, depending on the relative weight attached to the issue in the decision making process.
Moderate	60-90%	These effects, if adverse, while important at the local scale are not likely to be key decision making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or resource.
Minor	30-60%	These effects may be raised as local issues but are unlikely to be of importance in the decision making process. Nevertheless, they are of relevance in the detailed design of the project and consideration of mitigation should be made.
Neutral/Negligible	<30%	No effects or those which are beneath levels of perception, within normal bounds or variation, or within the margin of forecasting error.

The level of significance also requires consideration of the environmental sensitivity of locations, and therefore there is a need for interpretation and judgment supported by the baseline information on identification of potential sensitive locations.

Paragraph 2.5 of the IEMA Guidance defines sensitive locations as receptors that are sensitive to traffic, which could include, but are not limited to, schools, hospitals, places of worship and historical buildings. Table 7-2 shows the types of receptors which fall into the different categories of sensitivity based on the potential impact of increases in traffic flows.

Table 7-2: Sensitivity of Receptors

Sensitivity	Definition
Major	Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident blackspots, retirement homes, urban/residential roads without footways that are used by pedestrians.
Moderate	Traffic flow sensitive receptors including: congested junctions, doctor's surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, un-segregated cycleways, community centres, parks, recreation facilities.
Minor	Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision.
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distanced from affected roads and junctions.

The magnitude of change and the sensitivity of the receptor will then be compared to determine the significance of the impact in accordance with the significance of effects table presented in Section 6.

7.1.3.5 Potential Mitigation

The Transport Assessment and ES Chapter will identify locations where the transport impact requires mitigation. The details of the mitigation package will be determined through technical analysis and discussions with the LPA, LHA and Highways England. This process is underway and forms part of the wider pre-application scoping exercise being undertaken with the relevant Highways Authorities. The ES Chapter will provide appropriate details of the mitigation, supported by the Transport Assessment.

7.2 Ecology

7.2.1 Baseline Environmental Conditions

The baseline conditions are described for the area of land within and adjacent to the Site boundary. Areas and resources that might also be affected by the identified activities arising from the whole lifespan of the Project are also considered. Together these comprise the ZoI of the proposals.

The following sections describe the potential receptors within the ZoI in more detail. Receptors have been considered within areas of the Site boundary that are not already developed and their immediate environs, on the basis of their legislative protection, conservation status and their status/distribution within this part of the Site, based on desk study information and previous work undertaken over a number of years.

7.2.1.1 Designated Sites

The Multi Agency Geographic Information for the Countryside (MAGIC) (Ref 7.2) website confirmed the absence of statutory sites designated for nature conservation within the 2 km data search area. It is noted that Aston Rowant SAC, Little Wittenham SAC and Chilterns Beechwoods SAC are located within 10 km of the Site.

On the basis of the nature of the Proposed Development and its distance to each of these sites (6.4 km to the closest), no Likely Significant Effects (LSEs) are expected either during the construction or operational phases. This will be examined in detail in a Habitats Regulation Assessment (HRA) Screening Assessment that will accompany the planning application.

Table 7-3 details the statutory nature conservation designations of sites identified by the desk study. The designations are listed in order of increasing distance from the Site. Table 7-4 lists the identified non-statutory designated sites.

Table 7-3: Statutory Designated Sites

Designation	Reason(s) for Designation	Relationship to the Site
Little Wittenham SAC	One of the best-studied great crested newt sites in the UK, Little Wittenham comprises two main ponds set in a predominantly woodland context (broad-leaved and conifer woodland is present).	Located 6.4 km from the Site. The River Thames is located between the SAC and the Site. The flow of the river will act as a barrier to dispersal. There are no impact pathways linking the Site to this SAC.
Aston Rowant SAC	Internationally important site as it supports one of the largest remaining populations of juniper in lowland Britain.	Located 7.5 km east of the Site. This Site is located adjacent to the A40. An increase in traffic could result in detrimental air quality impacts upon the SAC.
Chilterns Beechwoods SAC	There are three features of interest: semi-natural grasslands and scrubland on chalk; (Asperulo-Fagetum) beech woodland (for which this is considered to be one of the best areas in the UK and lies in the centre of the habitat's UK range); and Stag beetle (Lucanus cervus), for which the area is considered to support a significant presence.	Located 9 km from the Site beyond the A40. Due to the distance from the Site to the SAC and from the SAC to the A40, it is unlikely that the Site will have any impact pathways that link to the SAC.

Table 7-4: Non-statutory Designated Sites

Designation	Reason(s) for Designation	Relationship to the Site
Whitford Copse	Ancient & semi-natural woodland	Located approximately 520 m to the north
Warren Copse	Ancient & semi-natural woodland	Located approximately 950 m to the north
Carter's Copse	Ancient & semi-natural woodland	Located approximately 1.2 km to the north

7.2.1.2 Flora and Fauna

A Phase 1 habitat survey was undertaken in accordance with the standard survey method (Ref. 7.3). Phase 1 habitat survey is a standard method of environmental audit and involves categorising different habitat types and habitat features within a survey area. The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any more specific survey work which may need to be carried out prior to the submission of a planning application. The standard Phase 1 habitat survey method can be "extended" to record target notes on protected, notable and invasive species.

The survey was undertaken on 9th June 2016 by two suitably qualified AECOM ecologists who recorded and mapped all habitat types present within the survey area, along with any associated relevant ecological receptors observed. The survey area encompassed all parts of the Site where access was permitted and that were safely accessible parts and adjacent habitats to a maximum distance of 50 m, where access permission had been granted in advance of survey, or this land was visible from within the Site boundary or from public rights of way, or other publicly accessible areas. In the case of watercourses and other waterbodies this distance was extended to 500 m to check for any features associated with the aquatic habitat that might be impacted by the Proposed Development.

Semi-improved Grassland

Semi-improved (neutral) grassland was the dominant habitat onsite. As the grassland varies in species richness it has been split into semi-improved (c.47 ha) and poor semi-improved (c.130 ha) to assist with the targeting of any future botanical surveys. The soil type was a loam/clay soil with some calcareous influence which was reflected in the vegetation present.

During the winter most of the grassland is sheep grazed with stock removed in the spring (Martin Baker pers.com). The grassland is then generally left unmanaged until the following winter, but may be mown on an 'ad-hoc' basis particularly around the runway and central triangle.

The grassland was dominated by false oat-grass (*Arrhenatherum elatius*) with varying amounts of other grasses including Yorkshire fog (*Holcus lanatus*), cock's-foot (*Dactylis glomerata*) and rough meadow grass (*Poa trivialis*). Other species included common sorrel (*Rumex acetosa*), meadow buttercup (*Ranunculus acris*), lady's bedstraw (*Galium verum*), ribwort plantain (*Plantago lanceolata*), bird's-foot trefoil (*Lotus corniculatus*), lesser trefoil (*Trifolium dubium*), common vetch (*Vicia sativa spp segetalis*) hairy tare (*Vicia hirstuta*) and rough-stalked feather moss (*Brachythecium rutabulum*). Grass vetchling (*Lathyrus nissolia*) was occasionally present in the grassland, indicating the calcareous influence in the vegetation. The highest species diversity was to the north with at least 20 plant species recorded. Towards the north of the Site there were signs of waterlogged soil with occasional meadowsweet (*Filipendula ulmaria*), rushes (*Juncus spp.)* and reed canary grass (*Phalaris arundinacea*) and also small areas (total 0.44 ha) dominated by marshy grassland.

Improved Grassland

This comprised a large field to the south-west of the Site (c. 34.7 ha) dominated by perennial rye-grass (*Lolium perenne*) with cock's-foot, white clover (*Trifolium repens*), Timothy (*Phleum pratense*), cut-leaved crane's-bill (*Geranium dissectum*), meadow fescue (*Festuca pratense*) and common mouse-ear (*Cerastium fontanum*).

Woodland and Scrub

There were small areas of woodland onsite (c.3.7 ha); comprising small copses to the south and along the northern boundary. The woodland at the northern boundary comprised mixed plantation and broad-leaved semi-natural woodland with Lawson's cypress (*Chamaecyparis lawsoniana*), cherry laurel (*Prunus laurocerasus*), pedunculate oak (*Quercus robur*), ash (*Fraxinus excelsior*) and wild cherry (*Prunus avium*) and semi-natural broad-leaved woodland extending onto the Site dominated by mature hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*). The woodland in the west contained some mature oak trees with ash and elder present.

Additional areas of woodland were present in the private woodland situated offsite (not accessed) containing mature ash and willow (*Salix sp.*). A plantation north of the boundary contained some ash,

oak, hawthorn and elder. A small area of broad-leaved woodland was present along the eastern boundary.

In the north-west of the Site, there was dense grey willow (*Salix cinerea*) scrub with some patches of swamp vegetation visible including bulrush (*Typha latifolia*), common reed (*Phragmites australis*) and greater pond-sedge (*Carex riparia*) as the ground slopes towards the stream to the north. No standing water was currently evident although the ground was soft in places. Based on the vegetation in this area there is likely to be some standing water after heavy rain and/or during the winter. The possibility of a pond within the dense willow scrub cannot be ruled out.

Marshy Grassland

Small areas of marshy grassland (c. 0.44 ha) were present to the north of the Site and alongside two small streams. Species included soft rush (*Juncus effusus*), hard rush (*Juncus inflexus*), Yorkshire fog, creeping bent (*Agrostis stolonifera*), hoary willowherb (*Epilobium parviflorum*), great willowherb (*Epilobium hirsutum*), fleabane (*Pulicaria dysenterica*) and angelica (*Angelica sylvestris*). There was also a very small patch of swamp (10 m^2) in this habitat dominated by bulrush.

Hedgerows

The majority of hedges were present along the perimeter fence. Most were species-poor dominated by hawthorn with some blackthorn and elder. Occasional standard pedunculate oak, ash and sycamore (*Acer pseudoplatanus*) trees were present.

Running Water

This comprised a shallow stream arising from a culvert at the southern end of a hedge. Species included reed canary grass, water figwort (*Scrophularia auriculata*); meadow sweet and fool's water cress (*Apium nodiflorum*).

A small stream was also present in the private grassland/wooded area arising from a culvert and flowing to the north-west through this habitat. Species included fool's water cress and water cress (*Nasturtium officinale*). Just outside the southern boundary of the Site a larger stream passes through Chalgrove and under the road.

Dry Ditch

There was a dry/damp shaded ditch south-east of a hedge with limited vegetation (bare and common nettle). There was an overgrown field ditch located within a fenced off inaccessible area in the north-east and a bare dry ditch under the hedge in the improved grassland.

Tall Herbs

Tall ruderal herbs were dominant in the far north of the Site. Species included creeping thistle (*Cirsium arvense*), prickly sow-thistle (*Sonchus asper*) and wild mignonette (*Reseda luteola*).

Ephemeral/short Perennial

This habitat was present in cracks in the hardstanding and adjacent to the access roads in various places throughout the Site. It also forms part of the area assessed as 'open mosaic habitat'. Species included whitlow grass (*Erophila verna*), thyme-leaved sandwort (*Arenaria serpyllifolia*), common liverwort (*Marchantia polymorpha*), thale cress (*Arabidopsis thaliana*) and biting stonecrop (*Sedum acre*).

7.2.1.3 Fauna

Invertebrates

Although no formal surveys have been undertaken, the variety and mosaic of habitat types present has potential to support notable and protected terrestrial invertebrates.

Amphibians

The desk-based study did not identify historical records of great crested newts (*GCN; Triturus cristatus*) or common toad (*Bufo bufo*) within 1 km. No ponds were recorded within the Site boundary; however, using aerial photographs and OS mapping, 10 ponds were identified within 500 m. The closest of these ponds is located with 30 m of the Site boundary. None of these ponds have been surveyed for amphibians. The Phase 1 Habitat survey confirmed the presence of suitable terrestrial habitat on the Site situated within 500 m of the ponds.

Reptiles

The data search did not return any records of reptile species within the search area; however the grassland, particularly the wetter areas to the north and the open mosaic habitat comprising mixed grassland, tall herbs, scrub, scattered woodland and bare areas have potential to support common reptile species. No reptile surveys have been undertaken thus far.

Birds

A scaled down common bird census (three visits), undertaken between April and June 2017, identified a number of species of conservation concern breeding within the Site. The extensive grassland supported over ten nesting pairs of skylark (*Alauda arvensis*) and provided foraging habitat for species including starling (*Sturnus vulgaris*), linnet (*Carduelis cannabina*) and red kites (*Milvus milvus*). The grassland also has the potential to support breeding curlew (Numenius arquata), which was recorded in April 2017 and heard further away on the airfield on 8th May 2017.

Bats

The Site, as a whole, contained a variety of habitats that could support roosting, foraging and commuting bats. Monthly transects commenced in May 2017 and are being supplemented with remote detectors left at strategic locations around the site. Data collected thus far has identified a rather limited diversity comprising five widespread bat species including noctule. Relatively few bats were encountered during the walked transect, all of which were restricted to the woodland edge in the north-west of the Site. It is not known yet whether any important flight lines are present within or adjacent to the Site.

Non-volant Mammals

Brown hare (*Lepus europaeus*) have been incidentally recorded during the bird surveys. The numbers of hares seen indicates that several families are present within the airfield. No formal surveys for brown hare have been commissioned. Brown hare are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and, as such, should be a material consideration during the planning process.

Historical records of hedgehog (*Erinaceus europaeus*) were returned by Thames Valley Environmental Records Centre. Many of these records originated from within 50 m of the Site. No formal hedgehog surveys have been undertaken. Hedgehogs are listed under Section 41 of the NERC Act 2006 and, as such, should be a material consideration during the planning process.

Evidence of badgers (*Meles meles*) was identified both during the initial Phase 1 Habitat survey and subsequent bird surveys. A formal survey is expected to be undertaken later in 2017. To date, no setts (active or otherwise) have been identified.

7.2.2 Potential Environmental Effects

7.2.2.1 Construction

The potential direct impacts as a result of construction activities are as follows:

- the loss of semi-improved grassland, open mosaic on previously developed land, hedgerows (not yet identified as ‘Important’ under the Hedgerows Regulations, 1997) and marshy grassland;

- the loss of foraging habitat for important invertebrate assemblages;
- the loss of terrestrial habitat (core and intermediate habitat) for amphibians and the direct risk of harm to protected species including the great crested newt;
- loss of reptile habitat within the grassland and potential incidental mortality of reptile species;
- the loss of potential nesting habitat for ground nesting birds, such as skylark and meadow pipit, and the disturbance of birds nesting within the adjacent woodlands;
- the loss of foraging habitat for selective bat species, the disturbance of tree roosting bats if present in the adjacent woodlands and the loss of flight lines due to lighting;
- the loss of habitat for both the brown hare and the hedgehog and potential incidental mortality of either species; and
- the loss of badger setts and foraging habitat.

In addition to these potential direct impacts, there is a risk of indirect effects (such as effects on air quality effects and nitrogen deposition) and disturbance from additional noise and lighting associated with the works to impact upon the woodlands bordering the Site.

7.2.2.2 Operation

Potential operational effects could include noise and lighting impacts associated with residential dwellings and light industry. Predation as a result of the increase in domestic pets could also increase. Consideration of these impacts is therefore scoped into the assessment.

7.2.3 Assessment Methodology

The Ecological Impact Assessment (EcIA) would be carried out in accordance with the current Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines on EcIA (Ref 7.4). Currently, insufficient data is held to inform the EIA process and further survey work is anticipated.

The EcIA would seek to identify Important Ecological Features (IEFs): i.e. features that are likely to be affected and are of sufficient value to be a material consideration in the planning decision. In addition to the assessment of IEFs, mitigation measures will also be proposed to ensure compliance with the legislation relating to protected (and controlled) species. Such measures are likely to largely relate to the siting, timing and method of site clearance, and the protection of retained habitats, to ensure compliance with the legislation in respect of invertebrates, amphibians, reptiles, nesting birds, roosting bats and non-volant mammals.

7.2.4 Habitats Regulations Assessment

The closest European Sites are Little Wittenham SAC, Aston Rowant SAC and Chilterns Beechwoods SAC. On the basis of the nature of the Proposed Development and its distance to each of these sites (6.4 km to the closest), no Likely Significant Effects (LSEs) are expected either during the construction or operational phases. This will be examined in detail in a Screening Assessment that will accompany the planning application.

7.3 Arboriculture

7.3.1 Baseline Environmental Conditions

The arboricultural features onsite are located around the periphery of the red line boundary both within and immediately adjacent to the boundary. Pockets of deciduous woodland (a priority habitat) are located just beyond the eastern, northern and north western boundary and within the Site boundary to the south and north. Trees are understood to be predominantly broadleaved in nature and range from young to mature in age class. Native species including English oak (Quercus robur) are likely to be well represented.

The trees anticipated to be of the highest value included individual mature trees (e.g. mature hedgerow oaks), and established groups of early mature to mature trees and these are likely to be

distributed around the Site boundary to the east, north , west and central southern sections of the Site. Tree quality and value is to be assessed via a walk over tree survey to BS5837: Trees in relation to design, demolition and construction – Recommendations (2012). There are no statutory tree protection designations affecting trees within the Site (as confirmed by SODC on 30.11.16).

7.3.2 Potential Environmental Effects

7.3.2.1 Construction

Construction has the potential to result in the removal of trees due to direct conflicts with the footprint of proposed new features, or where development requires activity which could have a significant negative impact on tree health or stability such as excavation, ground level changes, the installation or diversion of utilities, new hard surfacing and impacts on soil hydrology via localised changes in drainage and available water for trees.

Soil compaction via the movement of plant and machinery can lead to conditions which are inhospitable to tree growth and function. Trees can also be irreparably damaged by uncontrolled impacts with plant or machinery leading to bark wounds, and limb loss with a corresponding negative impact on the amenity and future health of the tree. The storage of materials can compact soils or result in effective raised soil levels burying roots at depths where function is impaired. The use and discharge of materials close to trees can lead to soil toxicity and potentially to the death or dysfunction of trees.

Full consideration of the spatial constraints associated with trees and well implemented and maintained tree protection measures throughout the construction phase will ensure that important trees can be successfully retained.

7.3.2.2 Operation

It is essential that the likely future impact of trees is fully considered in the design process to ensure well placed tree retention and to minimise unnecessary conflicts associated with trees. Where trees are not fully considered, future pressure to remove trees or undertake works which could be damaging to both health and/or amenity value.

Trees will cast significant shade to the northwest to due east of their position and it is likely to be unacceptable to site key living areas or important areas of open space where they will be significantly affected by shade.

Trees will continue to grow and increase in stature and must be provided reasonable space for their likely future dimensions to avoid pressure for tree removal or ongoing onerous tree pruning works which would have a negative impact on the health or amenity value of the trees.

These considerations will also apply to newly planted trees which should be selected to promote a diverse and resilient tree cover for the Site and be located to maximise future benefits (e.g. amenity and ecosystem services) and minimise the likelihood of future conflicts.

If trees are carefully considered at the design stage significant negative impacts associated with the future operation of the Site are unlikely.

7.3.3 Assessment Methodology

A walkover tree survey to BS:5837 Trees in relation to design, demolition and construction will identify the quality and value of the trees onsite and the spatial constraints associated with them. Tree dimensions, health and structural condition, quality category and likely remaining useful contribution (in years) will be considered. This will provide essential information to the design team to allow the retention of the highest value trees where feasible and to avoid potential future conflicts due to poorly positioned features or inappropriate tree retention.

A Tree Constraints Plan will be produced to set out the spatial constraints associated with the trees on and immediately adjacent to the Site.

Following design freeze an Arboricultural Impact Assessment will be developed to consider the likely direct and indirect impacts of the Proposed Development on the trees. This will constitute a desk top analysis of the proposals for the Site overlaid onto the Tree Constraints Plan and will identify those trees to be removed in relation to the Proposed Development and will consider how trees to be retained are to be protected throughout the construction phase. Suitable mitigation measures will also be recommended as appropriate.

A Tree Protection Plan will set out the spatial positioning of protective measures to protect retained trees and will identify trees for removal. This assessment will be included as a stand-alone report as an Appendix to the ES.

7.4 Landscape and Visual

7.4.1 Baseline Environmental Conditions

The Site is located in a predominantly rural setting of agricultural land to the north, east and west, with Chalgrove village to the south, comprising principally residential development in addition to limited commercial and industrial premises. Being an airfield, the Site is mostly open grassland. Three runways with taxiways for aircraft cross the Site. A number of existing buildings including offices, control tower, aircraft hangars, a residential building (for onsite security), garages and an explosives storage area are located on the eastern part of the Site.

The airfield is located between the Oxford Green Belt to the north and west and The Chilterns AONB to the south and south-east. The relatively narrow corridor between the Green Belt and AONB, including the Site, is not subject to any national or local landscape designations. However, the Registered Battlefield site of the Battle of Chalgrove extends into the eastern side of the Site.

There is a small Conservation Area in the centre of Chalgrove, and to the west of the airfield, Rofford Hall, Rofford Hall Barn and Rofford Manor are all Grade II listed. The Grade II listed Hampden Monument is located opposite the Site entrance on Monument Road. Development of the Airfield will need to have regard to the settings of these buildings.

The construction of the airfield means that most of the typically characteristic features of the earlier landscape have been removed. The field pattern of various sized fields, the hedgerows, tree plantations, drainage ditches and streams which characterise the surrounding landscape are not present on the Site.

The South Oxfordshire Landscape Assessment (Ref 7.5) shows the Site lying within Landscape Character Area (LCA) 3: The Clay Vale. Within LCA 3, the airfield is identified as ‘Airfields/MOD sites’ landscape type. The SODC Assessment identifies the airfield as having low scenic quality and a weak sense of place, with frequent intrusive influences, which would benefit from reconstruction. It explains why the airfield is of lower landscape quality relative to adjacent areas, stating that is has ‘disrupted the natural pattern and character of the landscape’. It is reasonable therefore to conclude that the overall landscape quality is low.

The study area for the LVIA will be defined by means of zone of visual influence (ZVI) modelling, based upon the development parameters to be defined for the outline planning application. On the basis of initial field surveys this is likely to extend to approximately 2.5km around the Site boundary. Defining the scope and refining the development parameters will be undertaken as an iterative process of assessment and design, to inform the evolution of a suitable scheme appropriate to its landscape and visual context.

The boundary of the AONB lies approximately 5km to the south-east of the site at its closest point, and the Proposed Development may be visible from some elevated locations within the AONB from distances of around 8km. Due to the distance, it is not considered that the Proposed Development would significantly affect the setting of the AONB and it is not therefore considered necessary to include the AONB within the study area.

The landscape assessment will be structured around LCAs based upon the landscape types defined in in the South Oxfordshire Landscape Assessment. The following landscape types (landscape receptors) lie within the likely study area:

- Chalgrove village;
- Airfields/MOD sites;
- Undulating open vale;
- Undulating semi-enclosed vale;
- Flat open farmland;
- Flat semi-enclosed farmland; and
- Parkland and estate farmland.

7.4.2 Potential Environmental Effects

The Proposed Development would have effects on the landscape as a resource and on views and the visual amenity of visual receptors. The main effects arising from the Proposed Development are likely to result from the loss of landscape features and the introduction of new features and elements either temporarily during construction, or in the long-term during the operational life of the Proposed Development.

7.4.2.1 Construction

Temporary landscape and visual effects during construction may potentially result from the following:

- movement of machinery and traffic to and around the construction site;
- removal of vegetation and soil stripping as part of site clearance and preparation;
- demolition of existing facilities (e.g. runways) and removal of materials arising;
- localised changes to topography due to excavation and the temporary stockpiling and storage of excavated materials;
- construction working areas, laydown areas, workshops, storage and other temporary structures associated with construction;
- construction roads, fencing, lighting and security features; and
- construction of new buildings and facilities and associated access routes and other infrastructure.

Effects at night may also be experienced as a result of lighting to structures, working areas, access routes and perimeter fencing.

7.4.2.2 Operation

Landscape and visual effects will result from the introduction of new buildings, infrastructure and facilities located within the site. Effects at night will also be experienced as a result of lighting to buildings and roads.

7.4.3 Assessment Methodology

The EIA process requires that a clear distinction is drawn between landscape and visual impacts, as follows:

- Landscape impacts relate to the degree of change to physical characteristics or components of the landscape, which together form the character of that landscape, for example landform, vegetation and settlement pattern; and
- Visual impacts relate to the degree of change to an individual receptor's view of that landscape (i.e. visual amenity), for example local residents, users of public footpaths or motorists passing through the area.

The LVIA methodology will draw upon the established Landscape Institute and Institute of Environmental Management & Assessment (third edition) 'Guidelines for Landscape and Visual Impact Assessment' (2013) (Ref 7.6), Natural England's 'An Approach to Landscape Character Assessment' (2014) (Ref 7.7) and other recognised guidelines, in particular Landscape Institute Advice Note 01/11 'Photography and photomontage in landscape and visual impact assessment' (Ref 7.8). The approach has four key stages:

Baseline: includes the gathering of documented information, such as published documents describing landscape character; scoping of the assessment and agreement of that scope with relevant consultees and the local planning authority; site visits and initial reports on issues that may need to be addressed within the design.

Design: the iterative process of assessment and input into the design, review of initial design layouts and options, and mitigation options.

Assessment: includes an assessment of the landscape and visual effects of the scheme, requiring site based work and the completion of a full report and supporting graphics. Visual effects will be assessed by reference to a series of representative views; viewpoint locations will be discussed and agreed with SODC as part of the assessment. Outline visually verified montages (VVMs) will be produced for some or all of the representative views, again subject to agreement with SODC.

Images from representative viewpoints and a Figure detailing the locations of those viewpoints are provided in **Appendix B** of this Report.

Cumulative Assessment: assesses the effects of the Proposed Development in combination with other consented developments or developments under consideration as outlined in **Section 6** above.

The significance of effects will vary as a result of numerous interrelated factors including the sensitivity of the landscape and visual receptors, and the magnitude of change resulting from the Proposed Development, which will vary dependent on issues such as scale, duration and extent. Consideration is given below to the potential effects arising from the Proposed Development during construction and operation.

7.5 Water Resources and Flood Risk

7.5.1 Baseline Conditions

7.5.1.1 Study Area

A study area of approximately 1 km around the Site has been considered in order to define water bodies that could reasonably be affected. However, watercourse flow impacts may propagate downstream, thus the assessment will also consider a wider study area of up to 2 km downstream of the Site boundary where relevant.

The Site is situated on the border between the catchments of Haseley Brook and Chalgrove Brook, both of which flow in a generally westerly direction to meet the River Thame, as illustrated in **Figure 3-3**. These are both Main Rivers[1] and are designated under the WFD (together with tributaries).

The majority of the southern water catchment on the Airfield Site drains directly to Chalgrove Brook downstream of Chalgrove village. A small proportion of the southern part of the Site also drains directly to the south, over the B480 and into Chalgrove village. The remainder of the Site discharges into two local watercourses that flow into Haseley Brook. Only one watercourse is located within the Site boundary itself. This is a tributary of Haseley Brook (henceforth known as "tributary of Haseley Brook"). A second tributary of Haseley Brook (henceforth known as "Rofford Stream") rises at the western boundary of the Site and flows northwest to Haseley Brook.

The Site has relatively flat topography and Ordnance Survey mapping indicates that it is situated between 65 m and 70 m AOD. The land rises gently to the east of the Site towards Easington (105 m AOD), and gently declines towards the north and east approaching Haseley Brook (60 m to 65 m AOD), and towards the south approaching Chalgrove Brook (60 m to 65 m AOD).

[1] Main Rivers in England are rivers that are designated by the Environment Agency

7.5.1.2 Surface Hydrology

The Environment Agency's Catchment Data Explorer website (Ref 7.9) provides information on the WFD designation for watercourses in the vicinity of the Site:

Haseley Brook (GB106039023780) – This WFD waterbody flows from south of Tetsworth in a westerly direction to discharge into the River Thame southwest of Little Milton. It is not designated artificial or heavily modified. It is 14.45 km in length and the catchment area is 30.0 km^2. The water body is at Moderate Ecological Status under the 2015 Cycle 2 classification, due to having a Moderate macrophyte and phytobenthos classification, and despite a Poor phosphate classification (i.e. the overall status is based on the biological classification). The waterbody is however at Good Chemical Status. The Poor phosphate classification is suspected to result from the surrounding agricultural pressures and potentially from domestic sewage treatment systems and small village sewage works.

Chalgrove Brook (GB106039023740) – This WFD waterbody flows from Watlington in a north-westerly direction towards Chalgrove and onto the River Thame to the west of Stadhampton. It is not designated artificial or heavily modified. It is 12.1 km in length and the catchment area is 32.8 km2. The water body is at Poor Ecological Status under the 2015 Cycle 2 classification, due to having Poor classifications for fish, invertebrates and phosphate. Fish are Poor due to pressures including barriers to fish migration in the watercourse and sewage discharges. Invertebrates are Poor due to morphological and sediment pressures relating to agricultural and rural land management, which also contribute to the Poor phosphate classification. The waterbody has Good Chemical Status.

Only one watercourse is located within the Site boundary. This is an ordinary watercourse and a first order tributary of Haseley Brook. This tributary appears to emanate from field drains to the east of the Site close to Warpsgrove.

There are six surface water abstractions in the two river catchments that cover the Site (Ref 7.10). These are all for spray irrigation for agriculture. There are no further details available as to their location.

There are no significant water pollution incidents recorded in the study area on the Environment Agency website (Ref 7.10).

7.5.1.3 Groundwater Features

The Environment Agency's Catchment Data Explorer website indicates that there are no WFD designated groundwater bodies beneath the Site or a bedrock aquifer designation (Ref 7.10). The southern half of the Site towards Chalgrove has superficial aquifer designated as Secondary A.

There are two licensed groundwater abstractions in the river catchments that covers the Site with both being used for agriculture. Further details will be requested from the Environment Agency during the impact assessment. There are no groundwater Source Protection Zones in the vicinity of the Site, with the nearest being over 5 km away, south of Watlington.

At this stage it is not known what, if any, Private Water Supplies (PWS) are located in the study area, although the local ground conditions would suggest that a local resource is not evident. Regardless, during the impact assessment SODC will be consulted as to what data they hold on any PWS known to them.

7.5.1.4 Flood Risk

The National Planning Policy Framework (NPPF) requires that future development provides no increase in flooding to adjacent and downstream property. The Environment Agency's indicative flood map (Ref 7.11) indicates that the Site falls within Flood Zone 1. This is land with a less than 1 in 1,000 annual probability of river or sea flooding. However, there are areas of Flood Zone 3 outside of the Airfield Site that could be impacted by flows from the Site. Areas of Flood Zone 3 are found around Chalgrove Brook between Chalgrove and Stadhampton, and along Haseley Brook, especially at Little Milton. Flood Zone 3 are areas have a 1 in 100 or greater annual probability of river flooding.

The Environment Agency's surface water flood mapping, the Risk of Flooding from Surface Water (Ref 7.12), indicates that the Site is predominantly in an area of very low flood risk (less than 1 in 1000 year probability of flooding).

7.5.1.5 Nature Conservation and Aquatic Ecology

Using the MAGIC online map there are no statutory designated sites of ecological importance (including SSSIs, SACs, SPAs, Ramsar and / or National Nature Reserve (NNR)) within the 1 km study area (see also **Section 7.2**). The presence of any local wildlife sites, aquatic protected species or UK Biodiversity Action Plan habitats in watercourses will be determined at the next assessment stage. Furthermore, WFD monitoring data on biological quality elements (e.g. fish, macroinvertebrates, macrophytes and phytobenthos) will also be obtained from the Environment Agency for Chalgrove Brook and Haseley Brook.

7.5.2 Potential Environmental Effects

7.5.2.1 Construction

The Proposed Development has the potential to result in surface water and flood risk effects during its construction and operational phases, both in and adjacent to the Site and also downstream in and around the Chalgrove Brook and Haseley Brook.

During construction works of the Proposed Development the following potential effects may occur:

Changes in the rate and volume of surface water runoff entering the identified watercourses due to earthworks and changes in land use;

Changes in the natural form which may have an subsequent effects on surface water drainage patterns;

Increased sediment supply to watercourses through earthworks and erosion of exposed soils by runoff, potentially impacting water quality and geomorphology of water bodies including Rofford Stream, the tributary of Haseley Brook, Haseley Brook, Chalgrove Brook and the online ponds; and

Potential supply of construction material (e.g. concrete) to surface and groundwater's (southern portion of the Site) through accidental spillage or leakage of fuel oils and lubricants from construction vehicles, with impacts on surface water quality.

7.5.2.2 Operation

During the operation phase of the Proposed Development the following potential temporary effects may occur:

- Changes in fluvial flood risk from surface water runoff due to changes in land use and increased areas of impermeable ground;
- Potential deterioration in surface water quality, and excess fine sediment input to watercourses from diffuse urban runoff;
- Potential deterioration in water quality and excess fine sediment input to watercourses from highways (link roads and main accesses to the development);
- Physical damage to the morphology of the tributary of Haseley Brook that could have both temporary and long term impacts on its hydromorphological condition;
- Impacts on hydraulic processes and sediment dynamics in watercourses and their floodplains;
- Increased local demand on the capacity of public sewers and waste water treatment provision; and
- Increased local demand for potable water supply.

For surface watercourses, the Proposed Development must not cause deterioration of any relevant WFD parameter (i.e. the reduction in class of any parameter) in the waterbodies described above, or prevent the improvement to meet future WFD objectives. Therefore, as part of the impact assessment

the potential for environmental enhancement to support delivery of WFD objectives and the application of multi-functioning SuDS will be considered.

7.5.3 Proposed Assessment Methodology

The assessment will consider the potential effect on water resources (both from surface and foul flows from the Site) and flood risk issues. Potential impacts of the Development on the water environment will be assessed by:

- Considering the existing (baseline) status of the water environment within the Site and relevant surrounds with respect to flood risk, surface water and foul drainage;
- Identifying potential impacts of the Proposed Development on the water environment during the operational and construction phases;
- Proposing suitable mitigation measures to be incorporated into the development design, construction and operation to offset any adverse impacts (i.e. embedded mitigation); and
- Reviewing any residual impacts and presenting additional mitigation measures to limit their impacts.

A Site wide FRA will be prepared in accordance with NPPF requirements (detailed FRAs will be provided for future reserved matters applications). The assessment related to flood risk for the EIA will draw upon the studies and conclusions made within the FRA.

Building on existing desk study and survey information, further data will be collected to prepare a robust baseline for the Site upon which the impact assessment can be undertaken. This would include a review of National and local planning policy, any relevant published plans, documents and best practice guidance, and a review of the following data sources:

- Existing scheme information, topographical data, site reports and consultations;
- Online Ordnance Survey and aerial maps;
- Envirocheck Report (where obtained by others);
- Online historic maps;
- Various websites for data on water quality, water resource, hydrological, climate, Geological, soils;
- Any / current River Basin Management Plan, Catchment Abstraction Management Strategy, and Strategic Flood Risk Assessment covering the Site; and
- Request and review latest water quality, water resource, pollution incident, fisheries and aquatic ecology data from the Environment Agency.

Following the initial Desk Study a Site Walkover survey will be carried out to review current land use, topography, and to determine the hydraulic and sediment dynamic properties of the rivers in this location (as this has relevance for the potential for sediment-bound pollutants in runoff to accumulate in the channel).

Baseline data will be evaluated and constraints to development identified so that the Illustrative Masterplan can take these into account, in accordance with planning policy. This will also inform the emerging options for the development to avoid, minimise and reduce adverse effects on hydraulic processes and sediment dynamics to potentially impacted watercourses, and to ensure compliance with the objectives of the WFD. However, as this is an application for Outline Planning Permission, it is not proposed to undertake any detailed hydraulic modelling at this stage.

With reference to the Simple Index Approach described in the SuDS Manual (Ref 7.13) the necessary number of complimentary SuDS treatment measures will be determined so that they may be incorporated into the Illustrative Masterplan and the principles described in the Surface Water Drainage Strategy to accompany the application. Consideration of the need for additional proprietary treatment measures will also be made where there is a high risk from routine runoff or chemical spillages.

The assessment will include a qualitative assessment of the disposal of foul water from the Proposed Development, in consultation with Thames Water. The assessment will also describe how the

Proposed Development seeks to minimise future water consumption, in accordance with planning policies and the regional Water Resources Management Plan.

The assessment of potential effects on the water environment from the Proposed Development would be supported by a Preliminary WFD Assessment (pWFD). This will include a review of the latest WFD classification information from the Environment Agency's Catchment Explorer website and water quality and biological quality element data, proposed WFD mitigation measures, and any available investigative reports obtained directly from the Environment Agency. Scheme proposals will be reviewed to identify development components and potential impact pathways to be considered by the assessment, and which are not subject to potential exemptions. An assessment would then be undertaken to determine the potential for the Proposed Development to cause deterioration or prevent improvement in WFD designated surface water bodies.

The significance of potential adverse effects during the construction and occupation phases of development is determined using the guidance and criteria set out in the Design Manual for Roads and Bridges (DMRB) HD45/09 (Ref 7.14). Although developed for road infrastructure projects, this method is suitable for use on any development project and provides a robust and well tested method by which to predict the significance of effects.

Under this approach, the importance of the receptor and the magnitude of impact are determined independently from each other and are then used to determine the overall significance of effects. Where significant adverse effects are predicted, options for mitigation will be considered and secured where possible.

7.5.3.1 Scope for mitigation

With reference to best practice (e.g. CIRIA guides) we will make recommendations for mitigation measures to manage and control works during construction to avoid, prevent and minimise the risk of water pollution. Liaison will also be undertaken with the Environment Agency to identify any water related licences / consents / permits that may be required for construction and operation of the development.

The potential impact on surface water quality from new urban runoff will influence the type of drainage systems considered. Preference will be given to the use of filtration type SuDS wherever practicable in accordance with the SuDS hierarchy set out in the Building Regulations. Features will be incorporated into the drainage strategy and designed to mitigate against the potential for pollution of surface water.

Mitigation for the loss of floodplain up to the 1 in 100 year return period with an allowance for climate change will be provided by way of flood compensation storage. This will be designed in accordance with CIRIA 624c and Environment Agency requirements to consider level for level compensation within the active floodplain using appropriate depth bands.

SuDS can also be used to limit the impact of the development on flood risk by reducing the rate at which runoff from new hard areas discharges into receiving watercourses. Attenuation of the discharge, as far as practicable, to equivalent Greenfield runoff rates as calculated in accordance with the Interim Code of Practice for SuDS, 2004d will be provided. Storage for additional flows up to the 1 in 100 year + 40% climate change return period will be provided in SuDS features.

7.6 Ground Conditions

7.6.1 Baseline Environmental Conditions

7.6.1.1 Geology

With reference to the BGS 1:50 000 scale geological map (Sheet 254 Henley on Thames Solid and Drift) and BGS online mapping 'Geological Viewer of Britain' shows that the anticipated underlying geology is comprised of the River Terrace Deposits of the Summertown-Radley Sand and Gravel Member overlying bedrock comprising the Gault Formation.

The underlying Gault Formation is described by the BGS as comprising “pale to dark grey or blue-grey or mudstone, glauconitic in part, with a sandy base. Discrete bands of phosphatic nodules (commonly preserving fossils), some pyrite and calcareous nodules. In places thin, variable junction beds at the base includes some limestones”. This formation is typically encountered at thicknesses of up to 60m.

7.6.1.2 Hydrogeology

The EA’s Groundwater Protection Policy adopts aquifer designations that are consistent with the Water Framework Directive. According to this system:

The underlying bedrock geology, Gault Formation has been classified by the Environment Agency as Unproductive Strata. The superficial River Terrace Deposits have been classified by the Environment Agency as a Secondary A Aquifer.

The Environment Agency defines a Secondary A Aquifer as: ‘…permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source to base flow to rivers. These are generally aquifers formerly classified as minor aquifers’.

7.6.1.3 Vulnerability of Groundwater Resources

The UK Soil Observatory’s (UKSO) online maps show that overlying soils comprise freely draining slightly acidic loamy soils. These soils have been classified by the Environment Agency’s Groundwater Vulnerability Map for the Site as having an intermediate leaching potential, based on worst case assumption.

Environment Agency mapping also shows that the Site does not lie within a Source Protection Zone. No Source Protection Zones are recorded within 1km of the Site. The regional direction of groundwater is expected to follow the regional topography to the south-west in the direction of the River Thame. There are no licenced groundwater abstractions within 1km of the Site.

7.6.1.4 Development History

Historical Ordnance Survey Maps dated between 1881 to present indicate that the Site was previously occupied by agricultural land from the earliest mapping until 1942. In the early stages of 1942 the Site underwent development for Chalgrove Military Air Base. Structures and runways associated with the airfield were built and the Site was established in 1943 as part of the United States Army Air Force (USAAF). The Site remained as Chalgrove Airfield since its development in 1942 however changes to the layout of the buildings and structures have changed over the years. This is shown in the mapping presented in the Zetica Report. The Site is currently occupied by infrastructure associated with the MBACL ejection seat manufactures and the original airfield runway, currently used by MBACL.

7.6.1.5 Statutory Information

A review of records contained in the Landmark Envirocheck Report as obtained as part of the AECOM (2016) Phase 1 Desk Study identified the following relevant regulatory records within 500m of the Site.

Table 7-5: Summary of Statutory Information

Subject	Number present			Details
	Onsite	0-250m	250-500m	
Agency and Hydrological				
Discharge Consents	7	1	1	The nearest entries relate directly to the Site; seven entries for MBACL which have either been transferred or revoked since 1984. Two entries are still active which allows for the discharge of final/treated effluent into the River Terrace Gravels. An additional two entries located 75m north east and 282m south west of the Site are now revoked.
Pollution Incidents to Controlled Waters	1	5	8	The nearest entry relates to a 'Category 3 – Minor Incident' located onsite in 1997. The cause of the incident is not detailed and the pollutant is classified as general. Within 250m of the Site five additional incidents have been recorded and are all classified as 'Category 3- Minor Incidents'.
Waste				
No Statutory Authority Records Known				
Hazardous Substances				
Control of Major Accident Hazard Sites (COMAH)	1	0	0	The Site is an active lower tier Control of Major Accident Hazard Site, the licence is held by MBACL.
Explosive Sites	1	0	0	The Site is classified as an active explosive Site.
Industrial Land Use				
Contemporary Trade Directory Entries	1	1	67	The nearest entry is the MBACL, classified as inactive. The nearest active entry to the Site is Cleaning Services Company located 144m south west of the Site.
Fuel Station Entries	0	0	1	The nearest entry relates to Chalgrove Garage, now obsolete located 269m south west.

7.6.1.6 Unexploded Ordnance

A UXO Desk Study and Risk Assessment was carried out by UXO specialist Zetica Ltd in February 2016. Isolated areas within the Site with UXO potential identified that 3 main areas within the Site are designated as having a Moderate Risk. With the exception of these locations, the majority of the Site has been classified as Low Risk as little evidence was available for bombing or other sources of UXO.

The ES will identify measures to be undertaken in advance of construction to ensure UXO risk will be reduced to As Low As Reasonably Practicable (ALARP).

7.6.1.7 Land Contamination

As part of the Phase 1 Geo-environmental and Geotechnical Desk Study Assessment**,** AECOM carried out a preliminary risk assessment to determine if there were any plausible contaminant linkages.

A risk assessment of the identified plausible contamination linkages was undertaken for the Site in line with current legislation. The assessment takes into consideration the sources of possible contamination risk and the presence of any plausible pathways or receptors as outlined in the Environmental Protection Act 1990 (Part 2A).

7.6.1.8 Human Health

Based on the findings from the desk study information environmental review, there is a potential for a variety of isolated contamination hotspots across the Site. As part of the EIA, the potential for impact from activities associated with the historical military airfield will be further considered along with the identification and evaluation of remediation options.

7.6.2 Potential Environmental Effects

7.6.2.1 Construction

Potential construction effects include:

- Potential effects on neighbouring sites, the environment and workers during the construction works regarding to the disturbance of potentially contaminated soils during earthworks;
- Potential creation of new pollutant linkages to pre-existing contamination i.e. mobilisation / exposure of contamination, new receptors (proposed residential / commercial usage), as a result of construction activities and change in land use;
- Potential creation of new contamination and adverse effects on ground conditions i.e. accidental spills, traffic and earthworks damage, waste soils, as a result of construction activities and effects on adjacent soils by spray or airborne pollutions;
- Potential effects from UXO on the Site as per the conclusions drawn from Zetica Risk Assessment Report (Ref 7.16);
- Potential instigation of stability hazards, as a result of earthworks and erection of permanent structures;
- Potential effects on soils from construction activities, including tracking of site plant, site operations and materials, excavation, stockpiling and backfilling of soils; and
- Potential effects to the environment from production of hazardous waste soils from the Proposed Development.

7.6.2.2 Operation

Potential operational effects include:

- Potential effects to final end users from potential contaminants associated with made ground/historical use of the Site as a military airfield and current manufacturing activities;
- Potential effects to final end users and buildings from the generation of ground gas from made ground;
- Potential effects on soils from long term operation;
- Potential degradation of buried concrete structures as a result of aggressive chemical ground conditions; and
- Potential sterilisation and loss of mineral resources

7.6.3 Assessment Methodology

An in-depth review will be undertaken of all existing information including reports, technical documents, drawings etc. The information will be assessed with reference to the scheme proposals for the Site in the context of current and any potential amendments to legislation. In addition, further sources will be consulted to supplement existing information and to update datasets.

Consultation will be undertaken with the SODC, Contaminated Land Officer and Building Control, with reference to land designations, known contamination, restrictions or enforcements etc. which may be relevant to the scheme. The Environment Agency will be consulted with reference to impact and restrictions / enforcements, relevant to controlled waters.

A check will be made of the Local Authorities Minerals Plans (Ref 7.17), and liaison with the Councils' Minerals Teams (if applicable), to ensure the accurate identification of mineral reserves.

A Site walkover will be undertaken to verify the desk study information and record any natural or man-made topographical, hydrological, and hydrogeological features, type of vegetation cover and any other relevant features. This information will be used to inform the Desk Study report.

The procedure for assessing effects to ground conditions will be as described in the Design Manual for Roads and Bridges (DMRB), Volume 11, Part 10, HD 45/09 Road Drainage and the Water Environment (Highways Agency 2009).

The basis of a contaminated land environmental risk assessment is as detailed within the Contaminated Land Report (CLR) 11 Model Procedures for the Management of Land Contamination (Ref 7.18). This provides guidance on the processes of risk assessment and identification/evaluation of remediation options. The potential significance of these effects will be reported in line with guidelines given in the National House Building Council (NHBC) and Environment Agency's R&D Publication 66 (Ref 7.19), and within CIRIA C552 (Ref 7.20).

The assessment of any potential hazards associated with unexploded ordnance will be in accordance with CIRIA C681 (2009) (Ref 7.21).

At this stage given the absence of significant risk or uncertainties associated with ground conditions and contaminated land following the baseline review, as detailed in the baseline Phase 1 Desk Study, further site investigation is scoped out of the assessment. A more detailed assessment of ground conditions and hydrogeology will be undertaken as the detailed design advances, to be determined through targeted phased radiological, geophysical and intrusive ground investigation in accordance with the Environment Agency (2002) Guidance on the Characterisation and Remediation of Radioactively Contaminated Land (Ref 7.22), BS5930:2015 (Ref 7.23) and BS10175:2011+A1: 2013 (Ref 7.24) and in compliance with any subsequent planning conditions, as applicable.

7.7 Cultural Heritage

7.7.1 Baseline Environmental Conditions

A desk-based assessment of the Site was carried out in December 2016. The assessment demonstrated that the Site comprised largely undeveloped agricultural land from at least the late 18th century, and likely much earlier. This remained the case until the 20th century, when the advent of World War II (WW2) saw the construction of a military airfield. Previously, the Site formed part of a medieval and post-medieval agricultural landscape, with areas of ridge and furrow recorded within the northern extents of the Site boundary, and the Deserted Medieval Villages (DMVs) of Warpsgrove and Rofford recorded in close proximity to the eastern and western extents of the Site respectively.

The eastern extent of the Site is covered by a statutory designation, that of the Registered Battlefield, and five heritage assets dating from the prehistoric period to the 20th century are also recorded in the central and eastern areas of the Site. It is also apparent that the Site sits within a post-medieval agricultural landscape with probable earlier medieval origins, although the 20th century saw the Site enveloped within a military aviation landscape. Surface archaeological features are limited to 20th century military buildings and post-medieval agricultural ruins. The Proposed Development would likely impact across the Site, with footings for residential properties, along with associated utilities, extending beneath modern horizons. However, despite the relatively rich archaeological record within the vicinity of the Site, the landscaping of the area as part of the WW2 airfield development is likely to have had a negative effect on any significant archaeological remains that may be preserved below the current ground level.

There are also a number of listed buildings with medieval and early post-medieval origins located in the village of Chalgrove. The bulk of these are ranged along the High Street, with the greatest concentration being within the Chalgrove Conservation Area centred on the village green at the centre of the High Street. The Chalgrove Conservation Area notes four buildings, The Crown, 101 High Street, Croxford's Stores and the John Hampden Hall as being of local interest. It is apparent that any development on the Site may be visible from within the Conservation Area and will therefore have the potential to affect the significance of these assets. Any potential development will also affect the significance of the three listed buildings within the grounds of Rofford Hall and of the Registered Battlefield, which currently sits within a largely rural landscape.

7.7.2 Potential Environmental Effects

7.7.2.1 Construction

Any intrusive ground-works as part of the proposed scheme have the potential to damage or destroy previously unknown archaeological remains preserved below the ground surface. Desk-based research and LiDAR analysis have shown there to be evidence of medieval and post-medieval agricultural settlement and agricultural activity within the vicinity of the Site, and it is likely that remains relating to this activity may survive below the impact layer of the airfield construction.

The setting of heritage assets located within the vicinity of the Site could also be altered following the construction of the Proposed Development. There are 34 built heritage assets within a 500m radius of the Site boundary, including those within the Chalgrove Conservation Area. The registered battlefield of Chalgrove (1643) is also partly located within the Site boundary. Assets of high significance in the surrounding villages will also require assessment. The Site also affords sight lines from along the top of the Chiltern scarp (part of the AONB), so the intervisibilty of the Site from here will also need to be assessed.

The outstanding key issues regarding cultural heritage and archaeology include:

- Presence and extent of previously unknown archaeological remains;
- Determination and assessment of the impact areas of any proposed intrusive works;
- Determination and assessment of the effects of the development upon the setting and character of designated heritage assets located in the vicinity; and;
- Monitoring of any ground investigation works would be useful in determining the likely presence of any archaeological remains or preserved environmental deposits

7.7.2.2 Operation

Operational effects of the Proposed Development may include:

- Effects of traffic on historic setting of registered battlefield;
- Effects of increased traffic impact on the conservation area and listed buildings in the vicinity; and
- Effects of increased lighting on the setting of the registered battlefield, conservation area and listed buildings.

7.7.3 Assessment Methodology

The aims of the assessment are to establish the baseline conditions for the cultural heritage resource and the significance of the heritage assets within the Site and 500m study area. The objectives of the study are:

- to identify the heritage assets within the Site and study area;
- to identify the significance and setting of heritage assets within the Site and study area;
- to establish the likely potential of finding previously unrecorded archaeological remains with the Site boundary;
- to identify the potential effects of the development on the cultural heritage resource; and
- to make recommendations for further work, if required.

7.8 Noise

7.8.1 Baseline Environmental Conditions

The baseline noise environment at the Site and surrounding area is dominated by traffic noise along surrounding roads and aircraft noise. There are a number of receptors which are sensitive to noise and are located in close proximity to the Site. The closest private residential properties to the Site boundary that could be affected by noise associated with construction and demolition activities, and

operations of the completed development include those to the south of the Site across the B480, the properties to be retained within the Site and also the properties to the north of the Site on Rofford Lane.

7.8.2 Potential Environmental Effects

The proposed scheme has the potential to effect noise and vibration levels during the construction and operational phases.

Construction phase works have the potential increase noise and vibration levels from site plant and construction vehicles.

During the operational phase the proposed scheme has the potential to affect noise and vibration levels as a result of the additional road traffic generated by the proposed site uses.

7.8.3 Assessment Methodology

7.8.3.1 Baseline

A full baseline noise survey will be undertaken in line with BS 7445:1991 (Parts 2-3) and 2003 (Part 1). A combination of long-term and short-term noise measurements will be carried out at locations around and within the Site in order to:

- Characterise representative daytime and night-time noise levels at existing noise sensitive receptors for subsequent use in setting appropriate fixed plant noise emission criteria;
- Establish ambient and maximum noise levels around the Site in order to construct a detailed noise map; and
- Assess the suitability of the Site for its intended use.

Noise monitoring will be long-term continuous where secure locations are available. Where secure locations are unavailable, a series of attended measurements will be undertaken. Where possible, spot noise measurements will be undertaken to count for individual aircraft movements for the purposes of validating the aircraft noise model for the new runway. However, it should be noted that there is no set timetable for operations at the airfield so spot noise measurements of aircraft are reliant on there being activity during site visits.

It is assumed that there are no existing sources of vibration and therefore a baseline vibration survey is scoped out.

7.8.3.2 Site Suitability

The suitability of the Site for development will be assessed in terms of noise will be considered in line with local guidance and guidance contained in the NPPF. Details will be provided on suitable glazing and ventilation strategies in order to achieve the indoor ambient noise levels recommended in BS 8233:2014 'Sound insulation and noise reduction for buildings – Code of practice', Building Bulletin 93 or any other relevant guidance documents. The assessment will use noise modelling software to predict the level of road traffic noise from the new road layout and the Integrated Noise Model to predict aircraft noise operating from the new runway.

7.8.3.3 Construction

Noise and vibration levels associated with any enabling works and construction works will be calculated (at chosen sensitive receptors) using the data and procedures given in BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control from construction and open sites'. The construction noise and vibration assessment will be undertaken based on construction activity, plant use and traffic movement information.

Additionally, noise increases at sensitive receptors due to any construction traffic on public roads will be calculated according to the methods given in Calculation of Road Traffic Noise (CRTN) and assessed with reference to the methodology within the Design Manual for Roads and Bridges (DMRB).

Noise due to Site traffic e.g. delivery vehicles and refuse vehicles will be considered and strategies to minimise disturbance to residents will be provided.

7.8.3.4 Operation

Building services noise associated with the operation of the completed development will be assessed in line with BS 4142:2014 and limits recommended such that noise does not exceed the typical background noise level in terms of LA90.

Noise levels associated with construction traffic and future operational traffic flows will be assessed in line with CRTN. The effects of operational road traffic noise levels will be assessed based on a range of relevant guidance including the DMRB and mitigation measures detailed where necessary.

It is assumed that the development will not give rise to any vibration or ground borne noise at surrounding sensitive receptors and therefore an assessment of operational vibration has been scoped out.

7.8.3.5 Additional considerations

The new runway will result in a redistribution of noise around the airfield. Noise predictions of baseline operating conditions will be undertaken and compared with a future operational scenario. Receptors that are affected by significant changes in aircraft noise will be identified and mitigation measures recommended where necessary.

7.9 Air Quality

7.9.1 Baseline Environmental Conditions

SODC has designated three air quality management areas (AQMAs) designated within South Oxfordshire. These have been declared in Henley, Wallingford and Watlington due to exceedances of the annual Air Quality Strategy (AQS) for nitrogen dioxide (NO_2) due primarily to road traffic emissions within narrow streets with limited dispersion.

The Watlington AQMA is located approximately 5km to the south east of the Site on the B480 which also forms the southern boundary of the Site. Traffic generated by the scheme could, therefore, potentially affect air quality within the Watlington AQMA. The remaining two AQMAs are both further from the Site and are not linked directly to a road that passes close to the Site. As such, these two AQMAs are not likely to be affected by traffic generated by the scheme.

SODC undertakes automatic monitoring at three sites, one within each of the AQMAs. In addition SODC undertakes diffusion tube monitoring at 54 locations within the District. The results of the background diffusion tube monitoring shows that NO_2 concentrations are well below relevant annual mean AQS objective in the district. The closest diffusion tube is located at a roadside location in Stadhampton, approximately 2 km to the east of the Site on the A329. SODC reported annual mean NO_2 concentrations of 21.4 µg/m^3 at this diffusion tube in 2015, well below the AQS objective limit of 40 µg/m^3.

Consultation will be undertaken with the air quality officer at SODC to agree the detailed scope of assessment and to obtain the most up-to-date monitoring data and Local Air Quality Management (LAQM) Review and Assessment reports. The methodologies proposed below meet current guidance and would be the methodologies we would anticipate employing for the scheme.

Additional information on existing air quality in the local area will be taken from the UK Air Information Resource website, LAQM Review and Assessment reports published by SODC.

7.9.2 Potential Environmental Effects

The proposed scheme has the potential to effect local air quality during the construction and operational phases.

Construction phase works have the potential to generate dust and particulate matter emissions that may affect public amenity and health. Emissions from construction vehicles and plant also have the potential to affect local air quality.

During the operational phase the Proposed Development has the potential to affect local air quality as a result of emissions from the additional road traffic generated by the proposed site uses. The development may include a form of onsite heat/power generation which will also be considered.

7.9.3 Assessment Methodology

A desktop study will be undertaken to identify the locations of sensitive receptor locations likely to be affected by the Proposed Development based on changes in traffic flows associated with the construction and operational phases of the development. An initial review will be undertaken of the baseline air quality in the study area with reference to local air quality monitoring data and the Council's Review and Assessment reports.

In accordance with SODC's Guidance for Developers, Appendix 1 (Ref 7.25) a qualitative assessment of construction dust associated with the Proposed Development will be carried out in accordance with the Institute of Air Quality Management's (IAQM) "*Guidance on the assessment of dust from demolition and construction"* (Ref 7.26). The construction dust assessment will identify dust-sensitive receptors that may be affected by dust and emissions during the construction phase, identify the risks and effects, and suggest appropriate mitigation measures that would ensure construction phase effects are minimised.

The impacts of road-going construction traffic will be considered in the context of the vehicle movement thresholds outlined in the IAQM's "*Land-Use Planning & Development Control: Planning for Air Quality*". If the construction traffic vehicle movements are estimated to exceed these thresholds then the effects of these vehicle movements on local air quality will be modelled using the same methodology as for the operational phase traffic.

Given the scale of the development it is anticipated that detailed modelling will be required in accordance with SODC's Guidance for Developers, Appendix 1 which states that, *"detailed assessment may be appropriate where:*

- *a screening assessment has identified potential problems and more detailed modelling or monitoring is required;*
- *For larger scale developments generating significant traffic;*
- *Where air quality constraints have already been identified e.g. likely to impact on AQMA."*

The operational phase of the development will, therefore, be assessed using the ADMS-Roads dispersion model. Concentrations of NO_2 and particulate matter (PM_{10} and $PM_{2.5}$) will be predicted at sensitive receptor locations that are likely to be worst affected by the proposed scheme (i.e. receptors nearest to roads experiencing the largest changes in vehicle movements or near to junctions).

The detailed dispersion modelling will assess the local air quality impacts of additional vehicle movements on the local road network, along with the impact of emissions from any onsite energy centres. If an onsite energy centre is included as part of the Proposed Development an assessment of air quality effects associated with it will be undertaken using a the AERMOD dispersion model. The air quality assessment would encompass energy plant serving non-residential buildings within the Proposed Development. NO_2 and PM_{10} / $PM_{2.5}$ concentrations at discrete receptor locations, representative of existing and future human exposure. The change in traffic flows within the Watlington AQMA will be assessed based on the IAQM/EPUG screening criteria. Should the change in traffic flows exceed the assessment levels within the AQMA detailed modelling will be undertaken to assess the predicted effects of the Proposed Development within the AQMA.

The closest designated ecological site is Knightsbridge Lane SSSI, located 4 km to the east of the Site. As such, effects of any energy centre ecological sites within 4km of the Site, as such the effect of any onsite energy centre on designated ecological sites is anticipated to negligible, as such, assessment of nitrogen deposition and oxide of nitrogen (NO_x) concentrations at designated

ecological sites has been scoped out of further consideration as has dust impacts at ecological receptor.

The process contribution from the onsite combustion sources would be added to the predicted contribution from road traffic sources for the with-development scenarios.

Dispersion modelling will be carried out for the following scenarios:

- Baseline year
- Proposed opening year scenarios:
    - without the proposed scheme
    - with the proposed scheme

Road traffic model outputs will be verified in accordance with methodology outlined in LAQM.TG(16) using local monitoring data where practicable.

Description of the operational phase air quality impacts and assessment of their significance will be assessed in accordance with the IAQM's "*Land-Use Planning & Development Control: Planning for Air Quality*". Should the assessment results indicate unacceptable air quality impacts, appropriate mitigation measures will be proposed.

7.10 Socio Economics

7.10.1 Baseline Conditions

Socio-economic receptors comprise the population and economy (including the housing market), together with surrounding social and community infrastructure. The specific receptors the Socio-Economic ES Chapter is concerned with and the baseline indicators relevant to them comprise:

- Construction sector employment;
- Population size and structure (including age profile);
- Overall employment in the local area and South Oxfordshire;
- Labour market characteristics;
- Housing market (current stock, policy target, future needs and housing characteristics);
- Capacity of local social and community infrastructure, specifically the following:
    - Education provision (early years, primary and secondary)
    - Primary health facilities
    - Open space

7.10.2 Potential Effects

In accordance with the receptors outlined above, the assessment will examine the following potential effects:

- temporary employment generation during the construction phase associated with the site clearance and construction works;

Completed and operational effects:

- provision of new residential units on the current housing stock and profile, including the contribution to current housing targets;
- a change in the population (as a result of new housing) on the existing population size and structure;
- a change in the population (as a result of new housing) on the existing labour market size and profile;
- change in long term employment opportunities associated with the proposed non-residential land

uses of the Development on the existing employment profile;

- the additional expenditure resulting from the new residents of the Development and the effect on the existing employment profile; and
- additional demand of the new predicted residential population upon local schools (early, primary and secondary), primary healthcare facilities and open space (including children's play space).

7.10.3 Assessment Methodology

The Socio-Economic assessment will, where possible, be quantitative in nature, using established assessment guidelines and approaches. Where this is not possible, a qualitative approach to assessment will be adopted. The following will be undertaken:

- Discussion and consultation with South Oxfordshire District Council's (SODC) relevant Economic Development and Planning Officers;
- A review of relevant social and economic policies at national, local and regional levels;
- Identification of the relevant socio-economic baseline conditions at, and surrounding, the Site and the SODC level;
- Identification and assessment of the likely significant effects of the Development using well-established assessment models and standard assessment procedures which are identified below, and supplemented by professional judgement, as appropriate. These will include:
    - an estimation and quantification of the number of Full Time Equivalent (FTE) jobs generated by the construction works. This will use estimates of construction spend and CLG / Offpat labour co-efficient ratios to derive estimates of both on and off-site construction jobs;
    - an estimation and quantification of the number of FTE jobs generated following completion of the Development. On site jobs will be estimated using established employment density ratios. Off-site jobs will be estimated using established ratios for indirect (supply chain) and induced (employee expenditure) multipliers;
    - quantification of the residential occupier mix and labour market profile using modelling based on the DCLG English Housing Survey and Census data;
    - an estimation of the new residential Site population and an estimation of the child yield arising from the Development based on SODC's Section 106 Planning Obligations document (2016);
    - an estimation of FTE jobs derived from additional expenditure created by the new population of the Development will be established using data on the socio-economic profile of the new community and the Family Expenditure Survey (FES) as well as local retail assessments; and
    - an appraisal of the effects of the Development's additional population on the capacity of primary and secondary schools, primary healthcare facilities, open space and children's play space.
- Identification of appropriate mitigation measures should any adverse effects be identified, or where appropriate identification of benefit enhancement opportunities; and
- Assessment of significance of the likely residual effects.

8. Other EIA Issues

The aim of the Scoping Stage is to focus the EIA on those environmental aspects that may be significantly affected by the Proposed Development. In so doing, the significance of impacts associated with each environmental aspect becomes more clearly defined. This section provides a summary of issues that will be addressed as part of the ES but will not have a stand-alone topic specific Chapter.

8.1 Health

In relation to the provisions within the EIA Regulations, the assessments undertaken within the ES will consider human receptors such as local residents, employees and construction workers. Therefore, the effects of the Proposed Development in relation to health and population will, where relevant, be considered in the technical chapters of the ES as relevant, including noise, air quality, ground conditions and socio-economics.

8.2 Major Disasters or Accidents

The Site is within Flood Zone 1. Flood risk will be assessed within the Water Quality, Flood Risk and Water Resources ES Chapter and the Flood Risk Assessment.

The Control of Major Accident Hazards (COMAH) Regulations 2015 aim to prevent major accidents involving dangerous substances and to limit the consequences to people and the environment of any accidents which do occur.

Martin-Baker Aircraft Limited (MBACL) operates within the Site and has an existing lower tier COMAH licence. Should there be any change to the existing licence, MBACL would notify the HSE to amend their consent. Prevention and control of major accident hazards will be based on the principle of reducing risk to a level as low as is reasonably practicable (ALARP) for human risks and using the best available technology not entailing excessive cost (BATNEEC) for environmental risks.

8.3 Climate Change

Climate change impacts, adaptation and mitigation measures will be taken into account during further design development and such considerations will be factored into the design where possible. Where relevant, reference to climate change impacts, adaptation and mitigation measures will be made within the ES and other supporting documents including the Energy Statement and Sustainability Statement.

During the construction phase, measures to mitigate climate change will include minimising carbon dioxide (CO_2) emissions from construction equipment wherever possible as well as reducing, reusing and recycling site waste. These measures will be described within the Site clearance and Construction Chapter of the ES. In terms of the operation of the Proposed Development, the choice of materials and other design related measures will be identified in the Proposed Development Chapter of the ES.

8.4 Waste

A description of the site clearance and construction phase waste streams and estimated volumes will be described within the Project Description chapter of the ES. In addition to this, a framework CEMP, which would be produced following receipt of outline planning permission, will set out how waste will be managed onsite, and how opportunities to recycle waste will be explored.

During the operation phase, the development will generate predominantly municipal solid waste from domestic properties, which will be collected by the Waste Collection Authority (SODC) and disposed of by the Waste Disposal Authority (OCC) as part of their statutory duties. The development will not include high-rise residential properties, and it is anticipated that domestic waste will be collected at the kerbside, with bins provided for each separate dwelling as per existing arrangements within the district. Although the development will increase the amount of waste generated in Oxfordshire, the

Waste and Minerals Core Strategy takes into account growth in the population and number of households when estimating waste arising's up to 2031.

It is therefore concluded that a) there will be no significant impacts on the collection activities of SODC, other than the need to provide additional collection routes as the site is developed; and b) there will be no significant impacts on the required waste management capacity in Oxfordshire, over and above those already considered as part of the Waste and Minerals Core Strategy. As a result, it is considered that operational waste management can be scoped out of the EIA

8.5 Aviation

Chalgrove is a former military airfield comprising three runways in a triangular arrangement. Currently only one runway is licenced, this being runway 13-31. Two other runways (16-24 and 18-36) are maintained in case of emergency need.

MBACL operates two modified Gloster Meteor aircraft. There is no published record of the number of air traffic movements associated with the testing but it is understood to be extremely infrequent.

A desk-based assessment will be undertaken to establish the baseline conditions and assess the effect from the new runway on all aviation matters and Appended to the ES. The assessment will include consideration of:

i. the type of airspace and associated air traffic control in the area;
ii. liaison with civil aviation aerodromes, air traffic control zones, the military and emergency services
iii. physical safeguarding of nearby aerodromes; and
iv. Ministry of Defence (MoD) Defence Meteorological radars.

9. Topics Scoped out of the ES

9.1.1 Daylight, Sunlight & Overshadowing

The proposals are not of a scale and are not located sufficiently close to existing residential buildings that built massing could cause changes to daylight or sunlight availability or cause overshadowing of amenity space. Daylight, Sunlight and Overshadowing is therefore scoped out of the ES.

9.1.2 Solar Glare

The Proposed Development will not be constructed of highly reflective materials which could cause solar glare effects. Solar glare is therefore scoped out of the ES.

9.1.3 Electronic Interference

The proposed building heights will be no higher than a maximum of four storeys and the majority of the buildings will be two storeys. Analogue signals have largely ceased to be transmitted and have been replaced by digital signals. As such, the Proposed Development's potential to interfere with television, radio (both analogue and digital) and mobile phone reception is considered negligible. Electronic interference is therefore scoped out of the ES.

10. Proposed Structure of the ES

The ES will comprise the following set of documents:

- **Non-Technical Summary (NTS):** providing a summary of the key findings of the EIA.
- **Volume I: Environmental Statement:** this will contain information prepared on behalf of the Applicant on the likely environmental effects of the Proposed Development with the proposed chapter headings as follows:
    1. Introduction;
    2. Legislation and Policy Context;
    3. The Proposed Development;
    4. Alternatives;
    5. EIA Approach and Methodology;
    6. Terrestrial Ecology and Biodiversity;
    7. Ground Conditions and Hydrogeology
    8. Surface Water, Flood Risk, and Water Resources
    9. Traffic and Transport;
    10. Air Quality;
    11. Noise and Vibration;
    12. Archaeology and Cultural Heritage;
    13. Landscape and Visual;
    14. Socio-Economics;
    15. Cumulative Impacts; and
    16. Residual Impacts and Conclusions.

- **Volume II: Technical Appendices:** including supplementary details of the environmental studies conducted during the EIA including relevant data tables, figures and photographs.

Abbreviations

Abbreviation	Description
ATC	Automatic Traffic Counts
AOD	Above Ordinance Datum
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
BAP	Biodiversity Action Plans
BGS	British Geological Survey
BS	British Standard
BTO	British Trust for Ornithology
CAA	Civil Aviation Association
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CLR	Contaminated Land Report
CO	Carbon Monoxide
CO2	Carbon Dioxide
CRTN	Calculation of Road Traffic Noise
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Sites
dB	Decibel
DfT	Department for Transport
DMRB	The Design Manual for Roads and Bridges
DMV	Deserted Medieval Villages
EdD	Enquiry by Design
EA	Environment Agency
EcIA	Ecological Impact Assessment
EIA	Environmental Impact Assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
FTP	Framework Travel Plan
GES / GEP	Good Ecological Status / Potential
GI	Ground Investigation
ha	Hectare
HCA	Homes and Communities Agency
HE	Highways England
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HRA	Habitats Regulations Assessment
IAQM	Institute of Air Quality Management
IEEM	Institute of Ecology and Environmental Management
IEF	Important Ecological Features
IEMA	Institute of Environmental Management and Assessment
JTC	Junction Turning Counts
km	Kilometre

Abbreviation	Description
LA90	The noise level exceeded for 90% of the measurement period, A-weighted and calculated by Statistical Analysis.
LAQM	Local Air Quality Management
LCA	Landscape Character Area
LPA	Local Planning Authority
LSEs	Likely Significant Effects
LVIA	Landscape and Visual Impact Assessment
m	Metre
MBACL	Martin-Baker Aircraft Co Limited
m/s	Metres per second
m3	Cubic metre
µg	micrograms
MAGIC	Multi Agency Geographic Information for the Countryside
NE	Natural England
NERC	Natural Environment and Rural Communities
NNR	National Nature Reserve
NO2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NTM	National Transport Model
NTS	Non-Technical Summary
OS	Ordinance Survey
PM10	Particulate Matter 10 micrometers or less in diameter
PM2.5	Particulate Matter 2.5 micrometers or less in diameter
PROW	Public Right of Way
PWS	Private Water Supplies
SAC	Special Area of Conservation
SGVC	Specialised Goods Vehicle Counts
SHMA	Strategic Housing Market Assessment
SODC	South Oxfordshire District Council
SPA	Special Protection Area
SPZ	Special Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
TA	Transport Assessment
UKSO	UK Soil Observatory's
USAAF	United States Army Air Force
UXO	Unexploded ordnance
VVN	Visually Verified Montages
WFD	Water Framework Directive
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

Glossary of Terms

Term	Description
Applicant	The party applying for outline planning consent.
Area of Outstanding Natural Beauty	Area of countryside in England, Wales or Northern Ireland which has been designated for conservation due to its significant landscape value. Areas are designated in recognition of their national importance, by the Natural England, Natural Resources Wales, or the Northern Ireland Environment Agency.
EIA Regulations 2017	Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') as amended.
Environmental Effects	Environmental effect is determined by a combination of the sensitivity of the receptor and the magnitude of the impact (refer below). It is an assessment of environmental effects that is required by the EIA Regulations (2017). Effects can be either positive, neutral or negative.
Environmental Impacts	Environmental impact is described and characterised for each technical discipline in order to allow the significance of the environmental effect to be determined based on frequency, duration, reversibility, and probability of the impact occurring (i.e. impact magnitude) along with the sensitivity of the receptor.
Environmental Impact Assessment	A process for determining how a Project may affect the environment. The results of an Environmental Impact Assessment (EIA) should establish a development's principal potential effects, their significance and how they interact. This information is summarised in the Environmental Statement.
Environmental Statement	A statement that includes information specified in the EIA Regulations as that reasonably required to assess the environmental effects of the development and of any associated development in which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile.
Public Right of Way	An access track that is open to everyone including roads, paths or tracks, bridleways and can run through towns, countryside or private property.
Ramsar sites	Wetland site designated of international importance, especially as Waterfowl Habitats, under the 1975 Ramsar Convention.
Scoping	A stage which occurs early in the project cycle identifying the key environmental issues and the procedures for determining the extent of and the approach to an EIA.
Scoping Opinion	The written statement by the Local Planning Authority as to the information to be provided in an environmental statement.
Scoping Report	A report by the Applicant on the results of the Scoping exercise which is submitted to the Local Planning Authority.
Sites of Special Scientific Interest	A site designated by Natural England as an area of special interest by reason of any of its flora, fauna, geological or physiographical features.
Special Area of Conservation	Strictly protected sites designated under the EC Habitats Directive due to their internationally importance for threatened habitats and species.
The Applicant	The Homes and Communities Agency (HCA)
The Proposed Development	The term used to describe the proposed residential led mixed use development.
The Site	The site boundary for the purposes of EIA Scoping as shown in Figure 4.1.
Water Framework Directive	This Directive sets out to establish a Community framework for the protection of surface waters and groundwater across the EU.

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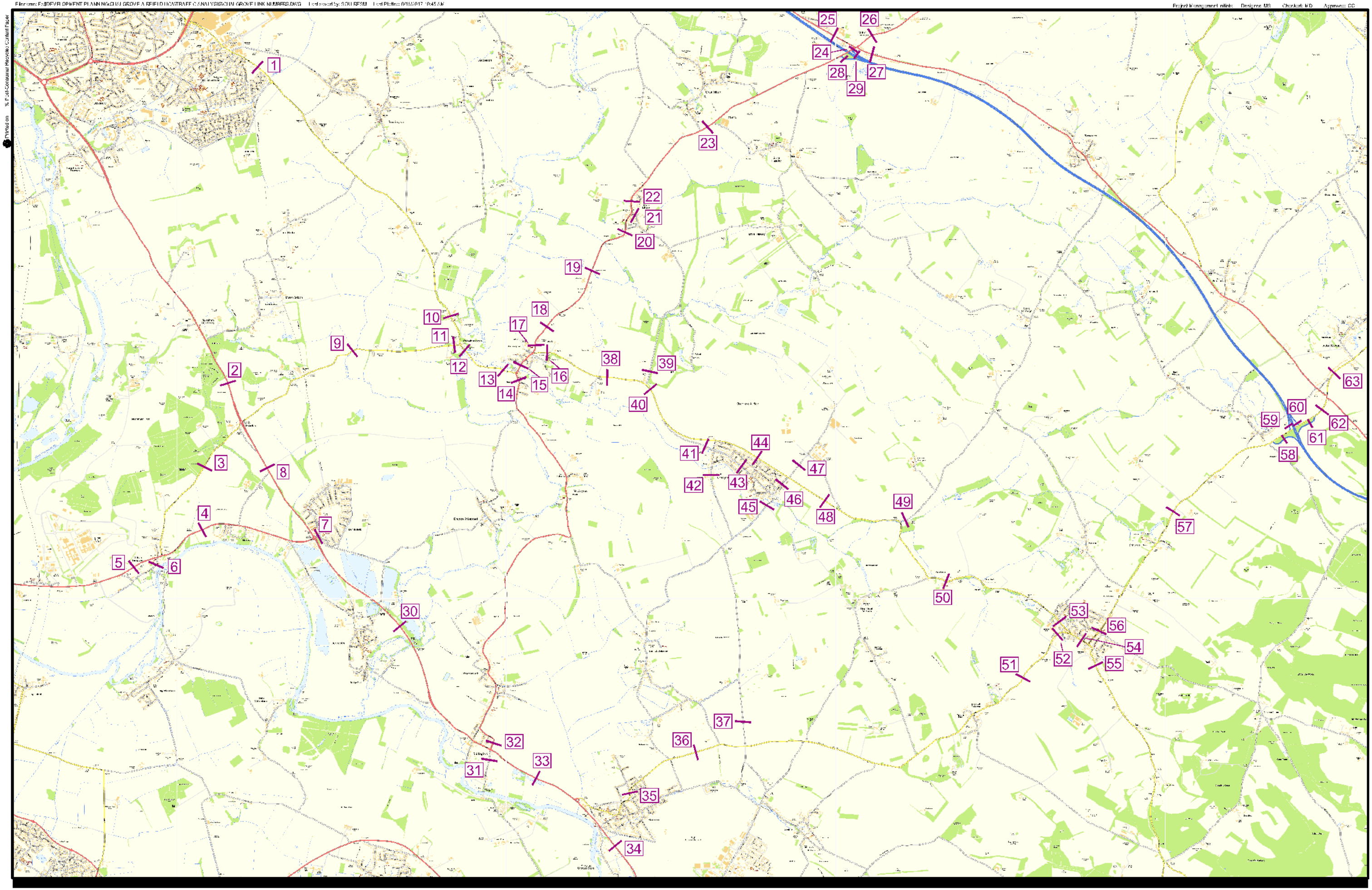
Appendix A Transport Links

Link No.	Link Name	Sensitivity	Description
1	B480, north of Grenoble Road junction	Minor	Predominantly urban in character, and covers a series of junctions which can become congested during peak hours.
2	A4074, north of Golden Balls Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
3	Oxford Road	Negligible	There are considered to be no sensitive receptors on this link.
4	A415, between B4015 and Berinsfield Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
5	A415, west of Clifton Hampden	Negligible	There are considered to be no sensitive receptors on this link.
6	High Street, at Clifton Hampden	Moderate	Sensitive receptors including a school / playground, place of worship and roads without footways that are used by pedestrians.
7	Wimblestraw Road, east of Berinsfield Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
8	A4074, between Golden Balls Roundabout and Berinsfield Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
9	B4015, between A4074 and B480	Minor	Limited sensitive receptors, however the road is fairly narrow and forward visibility is restricted.
10	B480, north of Chiselhampton	Negligible	There are considered to be no sensitive receptors on this link.
11	B4015, west of B480 junction	Minor	Close proximity to a junction which can become congested during peak hours. Roads have narrow / no footways, although pedestrian movements are low. Small number of houses set back from road.
12	B480, south of B4015 junction	Minor	Residential area with adequate footway provision.
13	B480, west of Newington Road	Minor	There are considered to be few sensitive receptors on this link, although forward visibility can be restricted.
14	A319 Newington Road, south of B480 / A319 junction	Moderate	Close proximity to a junction which can become congested during peak hours.
15	A329 Thame Road at Stadhampton	Minor	Residential area with adequate footway provision.
16	B480, east of Stadhampton Roundabout	Minor	Public open space either side of the road which is used to stage village events.
17	A329 Milton Road, north of Stadhampton Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
18	A329 Milton Road, north of Stadhampton	Negligible	There are considered to be no sensitive receptors on this link.
19	A329, midway between Stadhampton and Little Milton	Negligible	There are considered to be no sensitive receptors on this link.
20	A329, south of Haseley Road at Little Milton	Moderate	The school located at the bottom of Church Hill is considered to be of "major" significance. The church itself and pinch points within the village contribute to the sensitivity of this link.
21	Haseley Road at Little Milton	Moderate	Residential use with narrow footways, considered adequate for the level of pedestrian movement.
22	A329, north of Haseley Road at Little Milton	Minor	Residential area with footway provision, village hall and shop.
23	A329, midway between Little Milton and M40 Junction 7	Negligible	There are considered to be no sensitive receptors on this link.
24	A329, between M40 Junction 7 and A40	Negligible	There are considered to be no sensitive receptors on this link.
25	A40, north of A329 junction	Negligible	There are considered to be no sensitive receptors on this link.
26	A329, east of A40 junction	Negligible	There are considered to be no sensitive receptors on this link.
27	A40, south of A329 junction	Negligible	There are considered to be no sensitive receptors on this link.
28	M40 Junction 7 Northbound Off-Slip	Negligible	There are considered to be no sensitive receptors on this link.
29	M40 Junction 7 Southbound On-Slip	Negligible	There are considered to be no sensitive receptors on this link.
30	A4074, between Berinsfield Roundabout and Shillingford	Negligible	There are considered to be no sensitive receptors on this link.
31	Wallingford Road, south of Shillingford Roundabout	Minor	Narrow bridge with shuttle working on route to Wallingord.
32	A329, north of Shillingford Roundabout	Negligible	There are considered to be no sensitive receptors on this link.
33	A4074, south east of Shillingford Roundabout	Negligible	There are considered to be no sensitive receptors on this link.

Link No.	Link Name	Sensitivity	Description
34	A4074, south of Benson	Negligible	There are considered to be no sensitive receptors on this link.
35	B4009 at Benson	Moderate	Narrow footways and pinch points in the village are sensitive to traffic flow increase. This is exacerbated by the proximity of a school and other community facilities.
36	B4009, east of Benson	Negligible	There are considered to be no sensitive receptors on this link.
37	Hollantide Lane	Minor	Narrow in places. Limited visibility in two locations.
38	B480, between Stadhampton Roundabout and Rofford Lane	Negligible	There are considered to be no sensitive receptors on this link.
39	Rofford Lane, north of B480 junction	Negligible	There are considered to be no sensitive receptors on this link.
40	B480, between Rofford Lane and High Street	Negligible	There are considered to be no sensitive receptors on this link.
41	High Street, west of Mill Lane, at Chalgrove	Moderate	Doctor's surgery located on this link is classified as having "moderate" significance.
42	Mill Lane	Moderate	Sections of the link have narrow footways, and a pinch point on the route is sensitive to traffic flow increase.
43	High Street at Chalgrove	Moderate	There is a shopping area with roadside frontage, and at points along the link there are narrow footways.
44	B480, north west of Monument Road junction	Negligible	There are considered to be no sensitive receptors on this link.
45	Berrick Road, south of High Street, at Chalgrove	Minor	There is no footway provision, although pedestrian movements are low.
46	Monument Road, west of B480 junction	Minor	Residential area with adequate footway provision.
47	Monument Road, east of B480 junction	Minor	Limited footway provision.
48	B480, south of Monument Road junction	Minor	Limited sensitive receptors, however the road is fairly narrow and forward visibility is restricted.
49	Unnamed Road, east of B480 junction (north of Cuxham)	Negligible	There are considered to be no sensitive receptors on this link.
50	B480 at Cuxham	Moderate	Limited or no footway provision in the village contributes to a "moderate" sensitivity to traffic flow increase, with residential
51	B4009, south west of Watlington	Negligible	There are considered to be no sensitive receptors on this link.
52	Britwell Road, west of Cuxham Road junction	Minor	Residential area with adequate footway provision.
53	B480, north of Watlington	Moderate	Limited or no footway provision contributes to a "moderate" sensitivity to traffic flow increase. Located within an AQMA.
54	B480, between B4009 Britwell Road and B4009 Couching Street	Moderate	Residential area with adequate footway provision. Located within an AQMA.
55	B480, south of Watlington	Negligible	There are considered to be no sensitive receptors on this link.
56	Couching Street, east of B480 junction	Major	A pinch point and narrow footways on this link, including retail with roadside frontage, contribute to a "moderate" sensitivity to traffic flow increase. Located within an AQMA.
57	B4009, between Watlington and M40 Junction 6	Negligible	There are considered to be few sensitive receptors on this link.
58	M40 Junction 6 Northbound Off-Slip	Negligible	There are considered to be no sensitive receptors on this link.
59	M40 Junction 6 Northbound On-Slip	Negligible	There are considered to be no sensitive receptors on this link.
60	M40 Junction 6 Southbound Off-Slip	Negligible	There are considered to be no sensitive receptors on this link.
61	M40 Junction 6 Southbound On-Slip	Negligible	There are considered to be no sensitive receptors on this link.
62	B4009, between M40 Junction 6 and A40	Negligible	There are considered to be no sensitive receptors on this link.
63	B4009, north east of A40 junction	Negligible	There are considered to be no sensitive receptors on this link.



Chalgrove Airfield

Link Numbers

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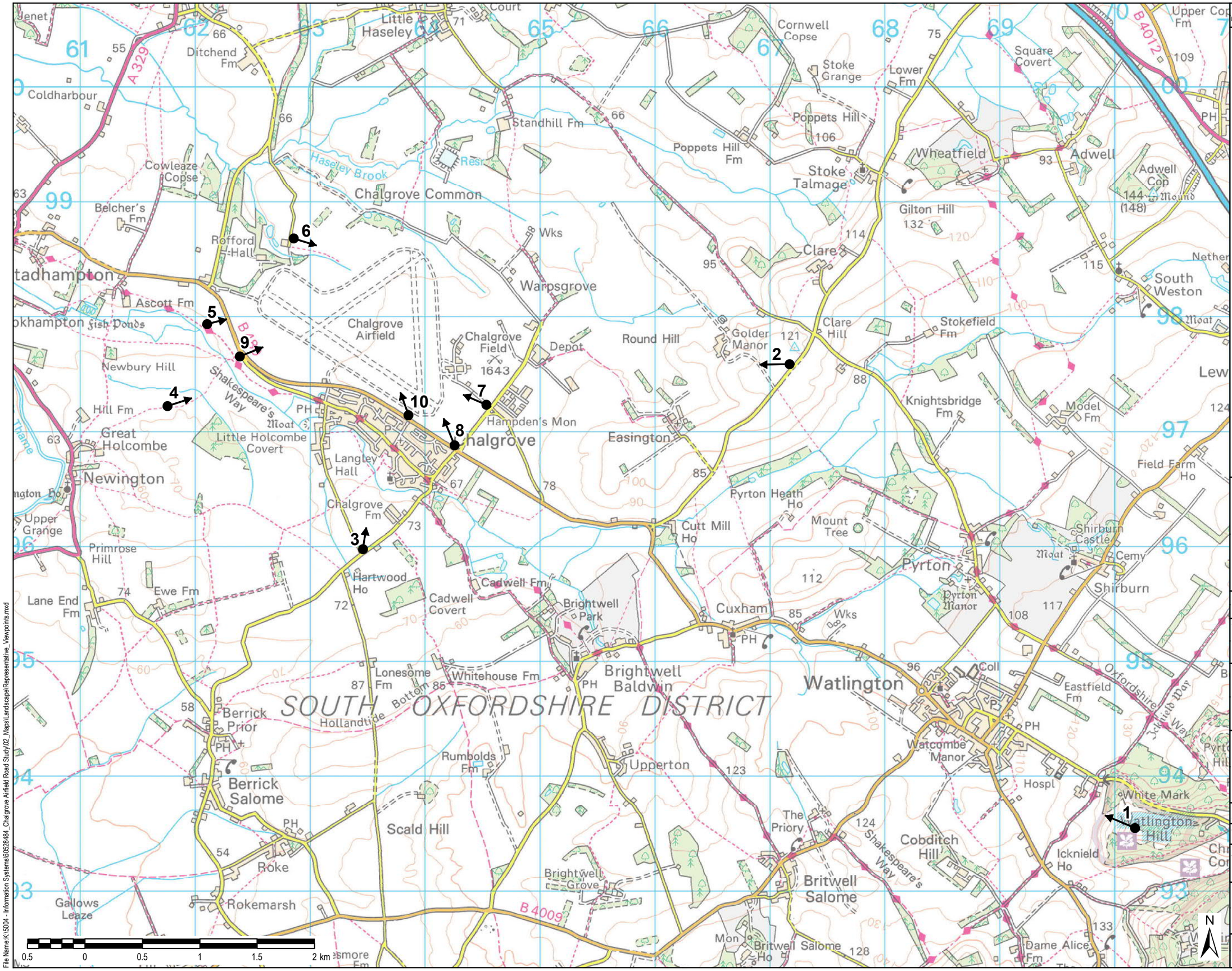
Appendix B Proposed Viewpoint Locations



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LEGEND

→ Representative Viewpoint

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Purpose of Issue
DRAFT

Client
HOMES AND COMMUNITIES AGENCY

Project Title
CHALGROVE AIRFIELD

Drawing Title
REPRESENTATIVE VIEWPOINTS

Drawn	Checked	Approved	Date
JW	CN	EH	28/06/2017

AECOM Internal Project No.	Scale @ A3
60528484	1:30,000

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Drawing Number
FIGURE 1

Rev

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1. View from Watlington Hill – 7km to the south-east of the site.

2. View from Clare Hill – 3km to the east of the site.

3. View from Mill Lane – at the junction with Berrick Road 1.5km south of the site.

4. View from Great Holcombe – on the public footpath 800m south-west of the site.

5. View from Shakespeare's Way – 150m south-west of the site.

6. View from Rofford Lane – opposite Rofford Manor 350m west of the site.

7. View from Hampden's Monument – 300m east of the site.

8. View from the B480 – at the junction with Monument Road 250m south-east of the site.

9. View from the B480 – at the junction with High Street on the southern site boundary looking north-east.

10. View from the B480 – on the northern edge of Chalgrove looking north-west.

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