

SCIENCE MUSEUM GROUP

Building ONE | The Science Museum Group at Wroughton | December 2017



Environmental Statement

BUILDING ONE

SCIENCE MUSEUM GROUP
AT WROUGHTON

Environmental Statement

WRITTEN STATEMENT AND
TECHNICAL APPENDICES

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BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 1

INTRODUCTION

1. INTRODUCTION

1.1 INTRODUCTION

1.1.1 This Environmental Statement accompanies a planning application for the construction of a collections management facility on land at the Science Museum Group at Wroughton (hereafter referred to as “SMGW”). The applicant and developer is The Science Museum Group [“SMG”].

1.2 BACKGROUND TO SMG AND DEVELOPMENT

1.2.1 SMG comprises: -

- The Science Museum, London
- The Museum of Science and Industry, Manchester
- Locomotion, Shildon
- The National Railway Museum, York
- The National Science and Media Museum, Bradford; and
- The Science Museum Group Wroughton, Swindon

1.2.2 SMG holds the nation's preeminent collection of science, technology, engineering, medicine, transport and media. The collection is astonishingly diverse - encompassing everything from aeroplanes to anatomical votives. Together these objects tell the story of our world - from the Indus Valley civilisation over 3000 years ago to the cutting-edge microchips that power our connected planet today. The SMG's mission to inspire futures includes bringing the management of it's world-class collection into the 21st century. They seek to continually evolve and improve how people engage with the astonishing stories of creativity, progress and humanity embedded in the collection and transforming how it is cared for, accessed and shared with global audiences. This revolutionary, once-in-a-lifetime project is called ONE Collection.

1.2.3 The Wroughton site is already acknowledged as a primary collections storage facility for SMG, currently housing approximately 35,000 large objects. The site is owned by the Board of Trustees of the Science Museum. A second site, at Blythe House in West Kensington, London currently provides alternative storage for 320,000 objects of historic international significance. Blythe House forms part the Department of Digital, Culture, Media and Sport (DCMS) estate and is leased to SMG, and is shared with the Victoria and Albert Museum and the British Museum.

1.2.4 SMG must vacate Blythe House by the end of March 2023 due to the sale of that premises by DCMS. The Government's decision to sell Blythe House now presents a unique opportunity for SMG to make significant progress towards relocating the collections stored in inadequate conditions at Blythe House, and in the majority of the life-expired hangars at Wroughton, into a purpose-built collections management facility. This is a once-in-a-generation opportunity for SMG to invest at Wroughton, and further demonstrates the commitment to using the Wroughton site as a sector leading national collections centre. There is no doubt that the development proposal will raise the profile of the site, Wroughton and Swindon, as a location of international significance in the heritage sector.

1.2.5 The Location of the development proposal is shown on **Figure 1.1 [to note; Figures are presented either within or at the end of each chapter. The technical appendices are presented in the accompanying Volume 2 of the Environmental Statement]**.

1.3 EIA REGULATIONS AND PROCEDURES

1.3.1 An Environmental Statement ["ES"] is a document that sets out the findings of an Environmental Impact Assessment ["EIA"]. An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a Proposed Development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed. The EIA is carried out prior to the submission of a planning application.

1.3.2 The statutory requirements for carrying out an EIA, the contents of the ES and the procedures for determining planning applications for 'EIA Development' are set out within the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [the "EIA Regulations"].

1.3.3 Where an application is made for planning permission for EIA development the local planning authority ["LPA"] is not permitted under the EIA Regulations to grant planning permission unless they have first taken the relevant environmental information into consideration.

1.3.4 In order to determine if it is necessary to undertake an EIA to accompany a planning application, Regulation 5 of the EIA Regulations makes provision for an applicant to apply to a LPA for a 'Screening Opinion'; in the absence of a submitted EIA, Regulation 7 of the EIA Regulations provides for LPAs to screen a planning application on receipt if it appears to require a screening opinion.

Screening

1.3.5 The EIA Regulations contain two development schedules (Schedule 1 development and Schedule 2 development). Schedule 1 contains a list of development where EIA is mandatory and Schedule 2 contains a list of development, coupled with development thresholds, where EIA may be considered. The Local Planning Authority must screen every planning application falling under the Schedule 2 development thresholds to determine whether or not EIA is required. Schedule 2 contains a list of development descriptions (categories) and applicable thresholds and criteria for the purpose of classifying development as Schedule 2 development. There is no category which specifically considers museum related activities, by considering the most relevant categories, the development proposal is most similar to *infrastructure projects*.

1.3.6 Swindon Borough Council issued their formal Screening Opinion dated 17 November 2017 which deemed the development proposal to be EIA development.

1.4 STRUCTURE OF ENVIRONMENTAL STATEMENT

1.4.1 This ES comprises studies on each of the aspects of the environment identified as likely to be significantly affected by the Proposed Development (the 'technical chapters'), which are supported with figures and technical appendices where appropriate.

1.4.2 This ES is structured as follows:

- **Environmental Statement: Main Report** - Comprises the main volume of the ES, including 'general chapters' that describe the EIA context, provide a description of the Application Site and Proposed Development, and set out the scope of the ES, followed by the 'technical chapters' for each environmental theme with the associated figures and appendices and concluding with a summary.
- **Environmental Statement: Non-Technical Summary (NTS)** – this provides a concise summary of the ES identifying the likely significant

environmental effects and the measures proposed to mitigate or to avoid adverse effects of the Proposed Development.

1.4.3 The content of the ES Main Report comprises:

- Chapter 1 Introduction
- Chapter 2 Assessment Scope and Methodology
- Chapter 3 The Development Site and Environs
- Chapter 4 The Proposed Development
- Chapter 5 Landscape and Visual
- Chapter 6 Cultural Heritage

1.4.4 For continuity, the figures and appendices are arranged and presented using the same reference numbers as the chapters as a means of providing supportive background and technical information.

The EIA Consultant Team

1.4.5 The ES has been coordinated and managed by Pegasus Group on behalf of SMG. The Environmental Impact Assessment upon which it has been based has been undertaken by the environmental consultants: -

- Pegasus Group (coordination of EIA, general ES chapters and landscape and visual chapter);
- Cotswold Archaeology (cultural heritage chapter)

1.5 OTHER DOCUMENTS

1.5.1 A number of other documents have been submitted to the local planning authority as part of, and accompanying, the planning application. These are set out in the covering letter to the planning application and summarised below:

- Planning Application Form;
- Planning Application Drawings;
- Design and Access Statement
- Sustainability Statement
- Planning Statement
- Statement of Community Engagement
- Environmental Statement
- Environmental Statement Non-Technical Summary
- Extended Phase 1 Ecological Impact Assessment
- Transport Statement
- Flood Risk Assessment
- Phase 1 Geotechnical and Geoenvironmental Desk Study
- Earthworks Strategy
- Drainage Strategy
- External Lighting Assessment

1.6 ENVIRONMENTAL STATEMENT AVAILABILITY AND COMMENTS**Availability**

1.6.1 This Environmental Statement has been submitted to Swindon Borough Council as the Local Planning Authority. The Environmental Statement may be inspected at the Council during normal office hours at: -

Economy, Regeneration and Skills

Development Management

Swindon Borough Council

5th Floor Wat Tyler House

Beckhampton Street

Swindon

SN1 2JH

Tel: 01793 466305

Web: www.swindon.gov.uk

1.6.2 The Environmental Statement and planning application documents may also be available to view on the Council's website (planning register) during its consideration of the submitted application.

1.6.3 Alternatively, copies of Environmental Statement may be obtained from Pegasus Group at the following address: -

Pegasus Group

South Wing

Equinox North

Great Park Road

Bristol

BS32 4QL

Tel: 01454 625945

Fax: 01454 618074

Email: Bristol@pegasusgroup.co.uk

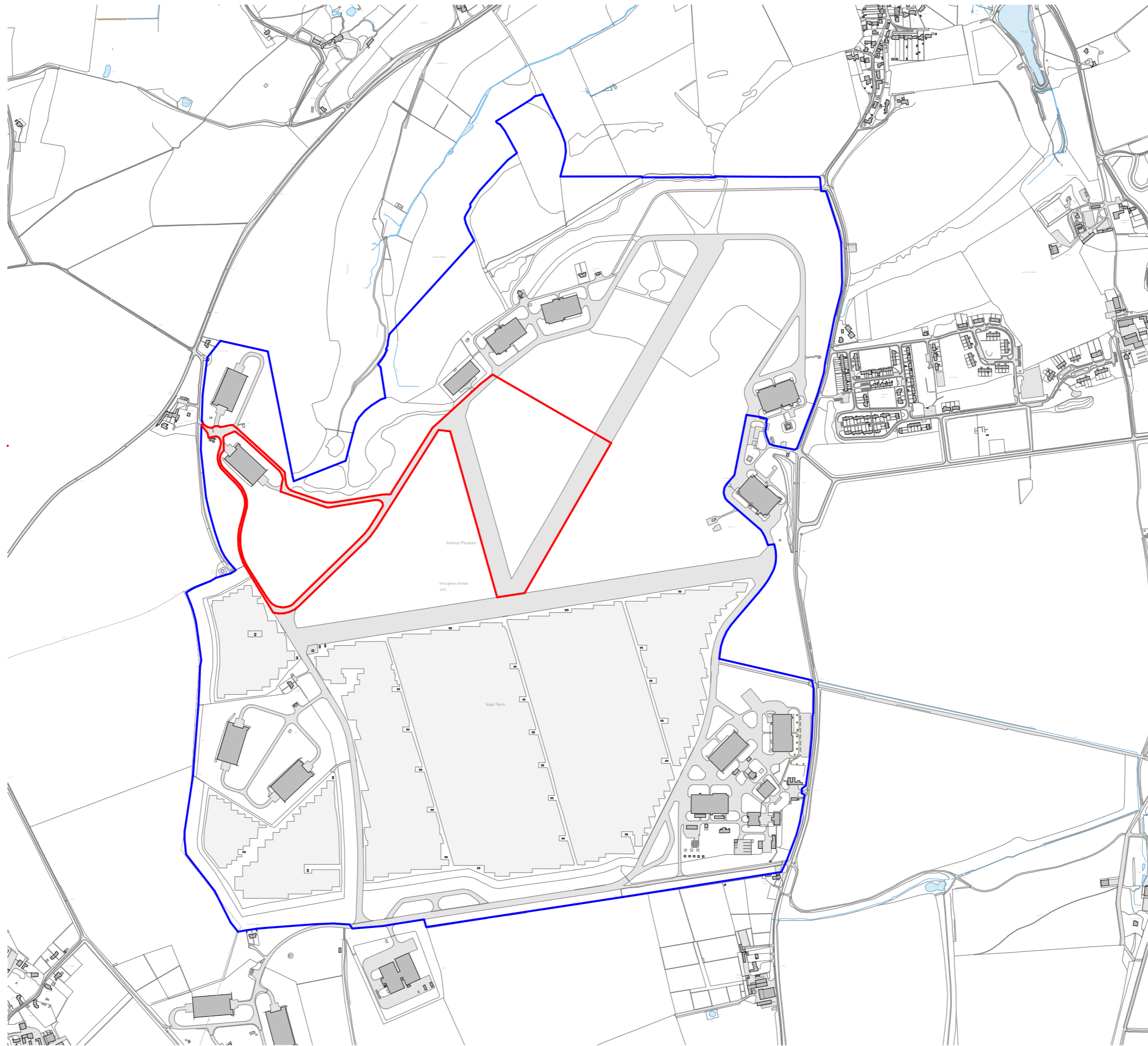
1.6.4 The purchase costs are: -

- Main Report and Technical appendices - £75.00
- Non-Technical Summary (NTS) - Free of charge
- Digital copies of the above documents on a CD - £10.00

Comments

1.6.5 Comments on the planning application should be forwarded to the Swindon Borough Council during its consideration and determination of the planning application.

Figure 1.1
Site Location Plan



key

— application site boundary

— site ownership boundary



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All drawings and specifications should be read in conjunction with the project health and safety plan, any possible conflicts should be presented to the Planning Coordinator.

All work to be carried out in accordance with current Building Regulations.

Contractors must verify all dimensions at the job before commencing any work or making shop drawings. Do not scale off drawing. Do not take digital dimensions from this drawing. Written dimensions should be taken. Any discrepancies to be reported to the Architect. The design is subject to the following:

- Land Registry Confirmation
- Planning Approval
- Topographical Information
- Review of Easements and Covenants
- Building Regulations Approval / Fire Engineering
- Full Structural Review
- Rights of lights Issues



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SMG Building ONE

Site Location Plan

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SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 2

ASSESSMENT SCOPE AND METHODOLOGY

2 ASSESSMENT SCOPE AND METHODOLOGY TESTING

2.1 INTRODUCTION

2.1.1 This chapter explains the methodology used to prepare the technical chapters of this Environmental Statement and describes its structure and content. In particular, it sets out the process of identifying and assessing the likely significant environmental effects of the development.

2.2 GENERAL APPROACH TO ENVIRONMENTAL STATEMENT

2.2.1 The Environmental Statement must contain the information specified in regulation 18(3) and must meet the requirements of Regulation 18(4). It must also include any additional information specified in Schedule 4 to the 2017 Regulations which is relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

2.2.2 Regulation 18(3) states: -

- (3) An environmental statement is a statement which includes at least—
- (a) a description of the development comprising information on the site, design, size and other relevant features of the development;
 - (b) a description of the likely significant effects of the development on the environment;
 - (c) a description of any features of the development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
 - (d) a description of the reasonable alternatives studied by the developer, which are relevant to the development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;
 - (e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and
 - (f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

2.2.3 Schedule 4 states: -

1. A description of the development, including in particular: (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases; (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of

waste produced during the construction and operation phases.

2. 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 project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.

5. A description of the likely significant effects of the development on the environment resulting from, inter alia: (a) the construction and existence of the development, including, where relevant, demolition works; (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; (c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste; (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources; (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; (g) the technologies and the substances used. The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).

6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases. prevented, reduced or offset, and should cover both the

construction and operational phases.

8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(c) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(d) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

9. A non-technical summary of the information provided under paragraphs 1 to 8.

10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.

2.2.4 Accordingly, in summary this ES comprises the following information:

- A description of the development comprising information about the site including the nature, size and scale of the development;
- The data necessary to identify and assess the main effects which the development is likely to have on the environment;
- A description of the likely significant effects of the development covering, direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects, explained by reference to the development's possible effect on cultural and archaeological heritage, landscape and the interaction between any of the foregoing material assets (as appropriate).
- Where significant adverse effects are identified with respect to any of the foregoing, mitigation measures will be proposed in order to avoid, reduce or remedy those effects; and
- A summary in non-technical language of the information specified above.
- A statement outlining the relevant experience of the experts who have undertaken the assessment and drafted the technical chapters within the Environmental Statement.

2.3 DEVELOPMENT PARAMETERS

2.3.1 The development, which has been the subject of this Environmental Impact Assessment, is described in detail within Chapter 4 which also sets out the parameters and controls defining those aspects of the development capable of having significant environmental effects, as defined by the Environmental Impact Assessment Regulations.

2.4 CONSIDERATION OF ALTERNATIVES

2.4.1 The 2017 Regulations do not require an applicant to consider alternatives. However, where alternatives have been considered, paragraph 2 of Schedule 4 requires the applicant to include in their Environmental Statement a description of the reasonable alternatives studied and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

2.4.2 Accordingly, this ES contains a section setting out the main alternative locations, development proposals (i.e. land uses) and/or design iterations (i.e., layouts, appearance, materials etc), as appropriate, as considered by the Applicant.

2.5 SCOPE OF ENVIRONMENTAL IMPACT ASSESSMENT

2.5.1 As set out within the Introduction (**Chapter 1**), the development was screened by Swindon Borough Council who concluded that the proposals would constitute Environmental Impact Assessment Development and therefore an Environmental Statement is required.

2.5.2 The scope of information and assessment supplied within the Environmental statement is considered to provide a clear understanding of the potential significant effects of the development upon its environment and the mitigation measures proposed to avoid or ameliorate those effects. The information, scope and knowledge required to undertake the Environmental Impact Assessment has been acquired from a number of varied sources to ensure that all impacts, whether explicit from the outset or coming to light during the projects; development, were appropriately assess as part of the Environmental Impact Assessment process or as standard technical documentation that support the wider planning application submission. These sources include: -

- Discussion with statutory consultees
- Specialist studies
- Historical and recent site investigations with the development site and wider SMGW site
- Expert knowledge from SMG and environmental consultant team with regards to their technical subject; and
- Expert knowledge of the environmental consultant team gained from previous work at the site, including the Swindon Solar Park.

2.5.3 Accordingly, the environmental themes scoped into or out of the Environment Impact Assessment are given in **Table 2.1**.

Table 2.1: Environmental Themes Scoped In / Out

Environmental Theme	Scoped In/Out	How/ Where Addressed / Reason for Scoping Out
Human Beings	In	Residential amenity is discussed within Technical Chapter 6.
Transport	Out	The development proposal would generate around 35 additional daily vehicle movements to the SMGW site during the working week but primarily in off-peak times. A Transport Statement has been prepared and submitted in support of the planning application which demonstrates that the development will not have a material impact with regards to transport considerations. Having considered the levels of traffic that could occur as a result of the development, it is deemed this topic can be scoped out of the Environmental Statement and addressed as part of the main planning application submission as a standalone technical report.
Biodiversity	Out	The footprint of the development comprises a parcel of managed grassland between hardstanding runways. The 2014 Public Inquiry for the Swindon Solar Park confirm the 'Previously Developed Land' status of the entire planning unit whereby the Inspector and the Secretary of State both agreed that the entire curtilage of the previously developed land extends out to the perimeter fencing of the unit and

Environmental Theme	Scoped In/Out	How/ Where Addressed / Reason for Scoping Out
		includes the grasslands in between the former runways and taxiways. The Secretary of State decision also specified that the improved grasslands within the site cannot be regarded, in its own rights, to have a high environmental value. An extended phase 1 habitat survey has been carried out at the site which concludes that the development proposal would not result in any adverse impacts upon the majority of the ecological features identified a occurring or potentially occurring within or adjacent to the site. Having considered the potential impacts, biodiversity can be scoped out of the ES and can be adequately addressed as part of the planning application process through the submission of standalone technical report.
Land and Soil	Out	<p>The geology map records the West Melbury Marly Chalk Formation (formerly the Lower Chalk) of Cretaceous Age beneath the complete site, with no mapped Superficial Deposits. An Environment Agency observation borehole, adjacent to the east proved Lower Chalk to 55m, with groundwater at 43m depth. Historical maps show open fields with associated farm buildings from 1885 and several small ponds in the northeastern area. The site was part of an operational airfield from the late 1930s to 1970s, providing aircraft storage and maintenance units. Since 1978 the existing runway layout has been in place. The development area, that will occupy the footprint of the building site has a level difference of approximately 1.3m. The levels vary in generally linear fashion from the higher south west elevation through to the north east elevation, but also fall in a north/south direction. Due to the development of the site as an airfield base there is likely to be some Made Ground overlying the site. Made Ground has been observed around the runways and appears to consist of gravel. The depth of the made ground is unknown but given that the runways were not elevated much above the surrounding fields it is assumed to be shallow. In addition to any made ground, historic borehole identified a 150mm layer of topsoil that may well be encountered across the wider area of the SMGW site. The Zetica Regional Unexploded Bomb (UXB) Risk Map for Wiltshire indicates that the site is located in an area of low risk of encountering UXBs. Given the historical context of the site a UXB survey has been commissioned. The Coal Authority records indicate that the site resides within an area 'that might not be affected by coal mining'. There is comprehensive ground conditions data for the wider SMGW site, including the WSP Environmental Limited survey published in March 2005, the Ove Arup and Partners survey published in April 2005 and the Integral Phase II survey results published in July 2015 for the Swindon Solar Park.</p> <p>A Phase 1 Geotechnical and Environmental Desk Study is submitted in support of the planning application submission. It is envisaged that a Contaminated land assessment will be imposed by planning conditions and the scope of intrusive</p>

Environmental Theme	Scoped In/Out	How/ Where Addressed / Reason for Scoping Out
		investigation will be based on that given in the phase 1 desk study and any additional measures to be agreed with the regulators. Having considered the potential impacts and historical data for the wider site, ground conditions can be scoped out of the ES and can be adequately addressed as part of the planning application process through the submission of standalone technical reports.
Hydrology and Drainage	Out	The Government planning maps for flooding indicates the site is not located in an area at risk from fluvial or surface water flooding. Having considered the potential impacts and historical data for the wider site, hydrology and drainage can be scoped out of the ES and can be adequately addressed as part of the planning application process through the submission of standalone technical reports.
Cultural Heritage including Architectural and Archaeological	In	Addressed in Technical Chapter 7
Landscape and Visual	In	Addressed in Technical Chapter 6.

2.6 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

2.6.1 The content of the Environmental Statement is based on the following:

- Review of the baseline situation through existing information, including data, reports, site surveys and desktop studies;
- Consideration of the relevant National Planning Policy Framework (NPPF) and accompanying National Planning Practice Guidance (NPPG), and the statutory extant and emerging development plan policies;
- Consideration of potential sensitive receptors;
- Identification of likely significant environmental effects and an evaluation of their duration and magnitude;
- Expert opinion;
- Modelling;
- Use of relevant technical and good practice guidance; and
- Specific consultations with appropriate bodies.

2.6.2 Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, assessments have been based on available knowledge and professional judgment.

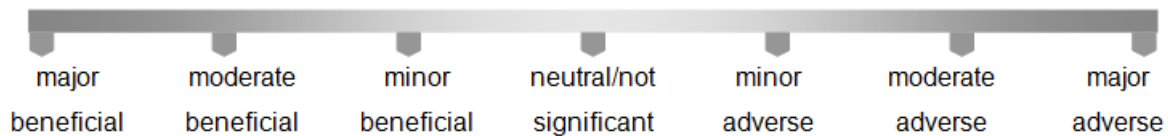
2.7 DETERMINING SIGNIFICANCE

2.7.1 The purpose of the Environmental Impact Assessment is to identify the likely 'significance' of environmental effects (beneficial or adverse) arising from a development. In broad terms, environmental effects are described as:

- Adverse – detrimental or negative effects to an environmental resource or receptor;
- Beneficial – advantageous or positive effect to an environmental resource or receptor; or

- Negligible – a neutral effect to an environmental resource or receptor.

2.7.2 It is proposed that the significance of environmental effects (adverse, negligible/neutral or beneficial) would be described in accordance with the following 7-point scale: -



2.7.3 Significance reflects the relationship between two factors:

- The magnitude or severity of an effect (i.e. the actual change taking place to the environment); and
- The sensitivity, importance or value of the resource or receptor.

2.7.4 The broad criteria for determining magnitude are set out in **Table 2.2**.

Table 2.2: Degrees of Magnitude and their Criteria

Magnitude of Effect	Criteria
High	Total loss or major/substantial alteration to elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed.
Medium	Loss or alteration to one or more elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Low	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible / detectable but the underlying character / composition / attributes of the baseline condition will be similar to the pre-development.
Negligible	Very little change from baseline conditions. Change not material, barely distinguishable or indistinguishable, approximating to a 'no change' situation.

2.7.5 The sensitivity of a receptor is based on the relative importance of the receptor using the scale in **Table 2.3**.

Table 2.3: Degrees of Sensitivity and their Criteria

Sensitivity	Criteria
High	The receptor / resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Medium	The receptor / resource has moderate capacity to absorb change without significantly altering its present character, or is of high and more than local (but not national or international) importance.
Low	The receptor / resource is tolerant of change without detrimental effect, is of low or local importance.
Negligible	The receptor / resource can accommodate change without material effect, is of limited importance.

2.7.6 Placement within the 7-point significance scale would be derived from the interaction of the receptor's sensitivity and the magnitude of change likely to be experienced (as above), assigned in accordance with **Table 2.4** below, whereby effects assigned a rating of Major or Moderate would be considered as 'significant'.

Table 2.4: Degrees of Significance

Magnitude of Change	Sensitivity of Receptor				
		High	Medium	Low	Negligible
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor to Moderate	Negligible
	Low	Moderate	Minor to Moderate	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

2.7.7 The above magnitude and significance criteria are provided as a guide for specialists to categorise the significance of effects within the ES. Where discipline-specific methodology has been applied that differs from the generic criteria above, this is clearly explained within the given chapter under the heading of Assessment Approach.

2.7.8 A significance of effects would be assigned both before and after mitigation.

2.8 MITIGATION

2.8.1 Standard measures and the adoption of construction best practice methods to avoid, minimise or manage adverse environmental effects, or to ensure realisation of beneficial effects, are assumed to have been incorporated into the design of the development and the methods of its construction from the outset. Further information on the standard measures and construction best practice is detailed in **Chapter 4**. Where outlined, the assessment is of the development incorporating these measures.

2.8.2 Where mitigation measures are proposed that are specific to an environmental theme or wider development proposal and incorporated into the design these are also outlined within **Chapter 4**, and if relevant are highlighted within the technical chapter.

2.8.3 Where the assessment of the development has identified potential for adverse environmental effects, the scope for mitigation of those effects, for example by way of compensatory measures, has been considered and is outlined in the appropriate technical chapter. It is assumed that such measures would be subject to appropriate planning conditions.

2.8.4 Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, then data and/or professional judgment has been introduced to support these assumptions.

2.9 CUMULATIVE AND IN-COMBINATION EFFECTS

Cumulative Effects

2.9.1 Cumulative impacts are those effects of development that may interact in an additive or subtractive manner with the impacts of other developments that are not currently in existence, but may be by the time the development is implemented. A

single development proposal, approved but not yet implemented, is the provision of a Roadwise safety circuit which forms part of Planning Permission S/17/0153 granted on 7 June 2017. The applicant has advised the development is no longer going ahead and can therefore be excluded from the cumulative impact considerations.

Combination Effects

2.9.2 Combined effects arise where effects from one environmental element bring about changes in another environmental element. These effects are also reviewed in each of the technical chapters of this ES. Examples of the main types of interactive effects for the development on residential amenity (i.e. visual impacts).

2.10 GENERAL ASSUMPTIONS AND LIMITATIONS

2.10.1 The principal assumptions that have been made and any limitations that have been identified in preparing this ES are set out below:

- All of the principal land uses adjoining the Application Site remain as present day, except where redevelopment proposals have been granted planning consent. In those cases it is assumed the redevelopment proposals will be implemented or would but for the development being implemented;
- Information received from third parties is complete and up to date;
- The design, construction and completed stages of the development will satisfy legislative requirements; and
- Conditions will be attached to the planning permission with regards "mitigation", where considered necessary to make the development acceptable.

STRUCTURE OF TECHNICAL CHAPTER

2.10.2 Throughout the EIA process, the likely significant environmental effects of the development will be assessed. Within each of the technical chapters the information which will inform the EIA process has generally been set out in the following way:

- **Introduction** – to introduce the topic under consideration, state the purpose of undertaking the assessment and set out those aspects of the development material to the topic assessment;
- **Assessment Approach** – to describe the method and scope of the assessment undertaken and responses to consultation in relation to method and scope in each case pertinent to the topic under consideration;
- **Baseline Conditions** – a description of the baseline conditions pertinent to the topic under consideration including baseline survey information;
- **Assessment of Likely Significant Effects** - identifying the likely effects, evaluation of those effects and assessment of their significance, considering both construction and operational and direct and indirect effects;
- **Mitigation and Enhancement** - describing the mitigation strategies for the significant effects identified and noting any residual effects of the proposals;
- **Cumulative and In-combination Effects** - consideration of potential cumulative and in-combination effects with those of other developments; and
- **Summary** – a non-technical summary of the chapter, including baseline conditions, likely significant effects, mitigation and conclusion.

BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 3

THE DEVELOPMENT SITE

3. THE DEVELOPMENT SITE

3.1 INTRODUCTION

3.1.1 This chapter of the Environmental Statement provides a description of the development site and the surrounding context.

3.2 THE WIDER SITE - THE SCIENCE MUSEUM GROUP AT WROUGHTON

3.2.1 The SMGW occupies a former RAF airfield base (operational from the 1930's to the 1970's) and is located approximately 6.5km south of the centre of Swindon and 1.4km south of the intervening village of Wroughton. The SMGW has occupied the site since 1980.

3.2.2 The site extends to 220 hectares (545 acres) and contains the remnants of the former RAF Wroughton military air base including the runways, hangars and associated buildings, as well as woodland and private open space used for sheep grazing. The site also houses the Swindon Solar Farm on the southern half of the site and the 'Hive' research facility for the University of Bath.

3.2.3 The landscape context surrounding the site, is open and rural, with both arable and pasture farmland that extends to the higher land to the south, known as Barbury Hill and its associated chalk scarp. To the north of the wider SMGW site lies a further scarp slope that is heavily wooded, separating the site from the village of Wroughton. Further to the north lies the M4 motorway corridor and the market town of Swindon, located at the head of a wide valley known as the Vale of White Horse. The remainder of the land to the north of the Site is interspersed with small local roads that link numerous small villages and farmsteads.

3.2.4 To the east and west of the site is a continuation of arable and pastoral farmland located between two scarp slopes that are approximately 3km apart, along with the villages of Broad Hinton, Chiseldon, the hamlet of Uffcott and residential areas of Thorney Park, Langton Park and Beranburh Field.

3.2.5 To the south, the landform steepens as it climbs the escarpment that is for the most part open, with limited vegetation. Further to the south and beyond the escarpment the open agricultural landscape continues as part of the Marlborough Downs, interspersed with occasional equestrian centres (paddocks and grass race tracks), with a few local roads connecting the settlements of Avebury and Marlborough at an approximate distance of 7.0km.

3.3 PLANNING UNIT

3.3.1 The SMGW site is a single planning unit that is in use for museum related activities. All other activities on the planning unit, such as the lease of hangars for storage purposes, the solar park, the research facilities, the use of runways for research and storage activities and use of managed grasslands for grazing are ancillary to the main use.

3.4 THE DEVELOPMENT SITE & PREVIOUSLY DEVELOPED LAND

3.4.1 The development footprint of Building ONE is located in the northern half of SMG's site and occupies a parcel of managed grassland located between the taxiways and runways. The 2014 Public Inquiry for the solar park confirm the 'previously developed land' status of the entire planning unit whereby the Inspector and the Secretary of State for DCLG both agreed that the entire curtilage of the previously developed land extends out to the perimeter fencing of the unit and includes the grasslands in between the former runways and taxiways. The Secretary of State decision also specified that the improved grasslands within the site cannot be regarded, in its own rights, to have a high environmental value.

3.5 ACCESS

3.5.1 Vehicular access to the site is currently provided via an existing cross road junction at Red Barn Gate from the A4361 Devizes Road. It is understood that the existing access has an achievable visibility splay of 215 metres to the nearside kerb looking to right at the junction at a setback of 2.4 metres and a visibility splay of 172.7 metres looking to the left. The unnamed access road continues southbound for approximately 170 metres to a gated access leading to the SMGW site. The unnamed access road forms a cul-de-sac approximately 370 metres to the south. The carriageway measures approximately five metres and the road is subject to the national speed limit.

3.5.2 The A4361 Devizes Road runs parallel to the western boundary of site. Within the vicinity of the site, the A4361 is a single carriageway road and travels in an approximate north-south direction and connects Swindon town centre with Devizes, via the A361 to the south of the site. The A4361 Devizes Road also serves as a bus route from Swindon to Devizes, via Wroughton.

3.6 PUBLIC ACCESSIBLE PATHS

3.6.1 There are no public footpaths, permissive routes or other rights of way across the development site. The nearest public right of way to the site, runs to the south-west, linking Uffcott/ Yew Tree Lane to a dirt track that leads to Science Museum Lane. A small length of 'other route with public access' is also indicated running from Science Museum Lane in a south-east direction and terminates at the main east to west runway, however there is no clear definition on the ground.

3.6.2 There are a number of other public footpaths, bridleways and Byways Open to All Traffic (BOAT) within the locality. In particular, the Ridgeway National Trail is located approximately 2.5km to the south at its closest point. The White Horse Trail, a promoted long distance walking route also passes to the west and southwest of the site as it runs up to join with the Ridgeway.

3.7 FLOOD RISK

3.7.1 The Government Flood Map for Planning¹ indicates that the development site and access track are not located within an area at risk of from flooding.

3.8 HYDROLOGICAL FEATURES

3.8.1 Ordnance Survey mapping shows the nearest surface water features to comprise an unnamed stream located approximately 100 m to the north of the site; a further unnamed stream is present approximately 300 m to the north of the site.

3.9 DESIGNATED HERITAGE ASSETS

3.9.1 There are no designated heritage assets within the site.

3.9.2 There are no World Heritage Sites (the most proximate World Heritage Site is Avebury, c.8km to the south), scheduled monuments, registered parks and gardens or registered battlefields within the 1km of the development site.

3.9.3 There are a number of Scheduled monuments within the wider environs of the Site, these include: -

¹ <https://flood-map-for-planning.service.gov.uk/summary/413869/178789>

- Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument;
- Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle; and
- Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monuments; and
- Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument.

3.10 LANDFORM AND TOPOGRAPHY

3.10.1 The development site is located between two north facing escarpments of the Marlborough Downs, as the land falls northwards into a broad low lying vale down towards the River Cole. From the centre of the site at +195 meters AOD, levels across the wider SMG site increase in height to the northwest reaching +208 meters AOD at Markham Hill before falling steeply to a level of approximately +125 meters AOD, before falling further on a shallow gradient towards the River Cole reaching levels of +100 meters along the southern edge of Swindon.

3.10.2 To the south of the site, the landform falls in a southerly direction to a level of approximately +190 meters AOD before rising steeply before reaching heights in the vicinity of Barbury Castle and Barbury Castle Country Park of approximately +265 meters AOD. This curved and higher area of landform forms a ridge and is a local landmark along which The Ridgeway National Trail, a long distance footpath, also runs. To the east of the Site, levels gently fall reaching a height of approximately +172 meters AOD at the foot of Liddington Hill, a distance of 5.5 Km from the Site, where the landform then rises very steeply to a height of approximately +277 meters AOD. To the west, the land is gently undulating and varies in height between +185 and +210 meters AOD before dropping steeply to a level of +160 meters AOD at the foot of the escarpment.

3.11 LANDSCAPE DESIGNATIONS

3.11.1 The North Wessex Downs Area of Outstanding Natural Beauty (AONB) covers an area of approximately 668 sq miles between Reading and Swindon to the east and north, and Andover and Devizes to the south and east. It is the third largest AONB in England and was designated in 1972. The site lies towards the northernmost boundary of the AONB, lying just over 1km from the edge of the AONB which runs along the southern edge of Wroughton following the dip in the landform at the foot of the Downs.

3.12 SITE GEOLOGY

3.12.1 The geology is understood to comprise topsoil directly overlying chalk material.

3.13 PLANNING HISTORY

3.13.1 The SMGW has an extensive planning history. The industrial context of the site originates from the 1940s. Work on Wroughton Airfield began in 1939 and was completed in 1940, for aircraft storage, with its use escalating throughout World War II. In 1943 two further runways were added. In the post-war years the site was used for adapting aeroplanes, as a repository for aircraft waiting to be scrapped, and for servicing helicopters. The latter function gave way to the Royal Navy taking over the site in 1972.

3.13.2 The planning history for the site is complex and the key recent applications and permissions are identified below.

- **Planning Permission S/17/0153:** Refurbishment of Hangar C3. This included the complete refurbishment of the hangar by way of removing and replacing the existing asbestos cement cladding. The application was submitted on 26 January 2017 and duly granted on 7 June 2017.
- **Planning Permission S/16/1994:** Erection of a 2.4-metre-high perimeter fence and erection of 10 no. CCTV cameras at the Wessex RXCA Hangar. The application was submitted to the Council on 17 November 2016 and duly granted on 16 March 2017.
- **Planning Permission S/13/0809:** Large scale ground mounted solar park granted on 18th March 2015 by Secretary of State **Direction** (Ref: APP/U3935/V/14/2216792).
- **Planning Permission S/14/1755:** This consent effectively relates to the variation of condition 1 imposed on S/14/1755 which extended the temporary planning permission from November 2014 to **November** 2015.
- **Planning Permission S/14/1710:** The proposal is to construct an enclosure for an environmental chamber on the site of the existing Building Research Park and the HIVE. The application was submitted on 2 October 2014 and approved on 28 November 2014.
- **Planning Permission S/14/0344:** This implemented planning permission relates to the change of use from disused runway/ events space to a short-term research and development facility for the testing automated barrier systems for Dartford Tunnel barrier upgrades. The change of use supports the ambition shared by both the Science Museum and members of the Swindon business community and Borough Council officers to see the site used to enhance the Research and Development. The application was submitted on 1 March 2014 and granted on 9 May 2014. A temporary planning permission was secured until 30th November 2014.
- **Planning Permission S/13/0079:** This implemented planning permission relates to the construction of a two-storey experimental building, a single storey materials store and up to sixteen single storey experimental 'pods'. Buildings are for the purpose of evaluating the environmental performance and durability of novel, low carbon, low environmental impact construction materials and systems, and to develop effective monitoring and management technologies. The application was submitted on 17 January 2013 and approved on 6th March 2013.
- **Non-Material amendment** was approved on 26 February 2014 which related to the reorientation of the main building and the 16 pads.
- **Planning Application S/12/0717:** Change of use of land and buildings from indoor leisure karting (**Class** D2) to a mixed use comprising indoor leisure karting (Class D2) and car auction site (Sui Generis) and associated works at C2 Hangar. The application was registered on 17 May 2012 and refused on 12 October 2012.
- **Planning Permission S/12/0327:** Installation of solar photovoltaic (PV) panels on land north of Hangar D2 at the Science Museum. The application was received on 3 March 2012 and **permission** was duly granted on 16 April 2012. The permission relates to the installation of 50kw solar arrays on land associated with the Science Museum.

- **Planning Permission S/10/0727:** Erection of 2 wind turbines, 1 Erection of 2 no. small wind **turbines**, 1 no. tracking solar array, 1 no. fixed solar array, 1 no. solar array mounted on one of 3 no. control cabins and ancillary development. The application was submitted on 13 May 2010 and planning permission was duly granted on 7 July 2010.
- **Planning Permission: S/10/0656:** Refurbishment of Hangar C1. This included the complete **refurbishment** of the hangar by way of removing and replacing the existing asbestos cement cladding. The application was submitted on 30 April 2010 and duly granted on 8 July 2010.
- **Planning Permission S/08/1903:** Temporary use of runways for vehicle storage and erection of a temporary unit (maximum 12 months). The application was received on 27 September 2008 and temporary planning permission granted on 8 January 2009. Planning permission has not been implemented.
- **Planning Permission S/07/2942:** Change of use from museum (Class D1) to data storage facility (sui **generis**) at Hangar L3. The application was submitted to the local planning authority on 10 December 2007 and planning permission for the change of use was duly granted on 4 March 2008. Planning permission has not been implemented.
- **Planning Permission S/06/2678:** This implemented planning permission relates to the change of **use** of existing building to library and associated works. The application was received on 30 October and permission granted on 21 December 2006.
- **Planning Application S/05/3110:** Outline application for the storage, conservation and display of the National Museums' collections in an educational and inspirational manner; incorporating **the** phased delivery of a purpose-built national collections centre with ancillary catering, retailing and accommodation facilities; sustainable business enterprise and sustainable research and development; all to be integrated within a restored and managed landscape, use classes D1, B1, C1, Sui Generis and ancillary A1 and A3 - Means of Access not reserved. The application was received on 25 October 2005. The application was considered by the Planning Committee on 23 May 2006 whereby it was resolved that the Director of Planning be authorised to grant planning permission following the referral of the application to the Department of Community and Local Government and, amongst other issues, subject to the completion of a Section 106 Agreement. The application was subsequently withdrawn.
- **Planning Permission S/05/2827:** This implemented planning permission related to the temporary change of use from 30 November 2005 to 23 December 2005 (24 days) from Museum **Storage** (B8) to Christmas Party Event (Sui Generis). The application was submitted on 20 September 2005 and approved on 25 November 2005.
- **Planning Permission S/05/0457:** This implemented planning permission relates to the change of **use** from engineering workshops to conservation workshop and exhibition spaces with associated visitor facilities. The application was submitted on 9 February 2005 and permitted on 20 June 2005.
- **Planning Permission S/04/2664:** Change of use of Hangar C2 to indoor leisure karting. The application was submitted on 12 July 2004 and subsequently permitted on 24 November **2004**.

- **Planning Application S/01/3694:** Use of all existing buildings and central areas of the runway for corporate and commercial driving events for a maximum of 45 days in each calendar **year**. The application was submitted on 29 November 2001 and subsequently withdrawn.
- **Planning Application S/01/3839:** Use of buildings and central area of runways for commercial events for a maximum of 20 days in each calendar year. The application was submitted on **29** November and subsequently withdrawn.
- **Planning Permission S/00/0036:** Related to the continued use without complying with condition 10 of permission T97.949/RJ at C2 hangar. The application was submitted on 11 January 2000 and permitted on 7 August 2000.
- **Planning Permission T/97/0949:** Change of use from storage to leisure karting centre at C2 hangar. The application was submitted on 23 July 1997 and permitted on 8 December 1997.
- **Planning Permission S/02/3921:** Renewal of previous temporary planning permission T97/0949RJ for leisure karting and associated use at C2 hangar. The application was submitted **on** 11 December 2002 and permitted on 11 June 2003.
- **Planning Permission S/00/1472 (Outline):** Demolition of the former RAF Princess Alexandra Hospital site (development area was circa 26.3 hectares) and redevelopment consisting of conference facilities, residential, office and community uses together with associated open space. The application was submitted on 18 July 2000 and outline permission granted on 22 April 2002. Separate reserved matters applications were then approved for office development, residential units, and conference centre.
- **Planning Permission S/03/1966:** Erection of conference centre (reserved matters) at the former RAF **Princes** Alexandra Hospital site. This reserved matters application was submitted on 10 June 2003 (pursuant permitted outline masterplan S/00/01472). The reserved matters were approved on 19 November 2003.
- **Planning Permission S/03/0880:** Erection of office development (reserved matters pursuant to permitted outline masterplan S/00/01472). This reserved matters application was submitted on 17 March 2003 and approved on 9 December 2003.

BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 4

THE DEVELOPMENT

4. THE DEVELOPMENT

4.1 INTRODUCTION

4.1.1 This chapter of the Environmental Statement sets out the description of the development.

4.2 PROPOSED DEVELOPMENT

4.2.1 The development proposal relates to the erection of a collections management facility with an overall building size of approximately 289m by 92m. The proposal will provide a gross internal area of up to 27,000 sq m with up to 9,274 sq m of additional mezzanine together with associated car parking, servicing and access arrangements. The maximum height of the collections management facility would be 12m.

4.2.2 The proposed layout drawings are provided at Figure 4.1

4.2.3 Table 4.1 set out how the building will be subdivided (note these dimensions are approximate)

Table 4.1: approximate subdivision of Building ONE

<i>USE</i>	<i>SPACE</i>	<i>FOOTPRINT</i>
STORES	OBJECT STORE	23,790 SQ M
	COLLECTIONS STUDY	230 SQ M
	CONSERVATION WORKSHOP	500 SQ M
	PHOTOGRAPHY STUDIO	170 SQ M
	CONSERVATION FREEZER	117 SQ M
	CONSERVATION LABORATORY	207 SQ M
	CONDITIONED STORE	ON MEZZANINE
	SPECIAL COLLECTIONS STORE	170 SQ M
SERVICES & WELFARE	STAFF WELFARE	73 SQ M
	ENTRANCE LOBBY	56 SQ M
	TOILETS	30 SQ M
LOGISTICS	INWARD TRANSIT	200 SQ M
	LOADING BAY	290 SQ M
	TRANSIT STORAGE	260 SQ M
	OUTWARD TRANSIT	120 SQ M
TOTAL		MEZZANINE 9,274 SQ M
		BUILDING GIA

	26,394 SQ M
--	-------------

4.3 VISION

4.3.1 Building ONE will help realise the ONE Collection vision for the SMG collection and enable new generations to discover its relevance to them. These are some of the new ways people will engage: -

An online 'discovery tool' for the endlessly curious

4.3.2 The development proposal represents a true step-change in digital access to the collection. The proportion of objects available to view online will jump from 5% to 75%. Hundreds of thousands of new records will become immediately available through a fast, effective search function. The SMG ambition is to ensure the diversity and richness of the collection is discoverable by everyone – not just those with a particular question in mind. They will invest in an intuitive online tool which visualises the extraordinary wealth of objects of different sizes, forms, materials and ages, and invites users on serendipitous journeys through the collection.

4.3.3 Inspiring international audiences

4.3.4 Building ONE will allow SMG to unleash the collection's most compelling stories. Online, the SMG can weave together extraordinary objects, historical events and powerful people stories into rich multimedia narratives. These will become the go-to destination for exploring the impacts of science on our lives. Evidence shows that the demand for stories about our collection is particularly strong among international audiences – revealing the potential of Building ONE to reach new and more diverse people. A 2016 research study undertaken by Frankly, Green + Webb showed that 67% of visits to the content-rich narratives on the Science Museum website were international (the percentage of international visits to the museum landing page was just 43%). The figures for the National Science and Media Museum reflected this trend too, with 42% of visits to the online collection being from international users.

Educational Resources

4.3.5 This project will transform the SMG Collection into a unique, flexible and accessible learning resource. The digitised collection will complement galleries and programmes across the SMG's museums and, crucially, reach those who are unable to visit. It will be available free of charge to teachers and their students to explore and discover, guided by learning resources that link aspects of the curriculum to particular objects. The applicant will invest in research into how new digital technologies – including 3D scanning – can enhance the classroom experience, for example seeing objects in incredible detail or printing replicas to handle.

From 'behind-the-scenes' to everyone's screen

4.3.6 There is something special about seeing behind-the-scenes. Evaluation of public tours of Blythe House, and wider sector audience research, fully endorse the unique insights and connections that arise from viewing collections in store. While public access to both Blythe House and Wroughton are currently severely limited, the Building ONE collections management facility will enable regular public tours, including educational trips by schools within the Swindon and Wiltshire administrative areas. The SMG will maximise the public benefit by making the facility, as well as the collection, accessible remotely to a virtual global audience – for example extending our partnership with Google Street View to enable people to walk amongst the collection and delivering live-streamed curator-led tours.

Effective Collections Management.

4.3.7 The collection stored at Building ONE forms the backbone of the exhibitions and galleries displayed at the Group's sites around the country. The improved access to these objects as a result of the new facilities, the digitisation and the organised way they will be stored drives real efficiencies in both cost and time, creating a truly game-changing way in which the SMG can turn around objects for display. This shift-change in the way the collections are housed in the building, will enable a much more extensive and rapid loans program – benefiting other museums and galleries both nationally and internationally.

4.4 ACCESS AND TRIP GENERATION

4.4.1 The development proposal will utilise the existing access arrangements, namely the priority T-junction at Red Barn Gate from the A4361 Devizes Road to the west of the site and then via the site's internal access roads. The internal access routes will follow the existing established routes to the development site.

4.4.2 The applicant anticipates a maximum of 15,000 visitors per year to the Building ONE facility. These would approximately be made up of: -

- Public tours operating on 2 days (2 tours concurrently, 3 times a day) of the week for 30 weeks of the year. On a pre-booked basis (c. 11,000 visitors);
- School visits facilitated on 2 days of the week for 30 weeks of the year on a pre-booked basis (c.3,000 visitors); and
- Up to 6 collections researchers 5 days a week for 30 weeks of the year on a pre-booked basis (c.1,000 visitors).

4.4.3 Visitors would arrive by a combination of personal vehicles, coaches and public transport. There would be approximately 35 additional vehicles arriving at site each day, primarily in off-peak times.

4.4.4 Vehicles would be accommodated in existing on-site parking areas with the wider site, the proposal would also provide an additional 12 no parking spaces including 2 DDA spaces.

4.4.5 Non-SMG staff accessing Building ONE by appointment would park at the existing visitor area on site before being escorted to the proposed building.

4.4.6 Traffic associated with the collections management of objects stored at the Building ONE facility would reflect current site operations. The additional operational collections transport impacts would be minimal, and this is reflected in the proposed layout design which only provides a single loading bay. The additional collections management traffic is expected to be circa three to four HGV movements and three to four LGV movements per week. The majority of these deliveries will take place outside peak hours.

4.4.7 The logistics associated with the movements of collections from Blythe House to Building ONE is expected to take up to two years with an annual delivery rate of: -

- Heavy goods vehicles - 192;
- Light good vehicles - 48; and
- Private cars - 480.

4.4.8 The construction phase is expected to take up to 12 months. Three potential routes from the M4 motorway will be discussed with Swindon Borough Council during the determination period, these are: -

- Route A: M4 junction 16 – B4005 Wharf Road – A4361 W to the site;
- Route B: M4 junction 16 – Hay Lane – A4361 E to the site; and
- Route C: M4 junction 16 – A3102 – A4361 to the site.

4.4.9 It should be noted however, that Route D detailed above, will not be used for any heavy goods vehicle movements at any stage of the construction and operational phases.

4.5 STAFFING ARRANGEMENT

4.5.1 On completion of the new collections facility, SMG staff numbers are likely to increase from its existing levels of around 20 staff per day to around 50 staff per day working across the site and within the new facility. This may vary at time to time dependant on projects and programme.

4.6 EARTHWORKS STRATEGY

4.6.1 In consideration of the project and the finished floor level proposed of 195.550 the cut and fill exercise indicates that a reasonably balanced situation could be achieved that would limit imported or exported material movements. The strategy for the site earthworks may be summarised by the following.

- Topsoil removal and temporary stockpile on site. The stockpile shall not be greater than 3m in height to retain the quality of the material and is likely to be 9,000m³ in volume that would occupy an approximate footprint of 50m x 60m.
- The construction work would utilise standard construction plant (360 excavators up to 30t and 40t dump trucks). It is unlikely that crushing plant will be required.
- The existing chalk sub strata would be excavated for both local ground level reduction, foundations and associated drainage and used as a structural fill material across the building's footprint. The surplus would be stockpiled local to the building site for re-use.

4.7 SURFACE WATER DRAINAGE STRATEGY

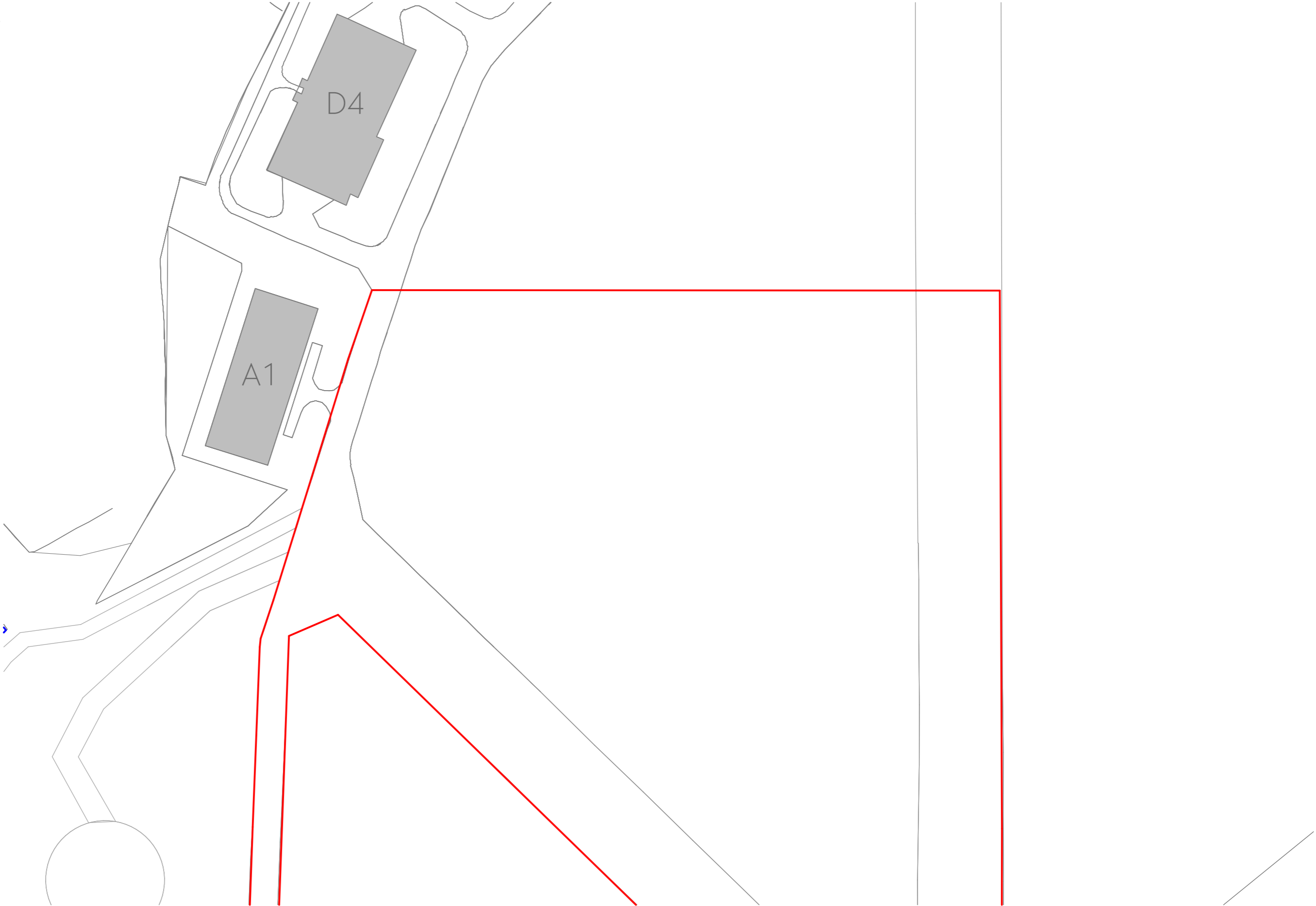
4.7.1 Due to the lack of suitable surface water drains near to the site, and the known geology, it is proposed to use soakaway drainage. The intrusive site investigation has yet to be completed, however, once received this drainage strategy shall be reviewed to determine its true parameters. Surface water drainage to the former runways is not proposed to be modified with the exception of the area fronting Building ONE, where local ground levels are likely to be modified for suitable pedestrian and vehicle access to tie in with the building's finished floor level.

4.8 FOUL WATER DRAINAGE STRATEGY

4.8.1 There is no foul drainage provision in this part of the SMGW site. Due to the relatively low population of the building, a septic tank or similar treatment plant is proposed. Based on a staff population of 20 plus a visiting group of 30, a septic tank of size 4.0x2.5x2.5m is likely to be suitable. This would be supplemented by associated drainage field to offer soakaway drainage from the tank for the treated water.

Figure 4.1
Drawing Pack

KEY:
Application Site Boundary



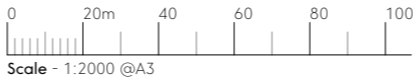
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All work to be carried out in accordance with current Building Regulations.

Contractors must verify all dimensions at the job before commencing any work or making shop drawings. Do not scale off drawing. Do not take digital dimensions from this drawing. Written dimensions should be taken. Any discrepancies to be reported to the Architect. The design is subject to the following:

- Land Registry Confirmation	- Full Structural Review
- Planning Approval	-
- Topographical Information	- Rights of lights Issues
- Review of Easements and Covenants	- Building Regulations Approval / Fire Engineering



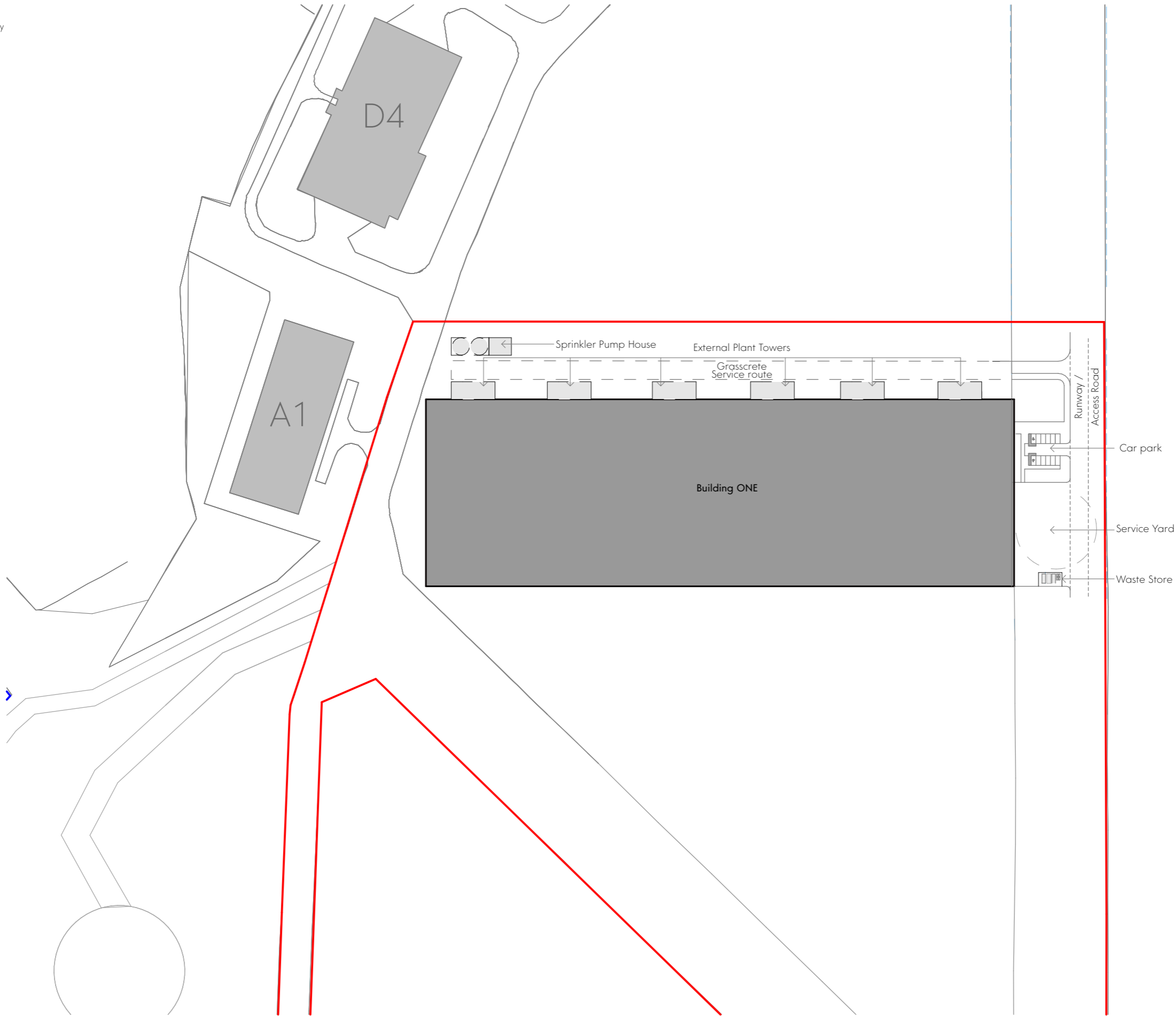
Name	(390)1716-GWP-01-00-DR-A-(PA)-0002		
Scale	A3/1:2000	Rev / Status	P08 / S
Dr/Checked	TA / RT	Date of Issue	24.10.17

BIM Server: BIMServer-HP - BIM Server 20/Che Collection (390)1716-GWP-01-00-002-A

SMG Building ONE

Existing Site Layout

KEY:
Application Site Boundary



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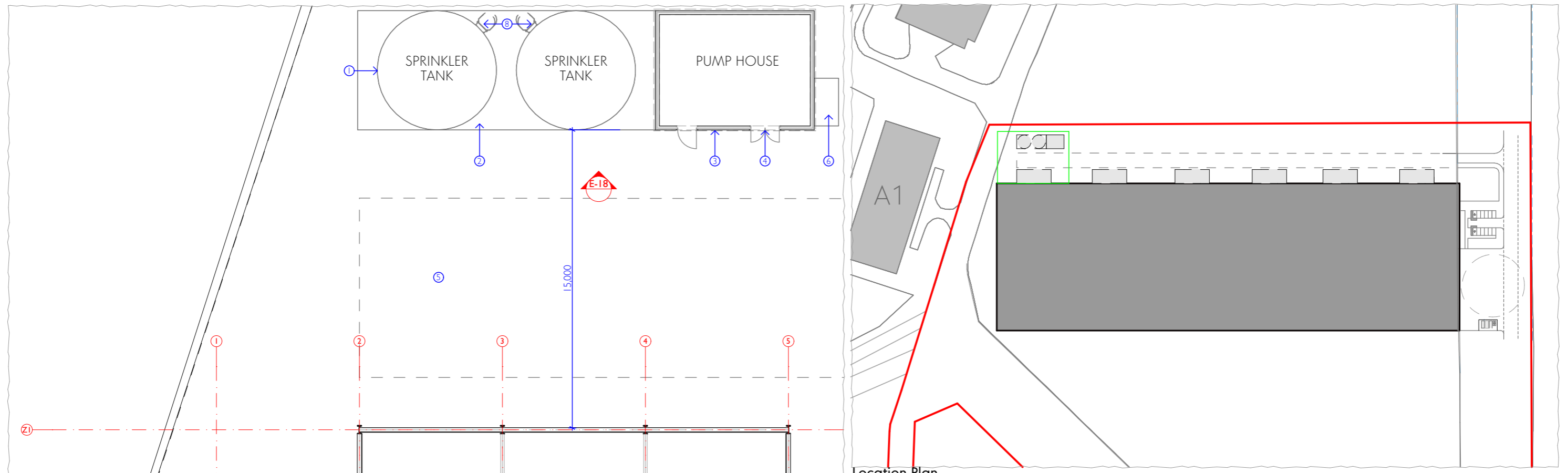


Name	(390)1716-GWP-01-00-DR-A-(PA)-0003		
Scale	A3/1:2000	Rev / Status	P09 / S
Dr/Checked	TA / RT	Date of Issue	24.10.17

BIM Server: BIMServer-HP - BIM Server 20/Che Collection (390)1716-GWP-01-00-002-A

SMG Building ONE

Proposed Site Layout



Pump House Plan
1:200 @ A3

- KEY:**
- 1- 100,000 ltr supply tank to sprinkler system

2- Concrete plinth

3- Pump house. Metal sheet cladding to match main building - Olive Green

4- Metal external doorset- Olive Green

5- Extent of Grasscrete maintenance route

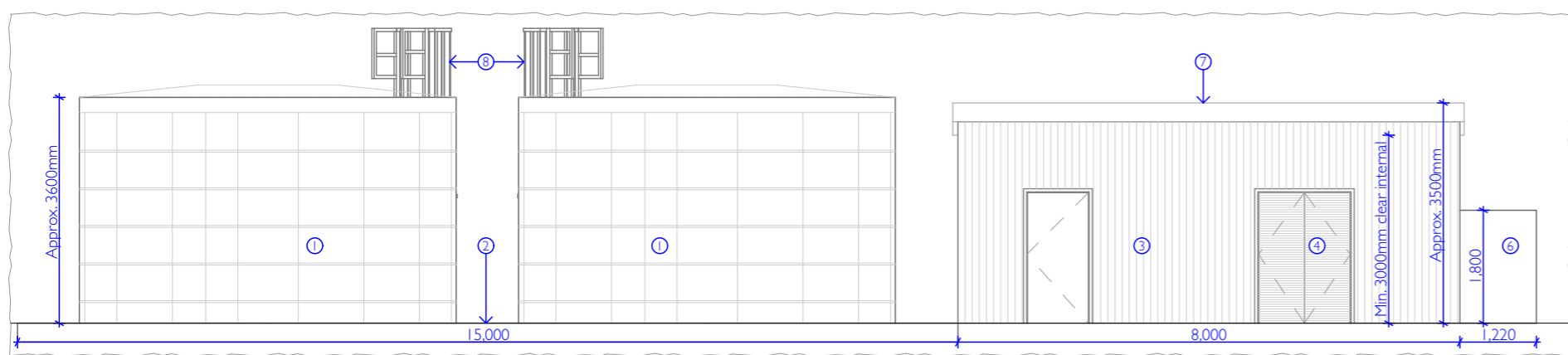
6- Gas meter housing in preformed GRP box

7- Aluminium flashing - Juniper Green

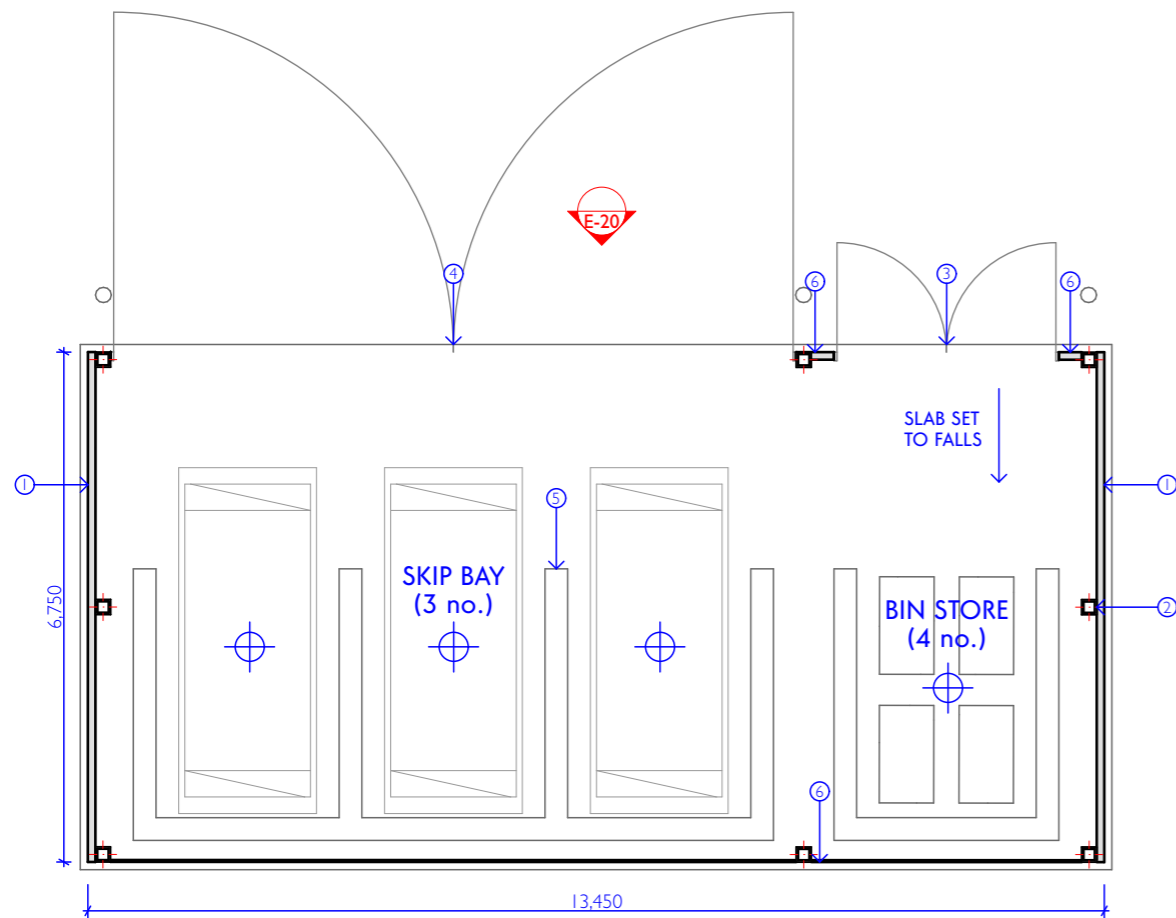
8- Galvanised steel cat ladder



Axonometric view



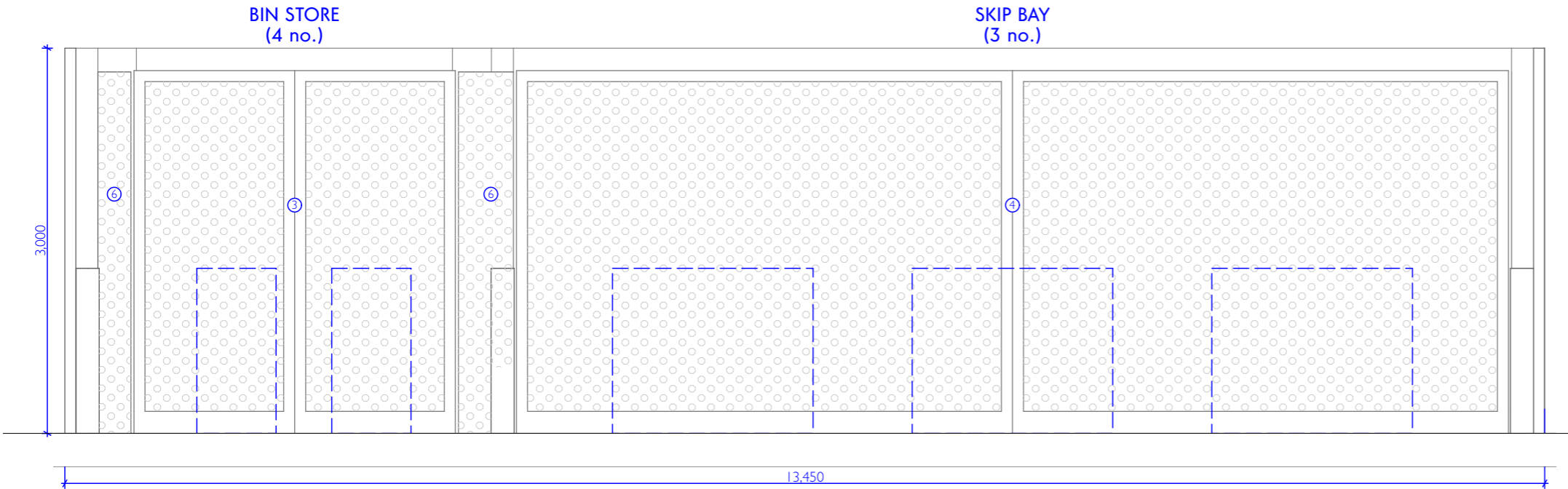
Pump House South Elevation
1:100 @ A3



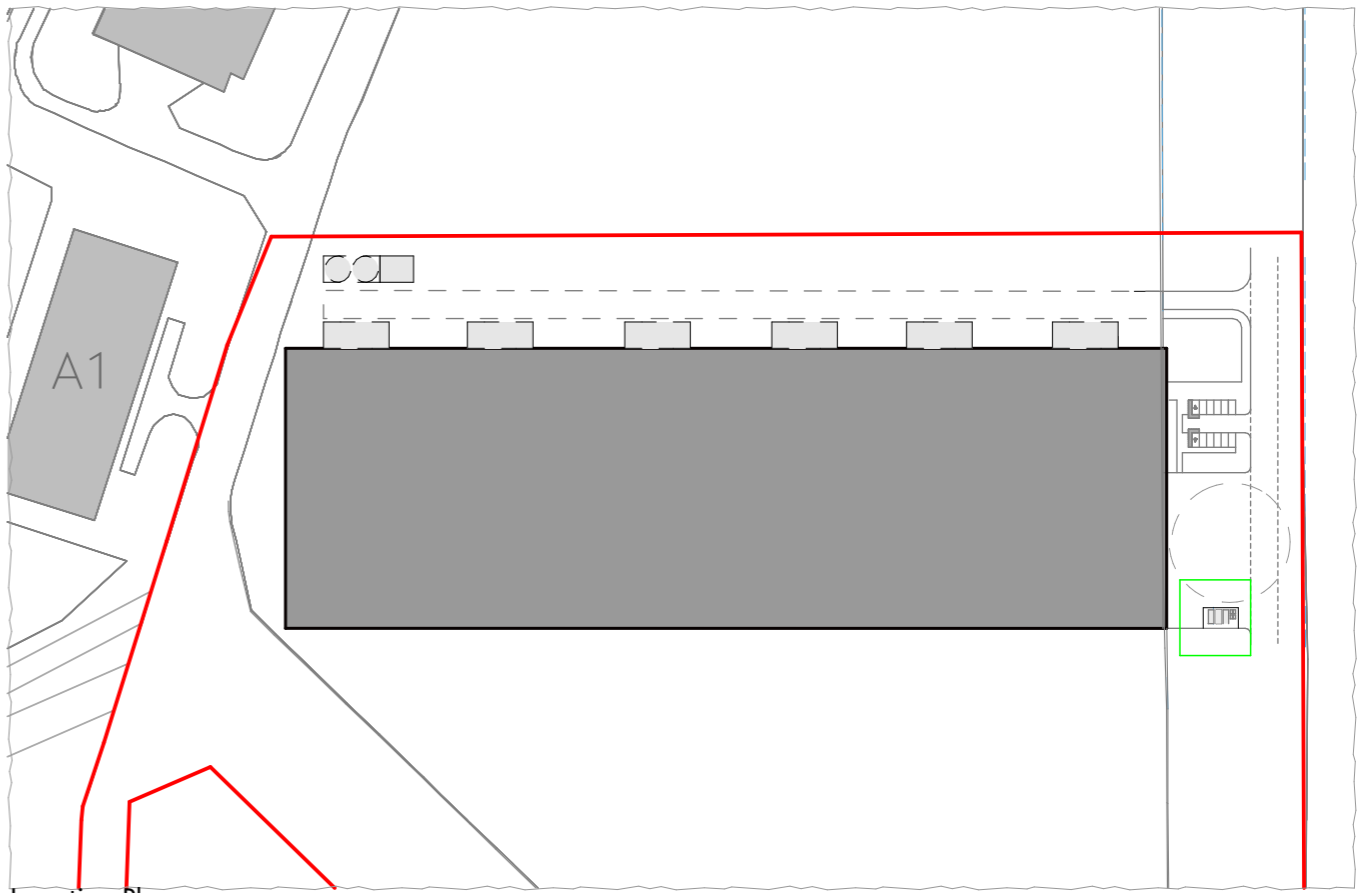
Waste Area Plan
1:100 @ A3

KEY:

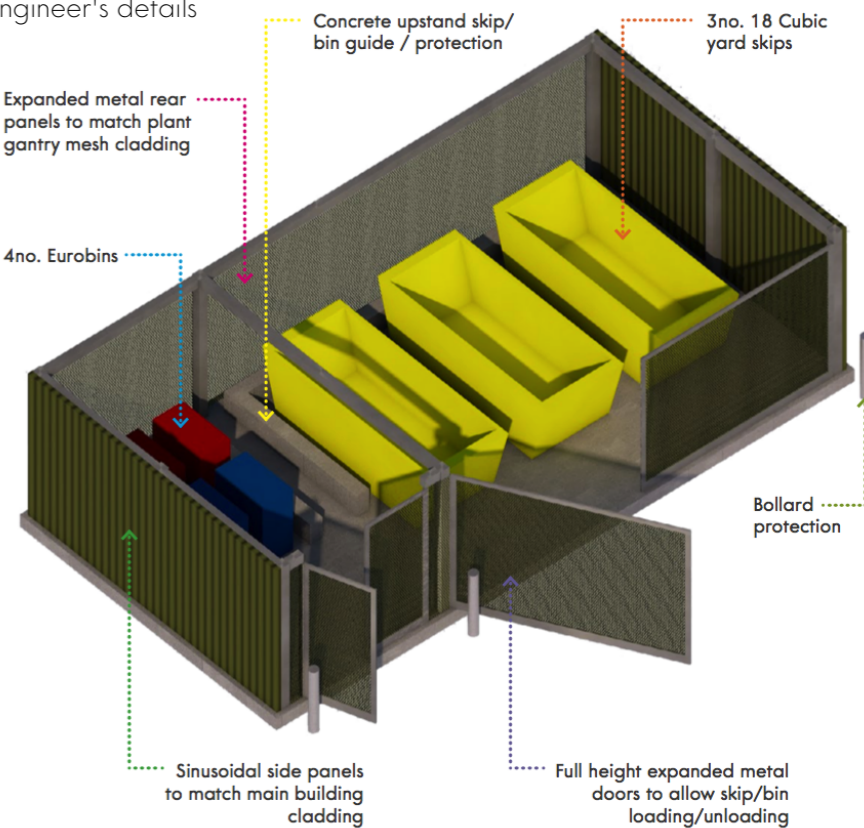
- 1- Metal sheet cladding to match main building (Olive Green)
- 2- Steel column
- 3- Metal doors to Bin Store with metal mesh panels (Olive Green)
- 4- Metal doors to Skip Bay with metal mesh panels (Olive Green)
- 5- Concrete skip guides
- 6- Metal mesh panel screens (Olive Green)
- 7- Drainage gullies - refer to engineer's details
- 8- Bollard protection



Waste Area North Elevation
1:50 @ A3



Location Plan
1:2500 @ A3



Waste Area Axonometric view



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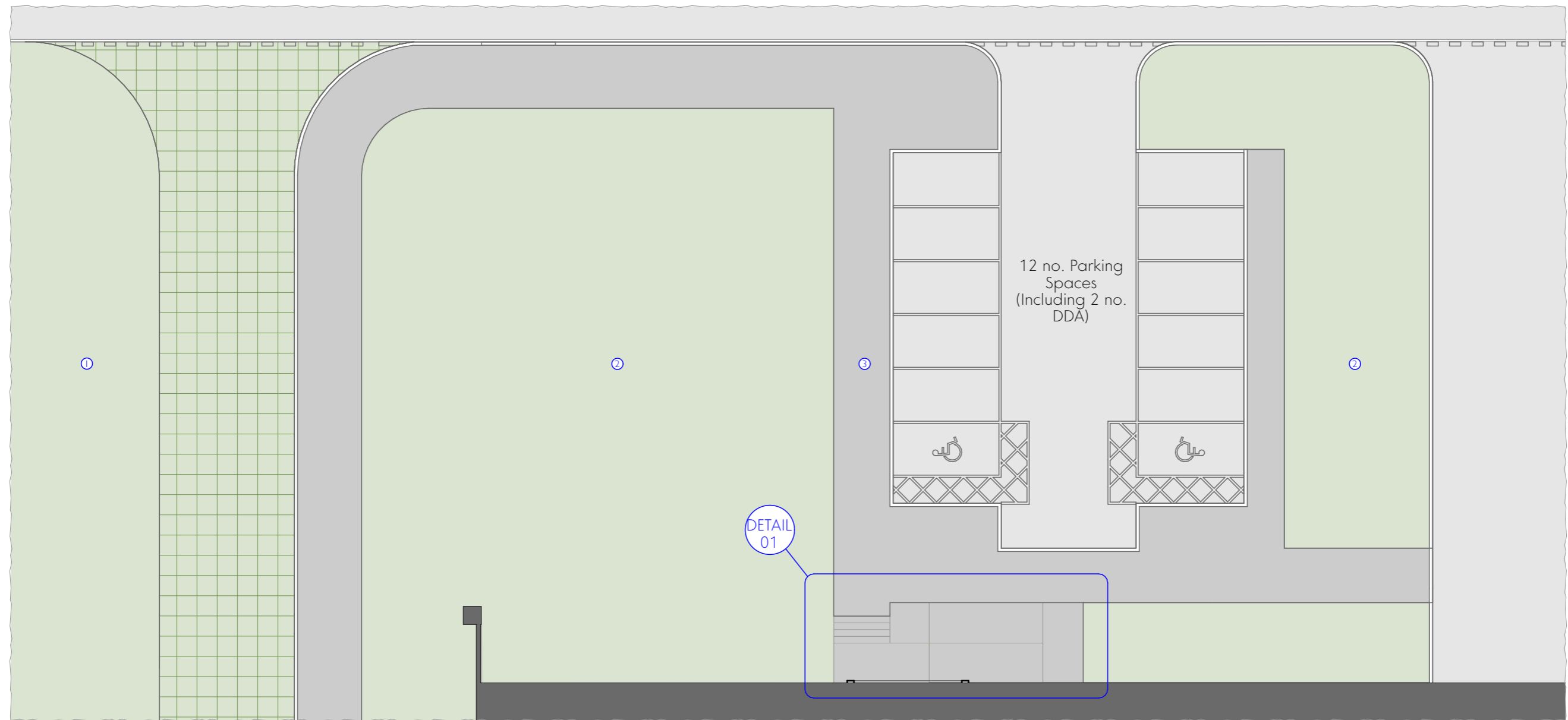


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Scale	A3/Various	Rev / Status	P03 / S
Dr/Checked	JA / TA	Date of Issue	11.12.17

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SMG Building ONE

Waste Store

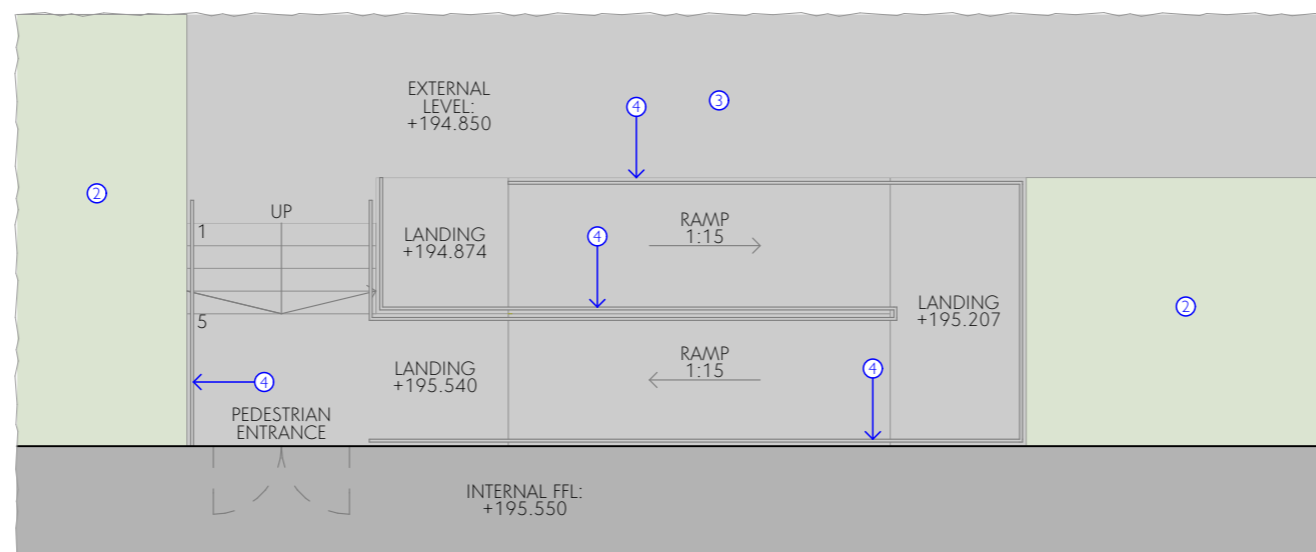


Parking Area Plan
1:200 @ A3

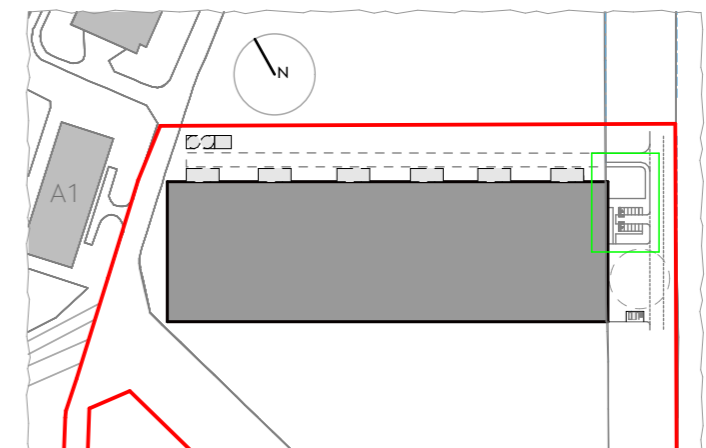
KEY:

- 1- Existing grassed area
- 2- New grassed areas
- 3- New paved pedestrian footpath
- 4- Stainless Steel Handrails to steps and ramp

- Grassed areas
- Grasscrete access route
- Existing runway surface with new line markings
- New paved pedestrian access routes



Entrance Stair & Ramp
1:100 @ A3



Location Plan
1:5000 @ A3



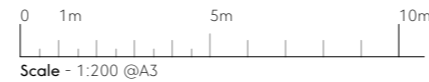
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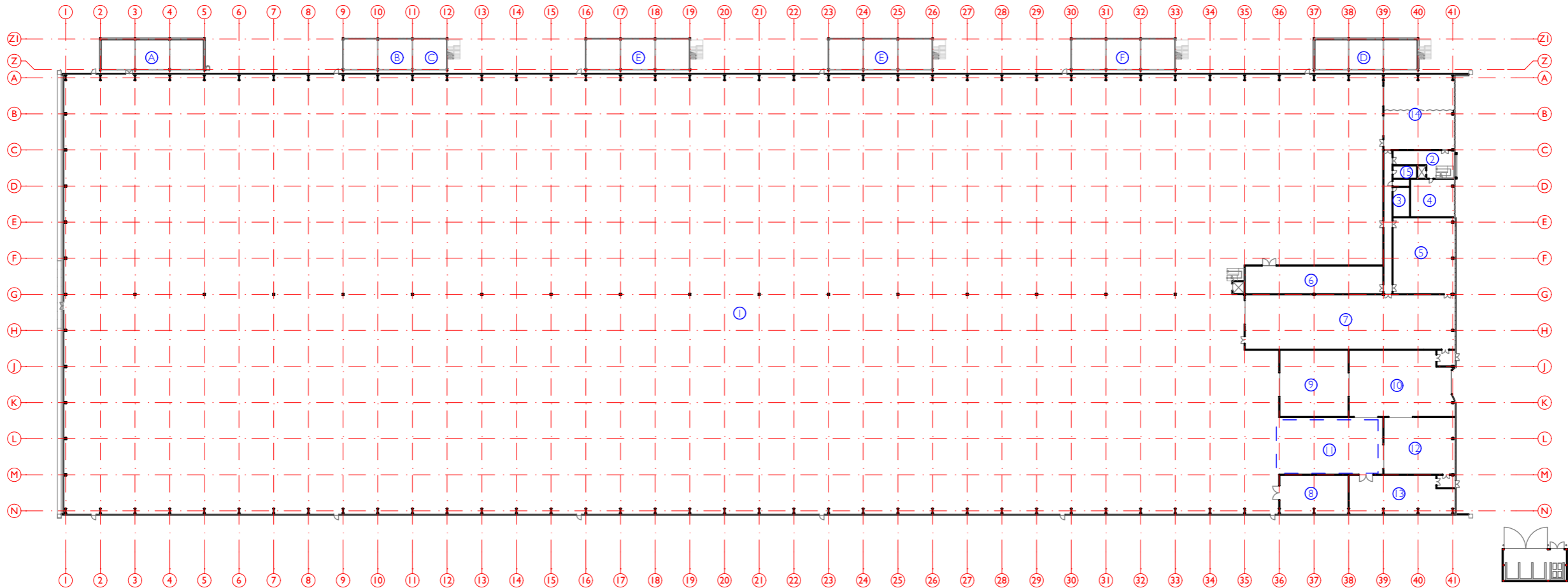
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Name	(390)1716-GWP-01-00-DR-A-(PA)-0011		
Scale	A3/1:200	Rev / Status	P02 / S
Dr/Checked	JA / TA	Date of Issue	12.12.17
BIM Server: BIMServer-HP - BIM Server 20/One Collection (390)1716-GWP-01-00-002-A			

SMG Building ONE

Parking Area Plan



Ground Floor GA Plan
1:1000 @ A3

NOTES

Room Types:

- | | |
|---|--|
| 1. Object Store (23,790m ²) | 8. Freezer (117m ²) |
| 2. Entrance Lobby (56m ²) | 9. Inward transit (200m ²) |
| 3. Unisex & DDA toilets (30m ²) | 10. Loading bay (290m ²) |
| 4. Staff Welfare Suite (73m ²) | 11. Transit storage (260m ²) |
| 5. Conservation Laboratory (207m ²) | 12. Outward transit (120m ²) |
| 6. Photography Studio (170m ²) | 13. Special Collections Store (170m ²) |
| 7. Conservation Workshop (500m ²) | 14. Collections Study (230m ²) |
| | 15. Store (14m ²) |

External Plant Allocation:

- A. Boiler house
B. Chiller compound
C. Chilled Water Pump
D. Electrical Sub Station/HV/LV Switch rooms
E. Air Handling Units
F. Plant for Conditioned areas



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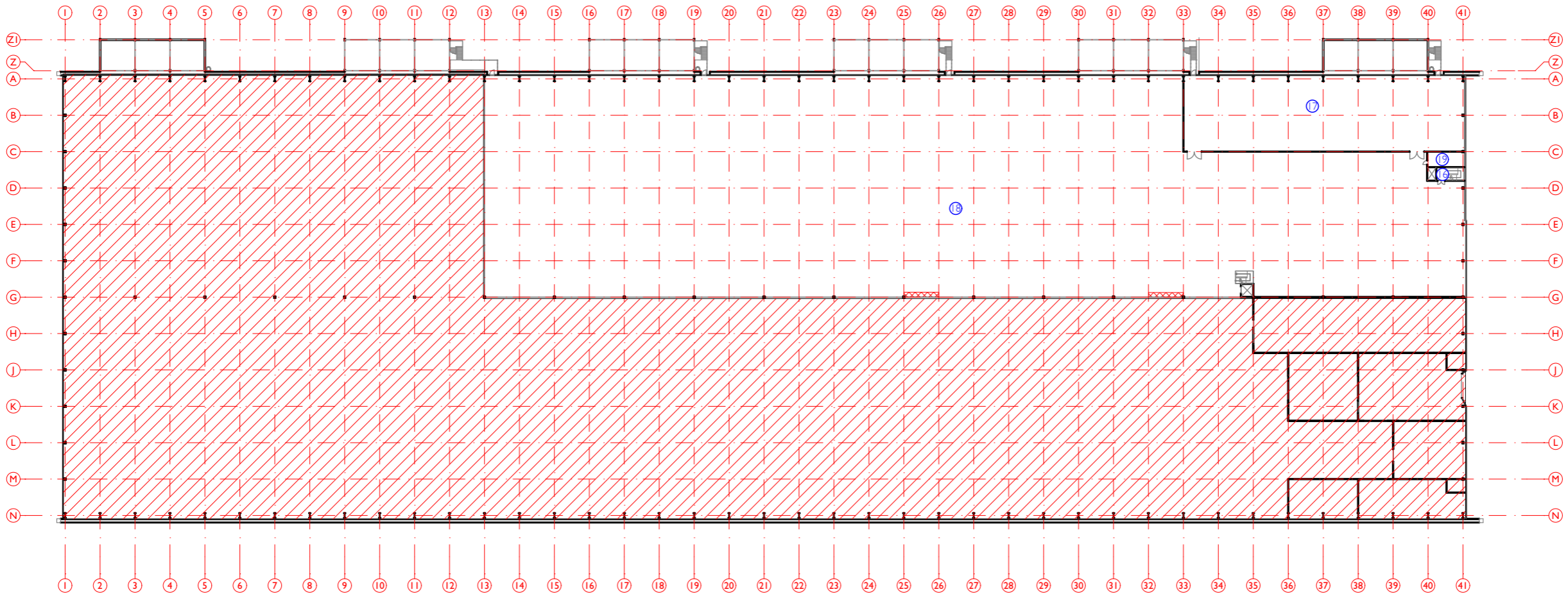
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- Planning Approval	- Rights of lights Issues
- Topographical Information	
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- Building Regulations Approval / Fire Engineering	



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Dr/Checked	TA / RT	Date of Issue	24.10.17
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SMG Building ONE

Proposed Ground Floor Plan



Mezzanine Floor GA Plan
1:1000 @ A3

NOTES

Room Types:

16. Mezzanine lobby (16m²)
17. Conditioned Store (910m²)
18. Mezzanine Store (Low Bay) (8,260m²)
19. Mezzanine Store (24m²)



Void space



External Plant/Roof
Escape Stair



Pallet gates



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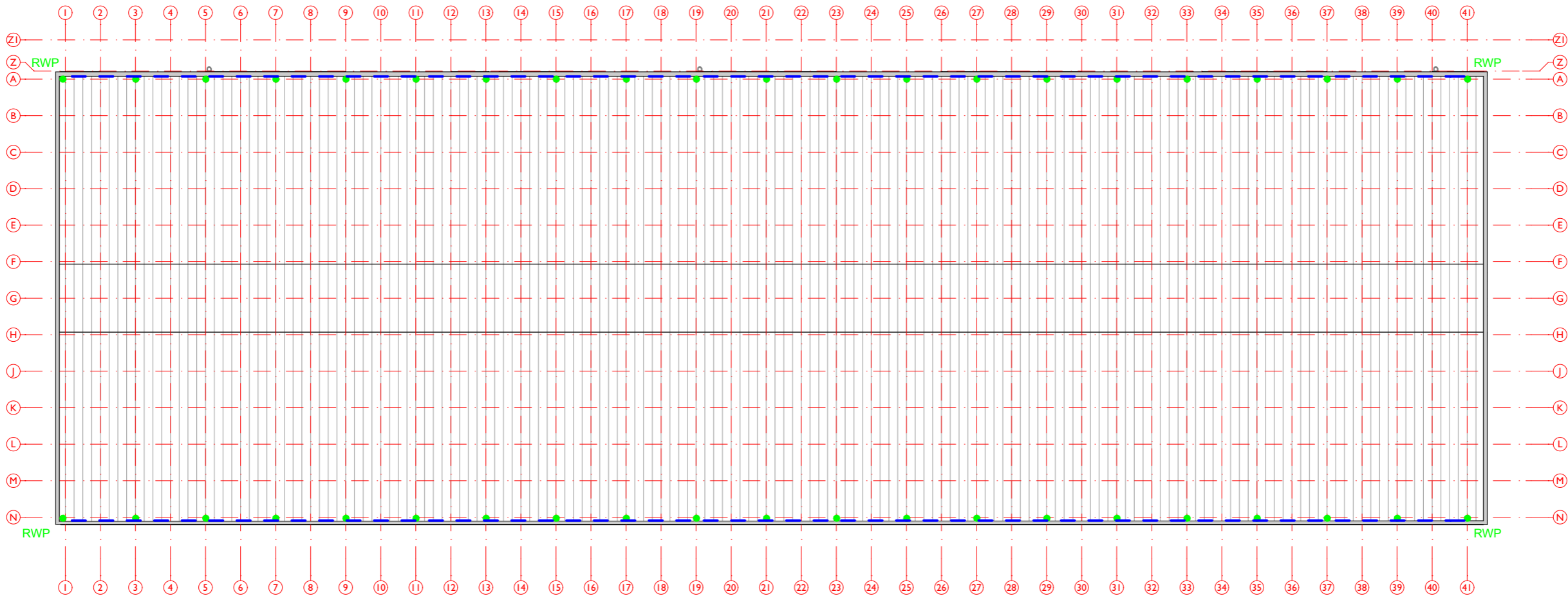
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Scale	A3/1:1000	Rev / Status	P06 / S
Dr/Checked	TA / RT	Date of Issue	24.10.17
BIM Server: BIMServer-HP - BIM Server 20/Close Collection (390)1716-GWP-01-M1-DR-A-(PA)-0005			



Roof GA Plan
1:1000 @ A3

NOTES

RWP

Rainwater Drainage Downpipe

Roof Drainage Gutter



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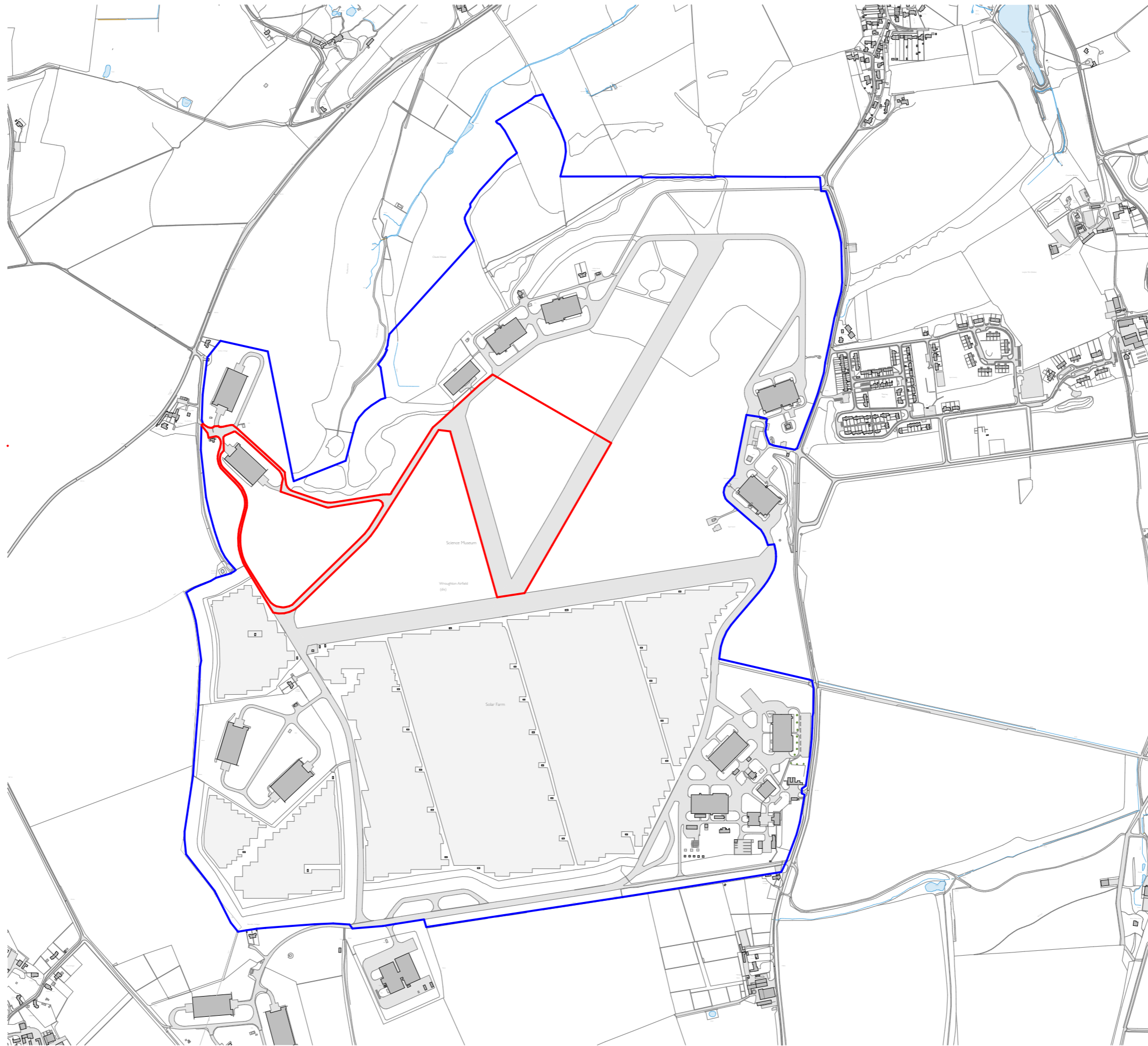


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Dr/Checked	TA / RT	Date of Issue	24.10.17

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SMG Building ONE

Proposed Roof Plan



key

— application site boundary

— site ownership boundary



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SMG Building ONE

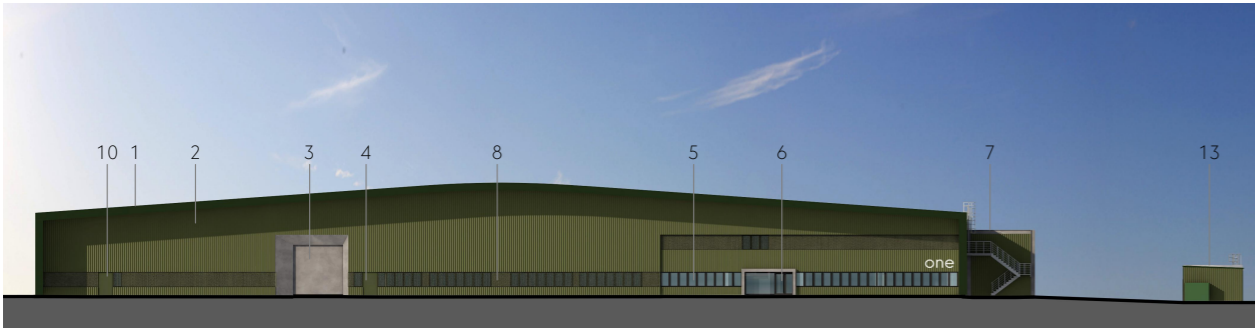
Site Location Plan



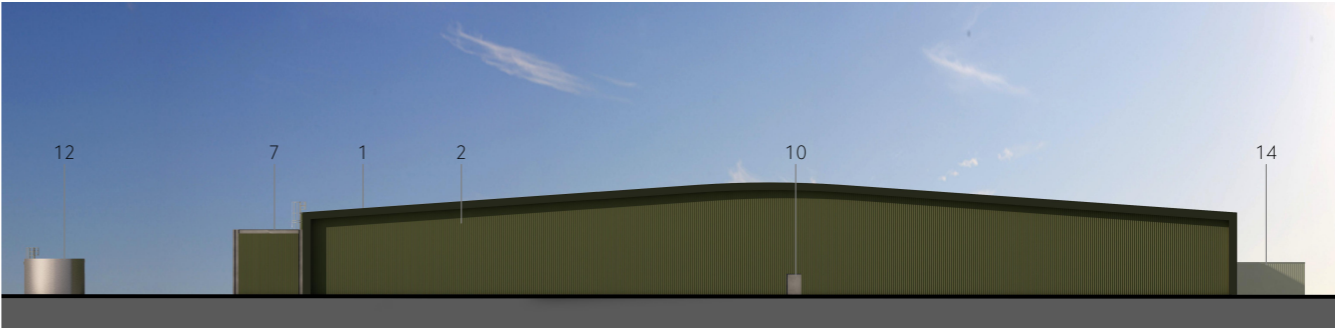
South-West Elevation
1:750 @ A3



North-East Elevation
1:750 @ A3



South-East Elevation
1:750 @ A3



North-West Elevation
1:750 @ A3

- KEY
- 1 Roof Covering
 - 2 Metal Cladding
 - 3 Loading Door
 - 4 Personnel Door
 - 5 Windows
 - 6 Pedestrian Entrance
 - 7 Plant Gantry
 - 8 Feature panel recessed cladding band
 - 9 External Access Stair/Cat Ladder
 - 10 Fire Escape Door
 - 11 RWP positions
 - 12 Sprinkler Tanks
 - 13 Sprinkler Pump House
 - 14 Refuse Store



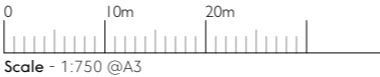
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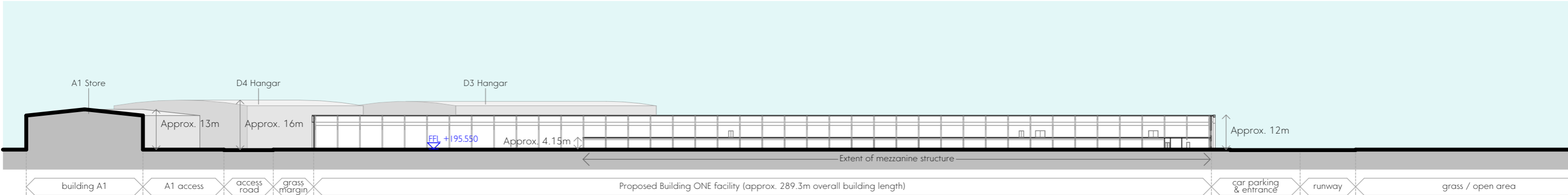
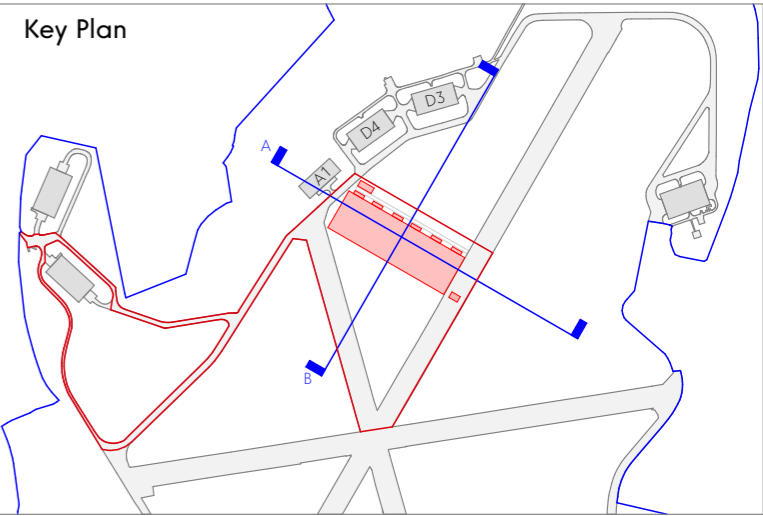


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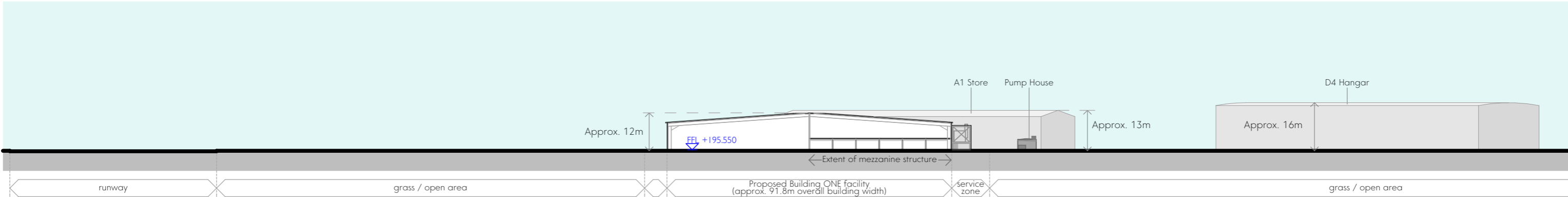
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SMG Building ONE

Proposed Elevations



Site Section A
1:1250 @ A3



Site Section B
1:1250 @ A3



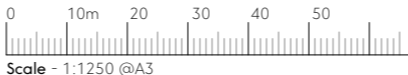
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SMG Building ONE

Proposed Site Sections

BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 5

CULTURE, HERITAGE AND PLANNING CONTEXT

5. CULTURE, HERITAGE AND PLANNING CONTEXT

5.1 INTRODUCTION

5.1.1 This chapter is structured into two parts. The first part examines why the development proposals necessary in the context of legislation and Government publications. Having set out this context, the chapter then goes on to outline the relevant planning policy and material considerations at the national and local level.

5.1.2 Topic specific legislation and policy guidance pertinent to specific environmental disciplines are considered in detail through each appropriate chapter of this Environmental Statement.

5.1.3 The plan-led approach to development as enshrined by Section 38(6) of the Planning and Compulsory Purchase Act 2004, requires development proposals to accord with the adopted development plan unless material consideration indicate otherwise.

5.1.4 Government's Planning Practice Guidance on Determining Planning applications (last updated 1 September 2015) sets out what may be a material consideration. Paragraph 8 of the guidance states ***"A material planning consideration is one which is relevant to making the planning decision in question (e.g. whether to grant or refuse an application for planning permission). The scope of what can constitute a material consideration is very wide and so the courts often do not indicate what cannot be a material consideration. However, in general they have taken the view that planning is concerned with land use in the public interest, so that the protection of purely private interests such as the impact of a development on the value of a neighbouring property or loss of private rights to light could not be material considerations"***.

5.2 CULTURE AND HERITAGE

NATIONAL HERITAGE ACT 1983 (AS AMENDED)

5.2.1 The SMG was established under the National Heritage Act 1983 with its own Board of Trustees. It has the status of a non-departmental public body, operating within the public sector but at arm's length from its sponsor department, the Department for Culture, Media and Sport (DCMS).

5.2.2 This legislation sets out the principles by which the SMG takes responsibility for, an ensuring that there are effective arrangements for, collections information management and access to the SMG Collection.

5.2.3 Under the National Heritage Act 1983, the Board of Trustees of the Science Museum is responsible for (under section 10(1) of the Act):

- (1) So far as practicable and subject to the provisions of this Act, the Board shall—
- (a) care for, preserve and add to the objects in their collections,
 - (b) secure that the objects are exhibited to the public,
 - (c) secure that the objects are available to persons seeking to inspect them in connection with study or research, and

(d) generally promote the public's enjoyment and understanding of science and technology and of the development of those subjects, both by means of the Board's collections and by such other means as they consider appropriate.

5.2.4 Section 10(2) of the Act sets out how SMG remit may extend to encompass education and research and acquire land and other property: -

(2) For those purposes the Board may, subject to the provisions of this Act—

(a) provide education, instruction and advice and carry out research,

(b) enter into contracts and other agreements (including agreements for the Board's occupation or management of the building known as the Science Museum or other premises), and

(c) acquire and dispose of land and other property.

5.2.5 To summarise, The SMG has a statutory obligation under the National Heritage Act 1983 (as amended) to care, preserve and add to the objects in their collection.

5.2.6 As defined in the 1983 National Heritage Act, SMG's charitable objectives are to: -

- Care for, preserve and add to the objects in its collections;
- Secure that the objects are exhibited to the public;
- Secure that the objects are available to persons seeking to inspect them in connection with study or research; and
- Generally, promote the public's enjoyment and understanding of science and technology and of the development of those subjects, both by means of the Board's collections and by such other means as they consider appropriate.

The Mendoza Review: An Independent Review of Museums in England (November 2017)

5.2.7 Commissioned and published by the Department of Digital, Culture, Media and Sport; the Mendoza Review looked at the existing national infrastructure for museums in England and makes recommendations on how they should evolve.

5.2.8 The review identifies nine priorities for museums today, five of which are relevant to the development proposal these are (inter alia): -

Growing and diversifying audiences reflects the important purpose of museums in engaging people and communities. Over half of the adult population now visits museums – up from around two in five a decade ago – a significant achievement. But those audiences are still less likely to be representative of the very young or very old, ethnic minorities, disabled, or lower socio-economic backgrounds. There is no complacency in the sector – museums are increasingly reaching out to their communities to provide exhibitions that welcome people. These include, for example, building more sophisticated partnerships to co-produce exhibitions; using new technology to collect and analyse visitor data; and gathering other evidence to understand how best to serve their visitors. In many ways, national museums have spearheaded these approaches, and provided support to museums outside London to improve access all over the country. This work needs to

continue and develop as further best-practice techniques are established and economies of scale established.

Dynamic collections curation and management are the fundamental point of museums – to protect and take care of the collections they hold, and to make them accessible to the public, not just physically, but meaningfully as well. This is not without its challenges: buildings maintenance backlogs (including insufficient storage) are a common issue, as is less available curatorial time and expertise, and the ongoing need for a sensible approach to both growing and rationalising collections. There are good examples of where sharing skills and infrastructure can help to overcome these issues; this is a particular area where a strategic framework for how the national museums' work with the rest of the sector will benefit museums across the country

Contributing to placemaking and local priorities helps museums play a part in their communities and in local decision-making, as well as leveraging investment in culture to also deliver on priorities such as health and wellbeing. There is increasing evidence to show that cultural institutions contribute a great deal to the local economy, to the wellbeing and education of its residents, and to attracting tourists and businesses to the area. Museums are especially able to do this because of their position as a civic space and their collections, which connect people to place. To encourage this work it is important that museums have and use consistent, statistically robust methods to measure economic and social impact.

Delivering cultural education has benefits for schoolchildren as well as helping to make the adult museum audiences of the future. Museums can and do support pedagogy, enhancing the theory and practice of formal learning and the curriculum, as well as engaging children with development – particularly around their social history and place in the world.

Developing leaders with appropriate skills and diversifying the workforce are long-standing concerns of the museums sector; they must be tackled successfully if museums are to adapt to reduced public funding and encourage more diverse audiences. The skills needed for a museums career are changing, with greater emphasis now on flexibility and collaboration, business and digital, commercial, marketing and fundraising. Volunteers are still of crucial importance in keeping museums running, although routes to entry into the sector need to expand to offer greater opportunities to a wider range of people, particularly reflecting the make-up of the local communities they serve.

Digital capacity and innovation is an area where museums have been slower than other arts and cultural sectors to develop. Beginning with senior leadership, but encompassing upskilling people in numerous roles, there is a need for greater understanding of the wide potential of digital in museums. Examples include display and interpretation, collections, communications, data – and the need for a strategic approach to embedding tools and technologies into every aspect of museums' work.

The Culture White Paper March 2016

5.2.9 The white paper sets out how the Government will support the cultural sector over the coming years and how culture will play an active role in building a fairer and more prosperous nation. Page 38 of the white paper states (inter alia) *"Many museums are actively involved in digitising their collections, but still only a fraction of the extensive and unique collections of our national museums can be readily viewed by the general public. **The government is providing £150 million of capital funding over the next five years to the British Museum, the Science Museum and the Victoria and Albert Museum to preserve, protect and transform public access to the collections currently stored at Blythe***

House in London, by relocating them to appropriate, world-class facilities. As part of this move, objects from the collections will be photographed and made available digitally”.

5.3 NATIONAL PLANNING POLICY

National Planning Policy Framework

5.3.1 The National Planning Policy Framework was adopted by Central Government on 27th March 2012. Within the “Ministerial Foreword” it states that **“the purpose of planning is to help achieve sustainable development”**. Further, the Ministerial Foreword notes that **“sustainable means ensuring that better lives for ourselves don’t mean worse lives for future generations”**.

5.3.2 The document stipulates that “sustainable development is about positive growth - making economic environmental and social progress for this and future generations”. Following on from this the Ministerial Foreword notes that “development that is sustainable should go ahead, without delay – a presumption in favour of sustainable development is the basis for every plan, and every decision”.

5.3.3 The NPPF is clear that planning decisions must be made in accordance with Planning Law. Paragraph 2 states that planning law requires that applications for planning permission must be determined in accordance with the Development Plan, unless material considerations indicate otherwise. Paragraph 2 continues that: - **“Planning policies and decisions must reflect and where appropriate promote relevant EU obligations and statutory requirements”**. The relevant statutory requirements here includes the National Heritage Act 1983.

5.3.4 Paragraph 7 confirms that there are three dimensions to sustainable development: Economic, Social and Environmental. These dimensions give rise to the need for the planning system to perform a number of roles (inter alia): -

- An Economic Role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- A Social Role – supporting strong, vibrant and healthy communities... with accessible local services that reflect the communities needs and support its health, social and cultural well-being ;
- An Environmental role – contributing to protecting and enhancing our natural, built and historic environment; and... mitigate and adapt to climate change including moving to a low carbon economy.

5.3.5 Paragraph 8 advises that in order to achieve sustainable development, economic, social and environmental gains should be sought jointly and simultaneously through the planning system.

5.3.6 Paragraph 10 notes that plans and decisions need to take local circumstances into account, so that they respond to the different opportunities for achieving sustainable development in different areas.

5.3.7 In applying the NPPF's presumption in favour of sustainable development, and the test at Paragraph 14 in particular with regards to decision taking; it is duly noted that the development accords with the development plan and as such the application should be approved without delay.

5.3.8 Paragraph 17 of the NPPF sets out 12 core land-use planning principles which should underline both plan-making and decision-taking. The land-use principles pertinent to the development proposal and development site are: -

- Take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs;
- Promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions;
- encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value;
- encourage the reuse of existing resources, including conversions of existing buildings; and
- proactively drive and support sustainable economic development and identify and then meet the development needs of an area, and respond positively to wider opportunities for growth.

5.3.9 Paragraph 19 confirms the Government's commitment to supporting sustainable economic growth and that "planning should operate to encourage and not act as an impediment to sustainable growth and therefore significant weight should be placed on the move to support economic growth through the planning system".

5.3.10 Paragraph 28 duly promotes the sustainable growth and expansion of all types of business and enterprise in rural areas, both through conversion of existing buildings and well-designed new buildings. It states that planning policies should support economic growth to create jobs and prosperity by taking a positive approach to sustainable development.

5.3.11 On the issue of community involvement Paragraph 66 identifies how local planning authorities should look more favourable upon proposals that take account of views of the community.

5.3.12 Paragraphs 69 to 78 of the Framework specifically consider how the planning system can play an important role in facilitating and creating healthy communities. It states that great weight should be given to the need to create, expand or alter schools. The same must be true for other educational establishments; such as that proposed through this development proposal. Indeed, it guides local planning authorities to take a proactive, positive and collaborative approach to development that will widen choice in education.

5.3.13 As the site is washed over by the AONB, Paragraph 116 of the NPPF is specifically pertinent to this application and states: -

Planning permission should be refused for major developments in these designated areas [including AONBs] except in exceptional circumstances and where it can be demonstrated they are in the public interest. Consideration of such applications should include an assessment of:

the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and

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any detrimental effect on the environment, landscape and recreational opportunities, and the extent to which that could be moderated.

5.3.14 Paragraph 197 of the NPPF repeats how local planning authorities should apply a presumption in favour of sustainable development.

5.3.15 Annex 2 of the Framework defines previously developed land as: -

Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure. This excludes: land that is or has been occupied by agricultural or forestry buildings; land that has been developed for minerals extraction or waste disposal by landfill purposes where provision for restoration has been made through development control procedures; land in built-up areas such as private residential gardens, parks, recreation grounds and allotments; and land that was previously-developed but where the remains of the permanent structure or fixed surface structure have blended into the landscape in the process of time.

5.3.16 Overall, the NPPF confirms that the primary objective of development management is to foster the delivery of sustainable development, not to hinder or prevent it. Local Authorities should approach development management decisions positively - looking for solutions rather than problems so that applications can be approved wherever it is practical to do so.

5.3.17 Under the NPPF, one of the core principles is the need to support and deliver healthier communities including widening the choice in education facilities. The application proposal would achieve both of those things.

5.3.18 The Government's overarching vision throughout the NPPF is that the planning system does everything it can do to support sustainable economic growth whereby there is a presumption in favour of sustainable development.

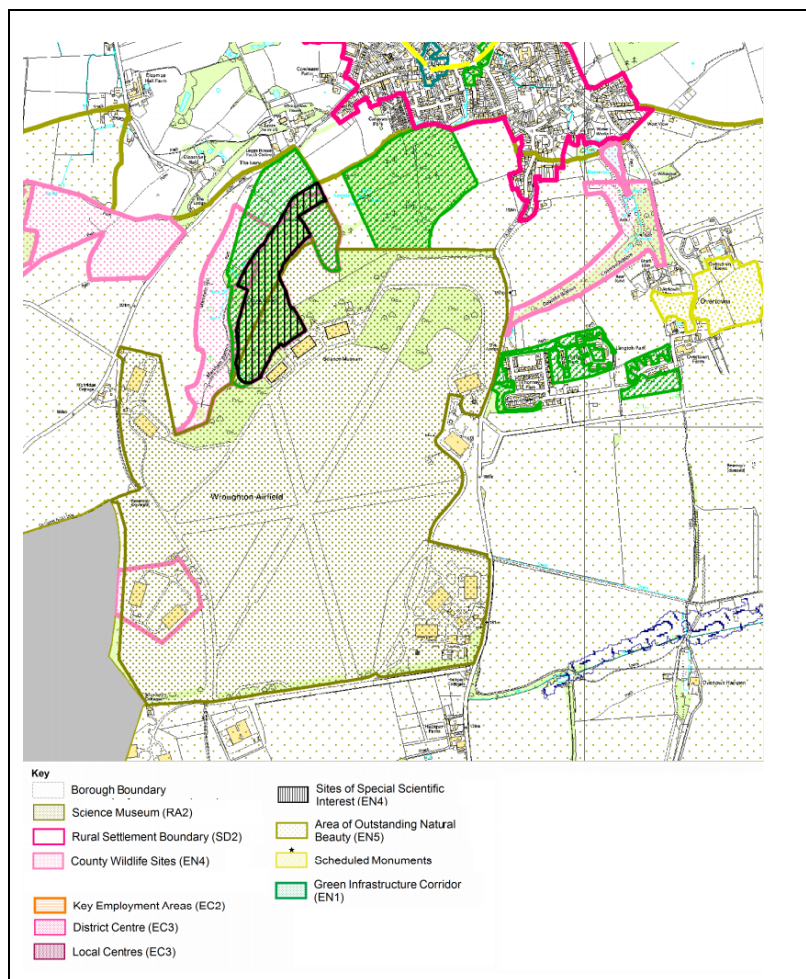
5.4 DEVELOPMENT PLAN

The Swindon Borough Local Plan 2026 (adopted March 2015)

5.4.1 The Swindon Borough Local Plan 2026 was adopted in March 2015 and sets out the local policy framework to deliver sustainable growth to 2026 and beyond. In accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town and Country Planning Act 1990, applications for planning permission should be determined in accordance with the Development Plan unless other material considerations indicate otherwise.

5.4.2 The Local Plan includes a Policies Map which shows the administrative area to which the policies contained in the plan relate. The relevant extract of the Policies Map pertinent to the development site is set out at Figure 5.1 and shows how the site is located outside Wroughton's settlement boundary and within the SMG's land use allocation.

Figure 5.1 Illustration: Extract of Local Plan Policies Map



5.4.3 The policies relevant to the application site and change of use are listed below.

- Policy RA2 Wroughton [and the Science Museum]
- Policy SD1 Sustainable Development Principles
- Policy SD2 Sustainable Development Strategy
- Policy SD3 Managing Development
- Policy CM3 Integrating Facilities and Delivering Services
- Policy CM4 Maintaining and Enhancing Community Facilities
- Policy TR2 Transport and Development
- Policy EN5 Landscape Character and Historic Landscape

5.4.4 Each policy is discussed in turn below.

5.4.5 As the site is located within the SMGW's landholding, it is prudent to consider its namesake policy. Policy RA2 states (inter alia): -

Development at Wroughton shall be in accordance with Policies SD1 and SD2 and should support the following local priorities at Wroughton: -

- Maximise opportunities associated with the Science Museum to benefit Wroughton and the Borough through: (i) Realising tourism benefits associated with the Science Museum; and (ii) Allowing expansion of museum related activities and enabling development providing the benefits of the development are delivered sustainably and do not conflict with other policies in the Local Plan.

5.4.6 The thrust of the Policy, with regards to development opportunities at the Science Museum, is to deliver proposal which benefits Wroughton and the Borough. The development proposal contributes towards both of these requirements. The policy goes on to identify how enabling development would be promoted providing the benefits of the development are delivered sustainably and do not conflict with the other policies of the Plan.

5.4.7 In this instance, the development proposal includes the creation of a new purpose-built facility to enable the SMG to facilitate the preservation, conservation and engagement of its stored collections in line with its duty of care under the National Heritage Act 1983.

5.4.8 The Policy makes reference to Policies SD1 and SD2 and these are discussed in turn below.

5.4.9 Policy SD1 relates to the delivery of sustainable development and sustainable communities. The policy sets out sustainable development principles which should be followed by proposals and states: -

To enable the delivery of sustainable development and support sustainable communities in the Borough all development proposals will: (i) be of high quality design; (ii) promote healthy, safe and inclusive communities; (iii) respect, conserve, and / or enhance the natural, built and historic environments; (iv) assess and address the impact of climate change through mitigation and / or adaption measures; (v) provide or contribute to the assessed local and borough wide infrastructure and service requirements; (vi) contribute to the retention of jobs and growth of the local economy and complement Town Centre regeneration; (vii) be accessible by walking, cycling and/or public transport; and, (viii) use land and resources (such as water, energy, minerals and waste) in an efficient and effective way.

5.4.10 The amplification to the policy, at paragraph 3.7 of the Local Plan, states ***“Policy SD1 sets out the development principles which underpin this Local Plan and the development proposals which will come forward in the Borough. They represent a sustainable and balanced approach to the provision of new development and respond to [amongst other things] the need for new development to contribute to sustainable and balanced growth and change for the better in the borough”***. The development proposal would meet these requirements.

5.4.11 Policy SD2 sets out the sustainable development strategy of the Development Plan. It states that development proposal in locations outside the settlement boundaries will be permitted where, amongst other things, it is in accordance with other policies of the Plan permitting specific development in the countryside. This in turn leads us to Policies CM4 and CM3.

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5.4.12 Policy CM4 is also pertinent as the collections management facility will provide an exemplar visitor experience. It is envisaged that Building ONE would generate a maximum of 15,000 visitors per year. These would approximately be made up of public tours, school visits on a pre-booked basis. The Policy states (inter alia): -

a. Proposals for new or extended community facilities will be supported, particularly where: the site is located within or adjacent to existing settlements; it is accessible for all members of the community and promotes social inclusion, and if possible they can be co-located with other community uses.

5.4.13 The reasoned justification to the Policy, at paragraph 4.303, states ***“Proposals for new facilities or the extension of existing community facilities will be supported where they promote the principle of creating and/or maintaining sustainable communities, for example through the co-location of services on a single site. The development of new sites should be located within or adjacent to existing settlements, and be well located to the intended catchment population to maximise the opportunity to travel to these facilities by sustainable transport means, particularly walking and cycling”.***

5.4.14 Paragraph 4.308 goes on to list examples of community facilities and these include: ***“museums and art galleries”***. As stated elsewhere in this statement, the SMG site at Wroughton is located adjacent to existing settlement and therefore receives the full support of Policy CM4.

5.4.15 Through Policy CM3 the Council will seek to encourage the delivery of flexible multi-use buildings.

5.4.16 Policy SD3 sets out how the Council will take a positive approach when considering development which reflects the presumption in favour of sustainable development. Through this policy the Council will always seek to work proactively and jointly with applicants to find solutions which means the proposal can be approved wherever possible, and to secure proposals that improves economic, social and environmental conditions, and promotes health and well-being for those people living and working in Swindon Borough.

5.4.17 Through Policy TR2 the Council will seek that development proposal are located where there is good public access in order to reduce the need to travel by car. The amplification to the Policy, at paragraph 4.197 of the Local Plan, states (inter alia) ***“in all cases development should provide a level of access that is appropriate to its location, and the type and nature of the vehicles that will use it”.***

5.4.18 Policy EN5 deals with landscape character and historic landscapes and states: -

a. Proposals for development will only be permitted when:

- the intrinsic character, diversity and local distinctiveness of landscape within Swindon Borough are protected, conserved and enhanced;
- the design of the development and materials used are sympathetic to the surrounding landscape;

- unacceptable impacts upon the landscape are avoided; and,
- where other negative impacts are considered unavoidable, they are satisfactorily mitigated.

b. In meeting the requirements of EN5a, applicants for development should demonstrate how they have taken into account Landscape Character Assessments and assessed the potential impact of the proposal upon the following attributes of the landscape:

- existing landscape form, features, topography and character;
- the contribution of the landscape to biodiversity and wildlife;
- local geology and geo-diversity;
- views, visual amenity and the landscape setting;
- valuable historic and heritage areas and assets;
- environmental amenity such as tranquillity & noise, pollution and light pollution; and,
- the existing social, physical, economic and environmental roles and functions of the landscape at the local and strategic scale (for example as a place of cultural and leisure activity, living, employment and separation of settlements).

c. The North Wessex Downs Area of Outstanding Natural Beauty (AONB) is a nationally recognised area of landscape protection. Proposals within the Borough which are within and or abuts the North Wessex Downs AONB must accord with relevant criteria set out in the AONB Management Plan and paragraph 115 and 116 of the NPPF. Proposals outside the AONB should not adversely affect its setting.

Written Ministerial Statement Planning for Growth

5.4.19 On 23 March 2011, the Chancellor of the Exchequer issued a call to action on growth, and published the Written Ministerial Statement on 'Planning for Growth' which presented an ambitious set of proposals to help rebuild Britain's economy. The Ministerial Statement emphasised how the planning system has a key role to play in this, by ensuring that the sustainable development needed to support economic growth is able to proceed as easily as possible. Government's clear expectation is that the answer to sustainable development and growth should wherever possible be 'yes'.

5.4.20 The Written Statement states "The planning system has a key role to play in this, by ensuring that the sustainable development needed to support economic growth is able to proceed as easily as possible. We will work quickly to reform the planning system to achieve this, but the Government recognises that many of these actions will take some months to

deliver, and that there is a pressing need to ensure that the planning system does everything it can to help secure a swift return to economic growth."

5.4.21 The Statement also confirms that: "When deciding whether to grant planning permission, local planning authorities should support enterprise and facilitate economic and other forms of sustainable development".

Wroughton Neighbourhood Plan 2016 – 2026 (April 2016)

5.4.22 The Wroughton Neighbourhood Plan is at an advanced stage whereby the Report of the Independent Examiner to Swindon Borough Council on the Wroughton Neighbourhood Plan was published on 4 April 2016. Paragraph 1.2 of the Plan identifies how the objectives and views within the plan have come from ideas, views and opinions of Wroughton's residents who have engaged in the plan making process.

5.4.23 Paragraph 1.5 goes on to identify the visions that shape the plan, those pertinent to the application proposal and application site are set out below, these are: -

- Encourage development of brownfield land and the use of derelict sites;
- Maintain and encourage improvements to educational facilities; and
- Support and enhance the local economy.

5.4.24 Policy LE5 of the Neighbourhood Plan replicates Policy RA2 of the Local Plan and encourages the expansion of Science Museum related activities and enabling development.

BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 6

LANDSCAPE AND VISUAL

6 LANDSCAPE AND VISUAL IMPACT

6.1 INTRODUCTION

6.1.1 Pegasus Group has prepared this Landscape and Visual Impact Assessment (LVIA) Technical Chapter in relation to the development of a new museum collections management facility for the Science Museum Group (SMG), on Land at the Science Museum Group at Wroughton (SMGW). The assessment has been carried out by Chartered Members of the Landscape Institute.

6.1.2 The purpose of this LVIA is to review the development site and its surrounding context in order to describe and identify the relative level of effects arising as a result of the development, in relation to:

- the features and character of the local landscape; and
- the visual amenity of people who view the site.

6.1.3 The judgements provided within the LVIA may then inform the planning balance to be carried out by the determining authority.

6.1.4 The LVIA is supported by the following Appendices:

- Appendix 6.1 Assessment Criteria
- Appendix 6.2 Figures
- Appendix 6.3 Photographic Record
- Appendix 6.4 Viewpoint Assessment
- Appendix 6.5 Photomontage Visualisations

6.2 ASSESSMENT APPROACH

Methodology

6.2.1 In accordance with published guidance, landscape and visual effects are assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- Landscape effects relate to the effects of the proposals on the physical and other characteristics of the landscape as a resource in its own right and its resulting character and quality;
- Visual effects relate to the effects on specific views experienced by visual receptors and on visual amenity more generally.

Landscape and Visual Impact Assessment Process

6.2.2 The assessment of landscape effects follows a recognised process set out below:

- Identify the baseline landscape resource (i.e. individual landscape elements and landscape character) and its value;
- Describe any mitigation measures proposed to avoid, reduce and ameliorate potential adverse impacts and to maximise the beneficial impacts of the development;
- Evaluate the sensitivity of the landscape resource to the type of development proposed;
- Identify predicted landscape impacts of the development;
- Evaluate the magnitude of change to the baseline landscape resource; and
- Assess the level of residual effect of the development on the landscape.

6.2.3 The assessment of visual effects follows a similar process as set out below:

- Identify a 'bare earth' Zone of Theoretical Visibility (ZTV) for the development using digital terrain data (i.e. the geographical area where views of the development are theoretically possible with a bare earth scenario);
- Identify potential visual receptors for the development (i.e. groups of people who would have views of the development);
- Describe any mitigation measures proposed to avoid, reduce and ameliorate potential adverse impacts and to maximise the beneficial impacts of the development;
- Evaluate the sensitivity of the visual receptor groups to the type of development proposed;
- Describe the nature of the baseline views (usually illustrated by a photograph) and the predicted visual impacts of the development on the views of each receptor group;
- Evaluate the magnitude of change in the view of the receptor groups;
- Assess the level of residual effects on the views from representative receptor groups and on overall visual amenity.

Baseline Information and Assumptions

6.2.4 The baseline landscape resource and visual receptors were identified in part through a desk-based study of published landscape character studies, relevant planning policy guidance, aerial photography, Ordnance Survey mapping. In addition, site visits were conducted during September 2017 when the viewpoint photographs were taken and observations were also made during our earlier work in relation to the adjacent solar farm development carried out in 2013 and 2014.

6.2.5 Access during site visits was restricted to publicly accessible locations and within the land ownership of the client. No access was possible to private properties, which were assessed from the nearest available publicly accessible vantage point. Therefore some assumptions have been made regarding views from private properties. These assumptions have been based on professional experience and interpretation of available desktop data as well as land use and vegetation present at the time of the site visits.

Study Area

6.2.6 Following preliminary desktop research and field work, the study area for the LVIA (used to understand the wider context of the site's location) was taken to be 5km from the site. Any views of the development beyond this distance would be negligible and unlikely to give rise to any effects greater than minor.

Assessment of Significance

6.2.7 This LVIA takes the precautionary approach that all effects, unless stated otherwise, are assessed as adverse, on the basis that the development would be permanent and non-reversible. The criteria used as guidance in assessing the significance of the effects of the development are outlined in Appendix 6.1.

Legislative and Policy Framework

6.2.8 A full and detailed consideration of planning policy is contained in the accompanying Planning Statement. This section provides an overview of the planning policy framework relevant to the landscape and visual matters considered in this LVIA.

6.2.9 At a national level The National Planning Policy Framework (NPPF, 2012) sets out the priorities for planning in England and places significant emphasis on the presumption in favour of sustainable development. At a local level, the current development plan consists of the 'Swindon Borough Local Plan 2026' (adopted 2015).

National Planning Policy

National Planning Policy Framework (March 2012)

6.2.10 The NPPF sets out the Government's national policy on land use planning in England. The primary principle of the NPPF is the presumption in favour of sustainable development, which is set out at Paragraph 14 as follows:

"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."

6.2.11 For **plan-making** this means that:

- **"local planning authorities should positively seek to meet the development needs of their area;**
- **local plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:**
 - **any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole;**
or
 - **specific policies in this Framework indicate development should be restricted*."**

6.2.12 (* a footnote explains that restrictions would include sites protected under the Birds or Habitats Directives, SSSIs, Green Belt, Local Green Space, AONBs, Heritage Coast, National Parks, designated heritage assets or locations at risk from flooding or coastal erosion.)

6.2.13 "For decision-taking this means:

- **"approving development proposals that accord with the development plan without delay: and**
 - **where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:**
 - **any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole;**
or
 - **specific policies in this Framework indicate development should be restricted*.**
- (* unless material considerations indicate otherwise)"**

6.2.14 This presumption in favour of sustainable development is underpinned by twelve core planning principles set out at Paragraph 17. These include that planning should:

“Always seek to secure high quality design and a good standard of amenity for all existing and future occupants of the land and buildings;

Take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it;

Contribute to the conserving and enhancing of the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;

Promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production); and

Conserve heritage assets in as manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations.”

6.2.15 Section 7: Requiring good design - Paragraph 58 states that:

- **“Planning policies and decisions should aim to ensure that developments:**
- **will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;**
- **establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit;**
- **optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including incorporation of green and other public space as part of developments) and support local facilities and transport networks;**
- **respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation;**
- **create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion; and**
- **are visually attractive as a result of good architecture and appropriate landscaping.”**

6.2.16 Section 11 Conserving and enhancing the natural environment - Paragraph 109 states that the planning system should contribute to and enhance the natural and local environment by:

- **“Protecting and enhancing valued landscapes, geological conservation interests and soils;**
- **Recognise the wider benefits of ecosystem services;**
- **Minimise impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline of biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;**
- **Preventing both new and existing development from contributing to or being at unacceptable risk form, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and**
- **Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”**

6.2.17 The Framework states at paragraph 110 that:

“In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in the Framework.”

6.2.18 Paragraph 115 also states that:

“Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.”

6.2.19 Paragraph 117 also addresses minimising impacts on biodiversity and geodiversity, and in relation to landscape issues states that planning policy should **“plan for biodiversity at a landscape-scale across local authority boundaries”**.

6.2.20 Paragraph 118 addresses the conservation and enhancement of biodiversity and states that when determining planning application, local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles, one of which states:

“planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss”.

Planning Practice Guidance

6.2.21 The Government has published online Planning Practice Guidance (PPG) which for the first time provides all planning practice guidance in one web-based resource.

6.2.22 The PPG draws heavily on the NPPF and other relevant Planning Policy Guidance and also reiterates that Landscape Character Assessment should be used as a tool to help understand the character and local distinctiveness of the landscape and the features that give it a sense of place.

Local Planning Policy

Swindon Borough Local Plan 2026

6.2.23 The Development Plan for the purposes of the development is formed of the 'Swindon Borough Local Plan 2026' (adopted 2015). The Local Plan confirms at paragraph 4.294 that: **"The Science Museum at Wroughton is also an important visitor attraction and heritage asset. The Borough Council supports development in support of the museum activities as long as they are in line with the sustainability principles and in accordance with other policies in this plan as set out in Policy RA2."**

6.2.24 Policy RA2: Wroughton states that: 'Development at Wroughton shall be in accordance with Policies SD1 and SD2 and should support the following local priorities at Wroughton: (*inter alia*)

- **"maximise opportunities associated with the Science Museum to benefit Wroughton and the Borough through:**
 - **realising tourism benefits associated with the Science Museum;**
 - **and allowing expansion of museum related activities and enabling development providing the benefits of the development are delivered sustainably and do not conflict with other policies in the Local Plan;"**

6.2.25 In summary, the former airfield and all that is within the perimeter fence and within the ownership of the Science Museum Group is a single planning unit that is in use for museum related activities including the storage, preservation, research and display of historic items and artefacts. All other activities on the planning unit, such as the lease of hangars for storage purposes, the solar park, the research facilities, the use of runways for research activity and use of grasslands for grazing are ancillary to the main use.

6.2.26 In addition, relevant Policies of the Local Plan with respect to landscape and visual matters include:

- SD1: Sustainable Development Principles
- DE1: High Quality Design
- EN5: Landscape Character and Historical Landscape

Scoping Criteria

6.2.27 Although a formal scoping exercise was not carried out, in line with good practice for LVIA, consultation took place with the local authority regarding the selection of viewpoints for the LVIA. Four of the viewpoints locations (viewpoints 17-20) and the locations of the three photomontages were chosen following early pre-application correspondence and meetings undertaken with Swindon Borough Council. Meetings also took place with the North Wessex Downs AONB Board (07.11.17) and Natural England (14.11.17) during which the design parameters and principles were set out and the assessment viewpoints locations discussed and confirmed.

Limitations to the Assessment

6.2.28 In order to accurately assess the worst-case visual effects, on-site assessment should ideally be carried out during the winter months when there is the least vegetation coverage. As the timescales for this project did not allow for such a winter appraisal, professional judgment has been used to assess the likely effects due to seasonal variation. It is nonetheless considered that the judgements made are robust and fit for purpose.

6.3 BASELINE CONDITIONS**Site Description and Context**

6.3.1 The site is located approximately 1.4km south of the village of Wroughton, within the perimeter of the former Wroughton Airfield, which now forms part of the wider SMGW site. The location of the Site is illustrated on Figure 1.

6.3.2 The Site is located within the northern half of the former Wroughton Airfield complex which currently comprises runways, associated hangars and other ancillary buildings. The airfield, (operational from the 1930's to the 1970's) is located approximately 6.5km south of the centre of Swindon and 1.4km south of the intervening village of Wroughton and now form part of the SMG Wroughton.

6.3.3 Since 2015, the southern half of the wider SMGW site has housed the Swindon Solar Farm, a renewable energy scheme comprising of approximately 73 hectares of photovoltaic (PV) arrays, capable of generating around 50 GWh of energy each year. The panels, each of which is around 3m tall and in a matt blue/blue colour, are a notable feature in the surrounding landscape from those places where topography is such that the former airfield can be seen.

6.3.4 The 2014 Public Inquiry for the solar park confirm the 'Previously Developed Land' status of the entire planning unit whereby the Inspector and the Secretary of State both agreed that the entire curtilage of the previously developed land extends out to the perimeter fencing of the unit and includes the grasslands in between the runways and taxiways. The Secretary of State decision also specified that the improved grasslands within the site cannot be regarded, in their own right, to have a high environmental value.

6.3.5 The landscape context surrounding the Site, is one of an open rural landscape, with both arable and pasture farmland, that extends to the higher land to the south, known as Barbury Hill and its associated chalk scarp. To the north of the former airfield lies a further scarp slope that is heavily wooded, separating the wider SMG site from the village of Wroughton.

6.3.6 Further to the north lies the M4 motorway corridor and the town of Swindon, located at the head of a wide valley known as the Vale of White Horse. The remainder of the land to the north of the Site is interspersed with small local roads that link numerous small villages and farmsteads. To the east and west of the Site is a continuation of arable and pastoral farmland located between two scarp slopes that are approximately 3km apart, along with the villages of Broad Hinton, Chiseldon, the hamlet of Uffcott and residential areas of Thorney Park, Langton Park and Beranburh Field. To the south of the wider SMG site, the landform steepens as it climbs the escarpment that is for the most part open, with limited vegetation. Further to the south and beyond the escarpment the open agricultural landscape continues as part of the Marlborough Downs, interspersed with occasional equestrian centres (paddocks and grass race tracks), with a few local roads connecting the settlements of Avebury and Marlborough at an approximate distance of 7.0km.

Baseline Survey Information**The Site and its Landscape Features**

6.3.7 This section provides a description of the landscape features within the development site and their context within the surrounding study area. The landscape context of the site and immediate surrounding area is shown in Figure 1.

Landform and Topography

6.3.8 The site is located between two north facing escarpments of the Marlborough Downs, as the land falls northwards into a broad low lying vale down towards the River Cole. From the centre of the site at +195 meters AOD, levels across the wider SMG site increase in height to the northwest reaching +208 meters AOD at Markham Hill before falling steeply to a level of approximately +125 meters AOD, before falling further on a shallow gradient towards the River Cole reaching levels of +100 meters along the southern edge of Swindon.

6.3.9 To the south of the site, the landform falls in a southerly direction to a level of approximately +190 meters AOD before rising steeply before reaching heights in the vicinity of Barbury Castle and Barbury Castle Country Park of approximately +265 meters AOD. This curved and higher area of landform forms a ridge that is visually prominent in the landscape, and is a local landmark along which The Ridgeway National Trail, a long distance footpath, also runs. To the east of the Site, levels gently fall reaching a height of approximately +172 meters AOD at the foot of Liddington Hill, a distance of 5.5 Km from the Site, where the landform then rises very steeply to a height of approximately +277 meters AOD. To the west, the land is gently undulating and varies in height between +185 and +210 meters AOD before dropping steeply to a level of +160 meters AOD at the foot of the escarpment.

Land Use, Buildings and Infrastructure

6.3.10 The site and its immediate surroundings still retain the characteristics of an airfield, with the runways, taxiways, hangars and ancillary buildings being visually dominant elements in the landscape. The surrounding land use, particularly on the escarpment is predominantly agricultural, supporting a mixture of grazing land and arable fields. Field sizes are generally medium to large in size, and consistent in shape. Several small settlements lie within the escarpment, with Overtown and Chiseldon to the east, with Uffcott and Broad Hinton to the south-west.

6.3.11 To the north of the escarpment and its well vegetated scarp slope, the agricultural field pattern is more intricate and field enclosures are generally irregular, varying in size and shape. There are also several isolated farmsteads along with the larger villages of Wroughton and Wootton Bassett along with the urban edge of Swindon characterised by both residential and commercial developments.

Landscape Character

6.3.12 Landscape Character is an expression of pattern within the landscape resulting from particular combinations of the natural and historical factors that make one place different from another. This results in areas that have a unity of character and a distinctive sense of place when viewed from a landscape-wide perspective.

6.3.13 Published Landscape Character Assessments that cover the development site have been interrogated and are detailed below:

- Natural England National Character Area Profiles;

- Wiltshire Landscape Character Assessment (LCA) (2005);
- Swindon Borough Council Landscape Character Areas Adopted SPG (2004); and
- North Wessex Downs AONB Integrated Landscape Character Assessment (2002).

6.3.14 Landscape characterisation within the 5km study area is illustrated in Figure 2.

National Character Areas (NCA)

6.3.15 The site falls within NCA 116: Berkshire & Marlborough Downs. Key characteristics presented in the character area description are as follows:

“NCA 116: Berkshire & Marlborough Downs:

- **Uplifted mass of Chalk dipping south-east into the London Basin and edged by an extensive, complex escarpment. Rolling hills of the dip slope defined by the River Kennet valley and its tributaries, many of which are dry ‘combes’.**
- **Sarsen stones are prominent in prehistoric monuments, in historical buildings and in the countryside.**
- **Chalk rivers, wet woodland, reedbed and wet grassland in the major chalk valleys, supported by groundwater. River Lambourn displays exemplary chalk river ecology.**
- **Woodland and hedgerows concentrated on clay-with-flint soils of the lower dip slope where Savernake Forest is the nucleus of ancient woodland. Isolated beech clumps and shelterbelts stand out on the hills.**
- **Huge arable fields managed in very large holdings stretch across the chalk soils of the uplands, bounded by post-and-wire fencing and grass baulks. In the valleys and around Savernake, agriculture is more mixed and boundaries are irregular and hedged, often with oak trees. Savernake farmsteads are small scale.**
- **Gallops and stables of large horse-racing establishments, with a nucleus in the Lambourn Valley.**
- **Small areas of species-rich chalk grassland scattered on the scarps and steep slopes of dry valleys display colourful and rare plants such as early gentian.**
- **Mosaic of farmland habitats supports established populations of farmland birds, arable plants, harvest mouse and brown hare.**
- **High density of monuments, many being prominent landmarks across the arable uplands including stone circles, hill forts, barrows, chalk-cut horse figures and historic routeways. Avebury World Heritage Site is internationally significant.**

- Traditional building materials include thatch, red brick, flint and sarsens.
- Settlement is sparse on the high Downs, offering experiences of tranquillity, dark skies and far-reaching views. Villages cluster in valley bottoms and near springs, often associated with historical mills, watercress beds and watermeadows, and farmsteads at low densities.
- Recreation focused on limited areas of open access land, well-known heritage features including Avebury and historic routeways, including the Ridgeway National Trail and Kennet and Avon Canal. Private fishing interests dominate access to chalk streams.
- The Vale of Pewsey is a low-lying corridor of Upper Greensand enclosed by chalk escarpments. Villages are densely scattered across high-grade agricultural land supporting mixed agriculture."

6.3.16 Whilst this national scale assessment is useful in providing a broad contextual overview of landscape character, it is not intended to be applicable at a site-specific level and therefore it would be unlikely that the site displayed all of the above characteristics. However, the dramatic scarp on the northern edge, tree belts punctuating the skyline, intensive arable farming with sparse woodland cover and many sites of archaeological significance is typical of the landscape character and context in which the site is located. The development would only be visible from a small proportion of the landscape within NCA 116, and at this scale would not result in any change to key identified landscape characteristics. It has therefore been determined appropriate not to assess the effects at this scale further and instead to focus the assessment on the regional and local scale character assessments discussed below.

Wiltshire Landscape Character Assessment (2005)

6.3.17 The Wiltshire Landscape Character Assessment (LCA) (2005) makes reference to and draws upon the information and conclusions contained within previous character assessments, namely the Kennet District Council Landscape Character Assessment (1998), The North Wessex Downs AONB Integrated Landscape Character Assessment (2002) and Landscape Character Areas Adopted SPG (2004). The Wiltshire LCA identifies sixteen landscape types that cover Wiltshire (including Swindon), each of which are further sub-divided into component landscape character areas. The site is located in 'Landscape Type 4: Low Chalk Plain and Scarp' which has just one character area; 4A: Avebury Plain. The key characteristics of this area of relevance to the proposals are identified as:

- **"Level almost flat plain underlain by the eroded surface of the Lower Chalk;**
- **Steep northern scarp slope down to the clay vales forms a dramatic landform feature, defining the northern and western boundary;**
- **Open and exposed landscape with long views to the strong skyline formed by the higher chalk downlands to the south and west plus some views across low lying clay vales to the north;**

- Intimate mosaic of pasture, parkland and woodland on the scarp contrasts with the large-scale open arable plain;
- Regular large arable fields with very little tree or hedgerow cover dominates the plain;
- Airfields and redundant military sites are concentrated on the plain to the north."

6.3.18 The Wiltshire LCA notes as part of its description of the key characteristics of the character area that **"Airfields and redundant military sites are concentrated on the plain to the north"**. The character assessment further describes the area to the north, close to Swindon as follows: **"the expanded settlement of Chiseldon has a more modern character, and there are sizable twentieth century military developments, including Wroughton Airfield..."**

6.3.19 The text also describes inherent landscape sensitivities which includes the following that are relevant to the Site and immediate context:

- **"The open exposed character of the plain with long views;**
- **The open landscape of the plain is potentially visually sensitive to any form of large scale development, with screening opportunities limited;"**

Landscape Character Areas – Swindon Bough Council Adopted SPG (2004)

6.3.20 Swindon Borough Council produced an SPG on landscape character in 2004 and this continues to be referenced in the accompanying text to policy ENV5 'Landscape Character and Historic Landscape' of the Swindon Borough Local Plan 2026. Within the SPG in a reference to the supporting text to the former Policy EN10 of the previous Swindon Borough Local Plan 2011, it states **"Within the countryside the Local Planning Authority will seek to protect and enhance the character and quality of the environment. Development shall only be permitted where it takes account of its natural surroundings and their landscape character."**

6.3.21 The SPG identifies eight landscape character areas, with the proposal Site located within Landscape Character Area 5(V) Downs Plains, the key characteristics of which are described as follows:

- **"High plain, gently falling from north to south and of varying width. Lies between the Lower and Middle Chalk escarpments;**
- **Sweeping views south across the open landscape towards the High Downs, Iron Age hill forts and tree clumps;**
- **Large extensive fields, often defined by post and wire fencing with occasional hedgerows and generally treeless except for few young shelter belts."**

6.3.22 The SPG also states that new proposals within the Downs plains Landscape Character Area should:

- **"Ensure that scale and massing is restrained and low key, and appropriate to its surroundings;**

- **Where opportunities arise, ensure that existing elements of built form, which compromise landscape character through their scale and visual intrusiveness, are integrated into the landscape;**
- **Have regards to the area's location within the North Wessex Downs Area of Outstanding Natural Beauty, and**
- **Ensure that vistas towards the High Downs are not interrupted or compromised."**

The North Wessex Downs AONB Integrated Landscape Character Assessment (2002)

6.3.23 The North Wessex Downs is a landscape of national significance as recognised by its designation as an Area of Outstanding Natural Beauty (AONB). It is one of thirty-seven AONB's in England and Wales, and is considered to be of equivalent importance in terms of landscape quality as a National Park.

6.3.24 A landscape character study entitled the 'Integrated Landscape Character Assessment Technical Report' was undertaken for the whole of the AONB in March 2002 by LUC. Following comparable boundaries to 'Landscape Type 4: Low Chalk Plain and Scarp' of the Wiltshire Landscape Character Assessment is a character area identified as 'Landscape Type 5: Downs Plain and Scarp'.

6.3.25 Within the 2002 Landscape Character Assessment, the area is characterised by eight landscape types, each of which are further subdivided into landscape character areas depending on its distinct and recognisable local identity. The proposal Site at SMG Wroughton is located within Landscape Type 5: Downs Plain and Scarp, which occurs along the northern edge of the AONB. The key characteristics of this landscape character type are:

- **"The Plains appear as an almost flat, level surface;**
- **Bleak open landscape dominated by arable land, within large fields without enclosure or hedge, scrub or tree cover – notable absence of hedgerow trees;**
- **General absence of settlement, which tends to be concentrated on the scarp;**
- **Airfields and redundant military sites are a particular feature."**

6.3.26 It also notes that **"Settlement is characterised by a string of attractive, small, clustered spring-line villages along the base of the scarp. This distinct pattern of settlement contrasts with the largely uninhabited plain, where former military airfields are often the only significant development."**

6.3.27 Identified within the assessment as one of the key issues relating to the Downs Plain and Scarp landscape type, is the vulnerability to large scale development and tall structures, and re-use of redundant military infrastructure on the plains. At paragraph 12.16 it also states **"Consideration should also be given to the impact of development on the boundary of the North Wessex Downs on views from the higher ground of the Downs Plain and Scarp."**

6.3.28 The site is located within the Character Area 5B: Chiseldon-Wanborough Plain whose distinctive character is described as "... a level uniform land surface. However

throughout the area, the backdrop created by the high land of the Marlborough Downs is dominant on the skyline, creating a sense of enclosure and containment." Paragraph 12.34 further describes the character of this area as **"The absence of hedgerow enclosure and woodland, combined with the flat landform, creates a high degree of intervisibility with sweeping views through the area. In places, the open landscape structure, without local pattern or detail, results in an open character ..."**

6.3.29 The site itself is mentioned at paragraph 12.36 where it states **"Superimposed upon this largely unsettled landscape are twentieth century military developments, including Wroughton Airfield, with its hangars, runway and associated infrastructure...These installations are sizeable and, within this open landscape are now dominant features of the area, having a considerable visual impact, particularly in views from the high downs to the north, for example from Barbury Hill."**

6.3.30 With regard to the published landscape character assessments it is therefore understood that the existing character of the site is one which is in contrast with the remainder of the AONB and is developed with military infrastructure which influences the existing character of the site and surrounding area.

Landscape Designations

6.3.31 The assessment of potential effects on features and designated areas concerned with the historic environment (such as World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings and Conservation Areas) does not form part of this assessment. The identification of these however can be important in providing an indication of the value and quality of the wider landscape character as well as an indication of potential sensitive visual receptors and areas from where existing views towards the site are potentially more sensitive to change.

North Wessex Downs Outstanding Natural Beauty

6.3.32 The North Wessex Downs Area of Outstanding Natural Beauty (AONB) covers an area of approximately 668 sq miles between Reading and Swindon to the east and north, and Andover and Devizes to the south and east. It is the third largest AONB in England and was designated in 1972.

6.3.33 The site lies towards the northernmost boundary of the AONB, lying just over 1km from the edge of the AONB which runs along the southern edge of Wroughton following the dip in the landform at the foot of the Downs. The AONB boundary in the context of the site is illustrated on Figure 1.

Stonehenge and Avebury World Heritage Site

6.3.34 The Avebury component of the Stonehenge and Avebury World Heritage Site (WHS) is located approximately 7km from the southern boundary of the site at its closest point.

Conservation Areas

6.3.35 There are four conservation areas within the study area with Wroughton Conservation Area located closest to the development Site at an approximate distance of 1km. Hodson Conservation Area is located to the north-east; Chiseldon Conservation Area to the east and Swindon (Town Gardens) Conservation Area located to the north.

Scheduled Monuments

6.3.36 There are thirteen scheduled monuments within 5km of the development Site including a grouping centred on Barbury Castle and includes adjacent field systems and earth works approximately 2.5km at their closest point to the south.

Baseline Visual Receptors

Extent of Visibility

6.3.37 A 'bare earth' Zone of Theoretical Visibility (ZTV) plan (Figure 1) has been produced which helps to illustrate the theoretical extent of where the development would be visible in a bare earth scenario. This has been generated on the assumption that proposed museum collections management building would be built at an assumed maximum building height of 13.5m. This image uses terrain data only, and as such represents a 'worst case' scenario, with no account made for the effects of screening elements present in the intervening landscape.

6.3.38 The ZTV plan is a tool to help illustrate locations where views of the development would not be possible so as to allow the focus of baseline studies to be made on those locations where views are theoretically possible.

6.3.39 Following desktop research and site visits, it was evident that the extent of actual visibility of any development is far less than is suggested by the ZTV plan. Visibility would be limited to the immediate environs of the site owing to the combined effect of built form and vegetation surrounding the site and the level topography of the landscape.

General views and screening elements

6.3.40 Views within the wider landscape beyond the site are generally restricted by the flat nature of the topography and the influence of screening elements within and in the immediate environs of the site.

6.3.41 To the north of the site the majority of locations within 1km would have no view of the site due to the screening effect of the topography. Beyond this area, the ZTV indicates an area of theoretical visibility along the M4 corridor. However, in reality any views would be no more than glimpses, as illustrated in the photograph for viewpoint 8, taken on an overbridge of the M4, which is discussed subsequently in this report.

6.3.42 To the west of the site, views are again heavily restricted by the topography of the landscape and limited to isolated areas of slightly higher ground, as represented by viewpoints 3, 7 and 20.

6.3.43 To the east, the ZTV illustrates the potential for a greater degree of visibility, however in practice the generally flat nature of the landscape in this area is such that a relatively small degree of vegetation between the site and the viewer can serve to screen the view, as demonstrated in the photograph for viewpoint 9, taken from the edge of Chiseldon.

6.3.44 To the south, clearer views are possible as the ground rises upwards towards the Marlborough Downs, as illustrated by viewpoints 6 and 10. At the higher ground at the northernmost point of the Marlborough Downs upon which runs the Ridgeway National Trail views of the site become unobstructed, albeit being seen in the context of a wider panorama which includes the solar energy development in the southern part of the wider SMG site and the built development of Swindon and the M4 corridor.

Visual Receptors

6.3.45 A number of visual receptors exist within the wider landscape. Those that formed the initial basis of the fieldwork study were identified through ZTV analysis and desk based study in advance of the site visit. Through fieldwork observations and an understanding of screening elements and general visibility, the majority of those originally identified were discounted due to an absence of views.

6.3.46 A number of viewpoint locations have been considered to help represent the nature of views towards the site from the surrounding landscape. The following 20 viewpoint locations have been considered, as illustrated at Figure 1 (Appendix 6.2) and presented in a Photographic Record at Appendix 6.3. A viewpoint assessment is also set out at Appendix 6.4 and three of the viewpoints have also been used as the basis for the production of photomontage visualisations, presented in Appendix 6.5. The photomontages show the scale and massing of the development in its landscape context from key locations in the surrounding locality and provide a useful tool to aid the judgements made in the LVIA process.

6.3.47 In line with good practice for LVIA, consultation took place with the local authority regarding the selection of viewpoints for the LVIA. Four of the viewpoints locations (viewpoints 17-20) and the locations of the three photomontages were chosen following early pre-application correspondence and meetings undertaken with Swindon Borough Council.

Table 6.1: Viewpoints

Viewpoint Number	Viewpoint Name
1	Minor Road, east of Wroughton Airfield
2	Public Footpath, west of Wroughton Airfield
3	Minor Road, northwest of Wroughton Airfield (208m spot height)
4	Public Footpath, near A4361
5	Minor Road, south of Overtown Farm
6	Public Footpath, south-east of Uffcott
7	White Horse Trail, south of Binknoll Castle (206m spot height)
8	Minor Road, overbridge of M4
9	Public Footpath, Chiseldon
10	Minor Road, south of Midge Hall
11	Minor Road, Fiddler's Hill
12	The Ridgeway, Hackpen Hill south of White Horse car park
13	The Ridgeway, Hackpen Hill north of White Horse car park
14	The Ridgeway, west of Barbury Castle
15	Barbury Castle
16	Barbury Castle, car park
17	Swindon Karting Area car park
18	Offices to the south-east of the Site
19	View from Site Entrance Road
20	View from Red Barn Gate

6.3.48 In addition to the assessment viewpoints, a range of different receptor groups that form the focus of this assessment are also listed below.

Residential receptors

6.3.49 The number of residential properties which offer the potential for residents to experience views towards the site in close proximity to the site are very limited. Those properties which may experience a view of the proposals include the cluster of properties at The Stables, to the west of the site, and Hackpen Farm to the south.

Users of publicly accessible paths and cycle routes

6.3.50 The nearest public right of way to the site, runs to the south-west, linking Uffcott/Yew Tree Lane to a dirt track that leads to Science Museum Lane. A small length of 'other route with public access' is also indicated running from Science Museum Lane in a south-east direction and terminates at the main east to west runway, however there is no clear definition on the ground.

6.3.51 There are a number of other public footpaths, bridleways and Byways Open to All Traffic (BOAT) within the study area. In particular, the Ridgeway National Trail is located approximately 2.5km to the south at its closest point. The White Horse Trail, a promoted long distance walking route also passes to the west and south-west of the site as it runs up to join with the Ridgeway.

Users of the transport network

6.3.52 Due to the high degree of screening by topography and vegetation present around the site, the number of roads from which motorists and passengers are likely to experience views is very limited. The only routes that would have the potential to experience more than a glimpse of the site would be the minor roads which run northwards down off the Malborough Downs.

Users of the recreational and cultural sites

6.3.53 There are a number of recreational, leisure and cultural sites (sites that are considered to have the potential to attract visitors that may regard views of the landscape as an important part of their experience and enjoyment) from which views of any development would be possible. These are primarily located along The Ridgeway within the Malborough Downs to the south of the study area, and include Barbury Castle and its associated country park.

6.4 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

6.4.1 The assessment of effects firstly assesses the sensitivity of the landscape resource or visual receptor. An assessment is then made as to the magnitude of the change, in terms of its scale or size.

6.4.2 The assessments of sensitivity of the receptor and magnitude of change are then combined with the duration of the effect and the reversibility of the effect, to assist in determining the relative level of effect on each landscape feature, character area or visual amenity.

Description of the Development

6.4.3 The development is a new museum collections management facility for the Science Museum Group. The building, known as Building ONE, would be located towards the

northern extent of the SMGW site on area between the former runway and the former hangar buildings, which has historically been maintained as managed grassland. The layout of the development has been developed to respond to the history of the former airfield site, with the building located at right angles to the former runway and with a design and scale which is in proportion to the existing former hangar buildings. Refer to Chapter 4 for details of building dimensions and access.

Construction

6.4.4 It is recognised that there would be some additional temporary, non-permanent effects during the construction of the building, over and above those assessed as permanent effects associated with the operational phase. The effects would relate to the movement of plant and materials on site during the construction period.

Effects on Landscape Features

6.4.5 There would be no additional temporary effects to the existing landscape features during the construction phase of the development beyond those considered within the assessment of operation stage effects discussed below.

Effects on Landscape Character

6.4.6 The only additional construction phase effects of note would be the direct effects on the existing airfield character of the site itself, within a small part of LCA 4A: Avebury Plain and the North Wessex Downs AONB. There would be minor earth movements associated with the construction of the new foundations, along with the movement of construction vehicles, personnel and materials as the new building is erected.

6.4.7 Within a relatively small radius of the site, it is considered that there would be a medium magnitude of additional change (over that during the operation phase described below). This would result in a temporary moderate additional effect on landscape character, over and above the permanent effects described below. The construction effects would be temporary in nature and would not be significant.

6.4.8 Beyond the immediate vicinity of the site, it is assessed that there would be no greater than an additional low magnitude of change, resulting in no higher than a moderate/minor temporary effect on landscape character, which is not significant.

Effects on Visual Amenity

6.4.9 The only effects of note would be experienced in the immediate vicinity of the site, due to the scale of the additional features in the view, in relation to construction vehicles, personnel and materials.

6.4.10 Receptors within the former Wroughton Airfield site, or those using the minor road to the east, would experience an additional medium magnitude of change on views as a result of the construction activities associated with the construction of Building ONE. This would result in a moderate temporary visual effect over and above the permanent visual effects described below. These additional temporary effects are not considered to be significant.

6.4.11 Beyond the immediate vicinity of the site, it is assessed that there would be no greater than an additional low magnitude of change on views, resulting in no higher than a moderate/minor temporary effect, which is not significant.

Operation

6.4.12 The effects on Landscape Features, Landscape Character and Visual Receptors in relation to the operational phase of the development are discussed in turn below.

Effects on Landscape Features

Effects on Landform and Topography

6.4.13 It is assumed for the purposes of this assessment that the new development would be constructed at grade with current ground levels with only a topsoil strip and temporary storage mounds taking place. As such although effects are considered long term and permanent the magnitude of change is assessed as very low resulting in a negligible level of effect to landform and topography, which is not significant.

Effects on Land Use, Buildings and Infrastructure

6.4.14 The managed grassland land use of the site is characteristic of the wider former airfield context surrounding the former runways and areas of hardstanding and is not of any designated character or value. It is therefore considered that in applying the assessment criteria and professional judgement, the land use of managed grassland is of low sensitivity.

6.4.15 The development would represent a change to the current land use from an area of managed grassland to a museum collections management building. The effects on land use would be direct, long term and permanent. The magnitude of change is assessed as very high, resulting in a moderate level of effect to the current land use, which, in part due to the functional nature of the existing land use, is assessed as non-significant. It is important to appreciate that a localised change to land use such as this is an inevitable consequence of the development of a museum collections management building such as this, and that the adverse effect identified is of a nature which is typical of other similar scale developments throughout the UK.

Effects on Landscape Character

6.4.16 The level of effect on landscape character is assessed through determining the sensitivity of the landscape character to a change of the type proposed and the magnitude (scale) of the change. These factors are then combined with the duration and reversibility of the effect, to establish the level of effect on landscape character.

6.4.17 As previously discussed, the ZTV in Figure 1 (Appendix 6.2) indicates that theoretically, based on topography, the development would be visible from areas falling within several different Landscape Character Types and Areas.

6.4.18 In reality however, vegetation and built form within the study area significantly reduces the actual extent of visibility. The potential for the development to affect landscape character to any notable degree would be limited to the site and its immediate environs within the Low Chalk Plain and Scarp and the rising ground of the Marlborough Downs to the south.

Effect on the Landscape Character of the Site and Immediate Surroundings

Sensitivity of the Landscape Character of the site to the Development of a Museum Collections Management Building

6.4.19 The existing character of the site is one which is developed in nature with former military infrastructure, including a number of adjacent former hangar buildings, which are very similar in nature to the development. This existing infrastructure serves to influence the character of the site and surrounding area such that the character continues to be

perceived as that of a former airfield, notwithstanding the location of the site within the AONB. The contrast between the character of the site and that of the wider AONB landscape is one which was also acknowledged within the published landscape character assessments covering the site, referenced earlier in this report.

6.4.20 It is therefore understood that in contrast with the remainder of the AONB the site is understood to be less sensitive and to have a 'medium' sensitivity to the development proposed. This medium sensitivity being defined in the assessment criteria as follows: 'medium: Areas that exhibit positive character but which may have evidence of alteration to/degradation/erosion of features resulting in areas of more mixed character. Potentially sensitive to change in general: again change may be detrimental if inappropriately dealt with but may require special or particular attention to detail. Regionally or locally recognised landscapes.'

Magnitude of Change and Level of Effect on Landscape Character of the Site

6.4.21 The development would be of a type which is similar in nature to the existing hangar buildings at the former airfield, but lower in height, and this would serve to limit the potential for the development to result in any notable impact to the character of the landscape.

6.4.22 Effects relate the change in the current land use from an area of managed grassland to a museum collections management building. Notwithstanding that the site itself is currently managed grassland, given the existing airfield character of the site and the close proximity of the existing large scale former hangar buildings, the magnitude of change is assessed as low-medium resulting in a minor to moderate level of effect on the character of the site and its immediate environs, which is not significant. Effects would be long term and permanent.

Effect on the Landscape Character of the wider Landscape Surrounding the site

Wiltshire Landscape Assessment - Landscape Type 4: Low Chalk Plain and Scarp, 4A: Avebury Plain

6.4.23 The Avebury Plain character area covers an area of generally flat arable landscape to the north of the lower slopes of the Marlborough Downs. The former Wroughton Airfield, now part of SMG Wroughton in which the site is located is an established large scale man-made element within this landscape character area and the development within the northern half of the former airfield fits well with the scale, landform and pattern of the landscape in this location. It is acknowledged that the development would introduce an additional built element to the site, but one which is already characteristic of the existing development within the receiving landscape of the former airfield.

6.4.24 The Avebury Plain character area extends across the full extent of the 5km study area in both directions from the site. Given the limited scale and nature of the development, the potential for any impact to the character of the landscape would be limited to only a small part of the character area, localised to the immediate environs of the site. Beyond a very short distance from the site the magnitude of change would reduce to low resulting in a minor level of effect on the character of the Avebury Plain in the area close to the site, which is not significant. Indeed, within no more than 1km from the site the magnitude of change would reduce to negligible, as the impact of the new museum collections management building would become imperceptible from that of the existing hangar buildings, resulting in a negligible level of effect on the character of the remainder of the Avebury Plain.

The North Wessex Downs AONB Integrated Landscape Character Assessment - Landscape Type 5: Downs Plain and Scarp

6.4.25 The Downs Plain and Scarp landscape character type covers broadly the same area of landscape as the Avebury Plain character area identified in the Wiltshire Landscape Assessment. The landscape character type is further subdivided into a series of character areas. The site is located within Character Area 5B: 'Chiseldon-Wanborough Plain'. As identified above, there would be a minor to moderate level of effect on the character of the site itself and its immediate environs, which is not considered significant. Beyond the site, within a very short distance the effect would reduce to minor and within no more than 1km from the site the effect on the Chiseldon-Wanborough Plain would reduce to negligible.

6.4.26 Character Area 5A: 'Avebury Plain' covers the area to the south-west of the site. Again, for this area any effect on the character of the landscape would be minor and within no more than 1km from the site the effect would reduce to negligible. Character Area 5E: 'Clyffe Pypard - Badbury Wooded Scarp' covers the wooded areas of the scarp landscape to the north of the site. There would be no potential for more than glimpsed views of the development from these areas and any effect on the character of these areas would be negligible.

Wiltshire Landscape Assessment - Landscape Type 1: Low Chalk Plain and Scarp, 1B: Marlborough Downs

6.4.27 The Marlborough Downs character area is an expansive area of undulating chalk plateau extending north of the Kennet River Valley, with its boundaries defined by the elevated topography and Upper Chalk geology. This scarp and vale topography is such that elevated views of the site at the former airfield are gained from the northernmost edge of the character area, as part of a wide panorama of views, which include the solar energy development in the southern part of the former airfield and the built-up area of Swindon and the M4 corridor beyond.

6.4.28 In general, from this distance (at least 2.5km) a notable change in landscape character can already be discerned between the former airfield/ military site and the wider Downs Plain and Scarp character area in which it is located. The edges of the former airfield are well defined and marked by the scale of the existing former hangar buildings to the periphery of the site. Some of the buildings are constructed from fairly light coloured and reflective materials including one building of newer appearance which forms part of the existing museum cluster. Several of the other buildings are more muted in colour but still clearly noticeable. At the southern end of the site, solar panels associated with the Swindon solar farm are a clearly noticeable element of the view.

6.4.29 In the northern part of the site, beyond the solar panels, the runways can be discerned but some sections are patchy and subject to weed growth, the runway markings have faded beyond perception at this distance. Vehicle movements can be clearly seen as they pass along the runways. The managed grassland at the site, between the former runways, appears in contrast to the surrounding patchwork of arable fields.

6.4.30 In the context of the existing difference between the character of the former airfield site and the remainder of the Downs Plain and Scarp landscape, the potential for there to be any effect on the character of the Marlborough Downs character area is limited. Whilst the sensitive nature of this part of the AONB landscape is acknowledged the magnitude of change on the character of the Marlborough Downs that would be brought about by the development would be no more than very low, resulting in minor to negligible level of effect, which is not significant.

The North Wessex Downs AONB Integrated Landscape Character Assessment - Landscape Type 1A: The Marlborough Downs

6.4.31 The Marlborough Downs landscape character type identified in the AONB landscape assessment covers broadly the same area of landscape as the character area of the same name identified in the Wiltshire Landscape Assessment. The assessment on this area would therefore be the same as identified above, a minor to negligible level of effect, which is not significant.

Summary

6.4.32 It is considered that the localised effects on the character of the landscape from the proposals would not be such as to result in any significant harm to the AONB or its special qualities (which are discussed separately in this Chapter). The site lies in a fringe landscape which is characterised to large degree by the former airfield in which it is located and in such a context the scale and form of the development would not result in undue harm to the character of the AONB.

6.4.33 The vertical extent of the development, similar in nature to the existing former hangar buildings, is such that the proposals would not have any detrimental impact on the ability to understand the topography of the scarp slope and the existing context of the site, set in the lower fringe landscape beneath the Open Downland would be such that the ability to enjoy the relative remoteness of the upper sections of the AONB would not be compromised.

6.4.34 Overall it is considered that the proposals will comprise an additional element of an existing component within the existing airfield character of the site, which in turn forms an existing unique component in the wider receiving landscape. It is acknowledged that some localised effects on landscape character would occur, but in particular given the existing context of the site, these would be highly limited in extent.

Effects on Visual Amenity

6.4.35 The assessment of visual effects considers the potential for changes in views and visual amenity. The aim is to establish the area in which the development may be visible, the different groups of people who may experience views of the development, the places where they will be affected and the nature of the views and visual amenity (meaning the overall quality and pleasantness to a view).

6.4.36 In accordance with GLVIA3, the assessment of visual effects begins with an assessment of the sensitivity of each visual receptor to residential development. An assessment is then made as to the magnitude of the change in terms of its scale or size. The assessments of receptor sensitivity and magnitude of change are then combined with the duration of the effect and the reversibility of the effect, to assist in determining the relative level of effect on each visual receptor.

6.4.37 The visual effects of the development on key visual receptors are assessed below. Consideration has been given to seasonal variations in the visibility of the development and these are described where necessary.

6.4.38 During the fieldwork stage of this assessment (September 2017), a series of photographs were taken for a number of assessment viewpoints. These have been included within this assessment as a means of illustrating the visual issues discussed within this LVIA. The photograph locations are illustrated on Figure 1 (Appendix 2) with photographs presented in Appendix 6.3 and a Viewpoint Assessment presented in Appendix 6.4, the effects identified in which are summarised below.

Table 6.2: Summary of Viewpoint Assessment

ENVIRONMENTAL STATEMENT

LANDSCAPE AND VISUAL IMPACT

Viewpoint Number	Viewpoint Name	Sensitivity	Magnitude	Level of Effect	Significant (yes/no)
1	Minor Road, east of Wroughton Airfield	Medium	Medium/High	Moderate	Yes
2	Public Footpath, west of Wroughton Airfield	High	None	None	No
3	Minor Road, northwest of Wroughton Airfield (208m spot height)	Medium	Low	Moderate/Minor	No
4	Public Footpath, near A4361	High	None	None	No
5	Minor Road, south of Overtown Farm	High	None	None	No
6	Public Footpath, south-east of Uffcott	High	None	Negligible	No
7	White Horse Trail, south of Binknoll Castle (206m spot height)	High	Very Low/None	Negligible	No
8	Minor Road, overbridge of M4	Medium	Very Low/None	Negligible	No
9	Public Footpath, Chiseldon	High	None	None	No
10	Minor Road, south of Midge Hall	Medium	Very Low/None	Negligible	No
11	Minor Road, Fiddler's Hill	Medium	Very Low	Minor	No
12	The Ridgeway, Hackpen Hill south of White Horse car park	High	Very Low	Minor	No
13	The Ridgeway, Hackpen Hill north of White Horse car park	High	Low/Very Low	Minor	No
14	The Ridgeway, west of Barbury Castle	High	Low	Moderate/Minor	No
15	Barbury Castle	Very High	Low	Moderate	No

Viewpoint Number	Viewpoint Name	Sensitivity	Magnitude	Level of Effect	Significant (yes/no)
16	Barbury Castle, car park	Very High	Low	Moderate	No
17	Swindon Karting Area car park	Medium	Medium/High	Moderate	Yes
18	Offices to the south-east of the Site	Low	Low	Minor	No
19	View from Site Entrance Road	Medium	Medium/High	Moderate	Yes
20	View from Red Barn Gate	High	Low/Medium	Moderate/Minor	No

Effects on Residential Receptors

6.4.39 Residential receptors (at their property) are generally considered to be of high sensitivity to a change in their view. It is generally accepted however that sensitivity decreases within upper floors due to the use of upper storeys generally not being associated with primary living spaces. As a precautionary approach, the default position adopted is that residential receptor sensitivity is high.

6.4.40 The number of residential properties which offer the potential for residents to experience views towards the development in close proximity to the site are very limited. Those properties which may experience a view of the proposals include the cluster of properties at The Stables, to the west of the site, and Hackpen Farm to the south. In no instance however would the proposed new building form more than a minor additional element in the view of the existing buildings at the former airfield site. The magnitude of any visual impact would be no more than low, resulting in a minor effect at most on a very small number of properties, which is not significant. On the whole however, the proposed new building would be barely perceptible from almost all residential properties in the area surrounding the site.

Effects on Publicly Accessible Paths and Cycle Routes

6.4.41 Whilst there is likely to be variation in terms of receptor sensitivity and visual effects experienced along a route (in part dependant on the angle and direction of the view) the assessment considers a worst-case scenario whereby recreational users of all public footpaths and cycle routes are considered to be of high sensitivity to changes in their view.

6.4.42 The nearest public right of way to the site, runs to the south-west, linking Uffcott/Yew Tree Lane to a dirt track that leads to Science Museum Lane. Much of this route lies outside of the ZTV and would have no visibility of the proposed new building. As illustrated in the photograph for viewpoint 2, from the short section of the route where the building would in theory be visible, the panels and new boundary planting associated with the solar energy development in the southern part of the former airfield site would serve to restrict any potential views.

6.4.43 A small length of 'other route with public access' is also indicated running from Science Museum Lane in a south-east direction and terminates at the main east to west runway, however there is no clear definition on the ground and the route does not appear to be used in practice. Should the route be walked, the new building would be visible

amongst the existing hangar buildings, but at a distance of more than 500m away would give rise to no more than a minor visual effect, which is not significant.

6.4.44 The Ridgeway National Trail is located approximately 2.5km to the south of the site at its closest point as the route follows the northernmost section of the Marlborough Downs.

6.4.45 The Ridgeway was designated as a National Trail in 1972 and is one of 15 National Trails which currently run within England and Wales. The routes, which were originally known as Long Distance Routes, began to be established alongside AONBs and National Parks following the Second World War.

6.4.46 The Ridgeway is 139km (87 miles) long and runs in a north easterly direction from Avebury in Wiltshire to Ivinghoe Beacon in Buckinghamshire, following a route used since prehistoric times and passing through the North Wessex Downs and the Chilterns. The Ridgeway of today is the middle section of the Greater Ridgeway, an ancient system of tracks that stretches from Lyme Regis on the Dorset coast, to Hunstanton on the Norfolk coast. The route is often described as the oldest road in Britain and was originally used by traders, travellers and drovers, but today is mostly used by walkers, cyclists and horse riders for leisure purposes.

6.4.47 As is illustrated on the ZTV Plan, theoretical visibility from the Ridgeway is limited to parts of a short section of the route between Hackpen Hill, to the south of White Horse Hill, and the Barbury Castle car park, approximately 4.4km in length. However, in reality the visibility would be less than is illustrated on the ZTV Plan from some areas. There are five viewpoints from the Ridgeway covering this area (viewpoints 12 - 16), two of which lie with the Barbury Castle area, discussed separately. At Barbury Castle the main route of the Ridgeway passes between the earthworks of the Hill Fort restricting views of the proposal site unless the earthworks are climbed by visitors.

6.4.48 As demonstrated with reference to the viewpoint photography, when viewed from the Ridgeway, the development would be contained within the envelope of the existing former airfield site, which, by the scale of the existing infrastructure, is currently a notable visual element in the baseline landscape. Given the sensitivity of the Ridgeway as a National Trail, although the proposed new building would result in no more than a low impact on the view, this would represent a minor-moderate visual effect, which is not significant. However, the ability to understand and appreciate the view from the route would not be harmed to any significant degree, and this section of the Ridgeway would continue to remain a pleasant and enjoyable route to walk.

6.4.49 The White Horse Trail, a promoted long distance walking route also passes to the west and south-west of the site as it runs up to join with the Ridgeway. The majority of the route lies outside of the ZTV and would have no visibility of the proposals. There is the potential for a glimpsed view of the development from a short section of the route as it crests a highpoint in the landscape to the west of the site. But, as demonstrated in the photograph for viewpoint 7, at a distance of more than 3km away, there would be no potential for more than a negligible visual effect from this location, which is not significant.

6.4.50 Further to the south the route rises up the scarp slope to meet with the Ridgeway and the site would become visible, with the proposals forming a distant element amongst the existing buildings at the former airfield site. Again, at more than 3km away, notwithstanding the more elevated position in the landscape, there would be no potential for more than a minor to negligible visual effect from this section of the route, which is not significant.

6.4.51 There would be a limited number of further rights of way from which the proposals would be visible, generally those located on the scarp slope where views are more

elevated. However, in all cases the development would appear as a minor addition to the existing infrastructure at the former airfield, resulting in no more than minor to negligible visual effects, which are not significant. This is demonstrated in particular with regard to the photography for viewpoints 6 and 10 (which is located near the route of the Old Ridgeway footpath).

Effects on Transport Routes

6.4.52 With reference to the criteria set out in Appendix 6.1, users of minor roads are considered to be of medium or high sensitivity, depending on the level of recreational use of the route where they are located. In the case of this assessment, all minor roads leading to the Marlborough Downs are considered to be likely to be used by a number of recreational users in order to access the Ridgeway and are therefore considered to be of high sensitivity.

6.4.53 Due to the high degree of screening by topography and vegetation present around the site, the number of roads from which motorists and passengers are likely to experience views is very limited. The only routes that would have the potential to experience more than a glimpse of the site would be the minor roads which run northwards down off the Marlborough Downs. The photographs for Viewpoints 10 and 11 provide a good indication of the potential for visibility of the proposals from these minor roads. In both cases the proposed building would appear as a minor additional element alongside the existing infrastructure at the former airfield. Whilst noticeable, the potential for new visual impacts to arise to the users of the roads would be limited, with no more than minor visual effects arising, which are not significant.

Effects on Recreational and Cultural Sites

6.4.54 There are a number of recreational, leisure and cultural sites from which views of the development would be possible. These are primarily located along The Ridgeway within the Marlborough Downs to the south of the study area, and include Barbury Castle and its associated Country Park.

6.4.55 Barbury Castle hill fort remains and its associated Country Park lie approximately 2.5km from the site to the south and are located along the Ridgeway National Trail. The Castle remains are a Scheduled Monument and the Country Park covers a surrounding area of 60 hectares, all of which is accessible to the public.

6.4.56 There are two viewpoints representing this area, from the Castle itself (viewpoint 15) and from within the Country Park (viewpoint 16), which was taken from near the car park. The existing view from this area is towards the former airfield and views of development are available in the broad panorama visible from the Castle, particularly the former aircraft hangars and solar farm development.

6.4.57 The Castle is considered to represent a very high sensitivity receptor and therefore although the proposed new building would result in no more than a low impact on the view, this would represent a minor-moderate visual effect, which is not significant. However, whilst there would be some effect on views from the Castle when looking towards the site, the overall experience of visiting the castle and the ability to understand and appreciate its landscape context would not be harmed to any significant degree.

6.4.58 The landscape context in and around Barbury Castle has evolved since the establishment of the hill fort in the Iron Age, however development has been a feature of the lower lying land visible from the Castle for a great period of time. Evidence of settlement around Wroughton extends as far back as the Roman period and the area continued to grow throughout the middle ages. The former Airfield itself has been part of the landscape since its development in the 1930s as RAF Wroughton, with its large hangars

being used since the late 1970's for storage of large objects from the Science Museum Group's collection. More recently the landscape context of the Castle has further evolved with the addition of the Swindon Solar farm development in the view.

Effects on the North Wessex Downs Area of Outstanding Natural Beauty (AONB)

6.4.59 The North Wessex Downs Area of Outstanding Natural Beauty (AONB) covers an area of approximately 668 sq miles between Reading and Swindon to the east and north, and Andover and Devizes to the south and east. It is the third largest AONB in England and was designated in 1972.

6.4.60 The development site lies towards the northernmost boundary of the AONB, lying just over 1km from the northern edge of the AONB, which runs along the southern edge of Wroughton following the dip in the landform at the foot of the Downs.

Potential for Effects on the Special Qualities of the AONB

6.4.61 There are eight landscape 'special qualities' set out in the AONB Management Plan (2014-2019). Each of the eight relates to a different landscape character area within the AONB, based on those areas which were defined within the North Wessex Downs AONB Landscape Character Assessment (2002). In each case the character area is highlighted as part of a sentence describing the characteristics of the area. The character areas and their 'special qualities' in the vicinity of the site which are therefore of relevance are the 'Downs Plain and Scarp' in which the site is located and the 'Open Downland' which covers the higher ground to the south.

6.4.62 The 'special qualities' of these areas as they are set out in the AONB Management Plan (2014-2019) are set out below:

- **"The distinctive northern Downs Plain and Scarp plunges down from the chalk plain to the Vale of White Horse, creating a dramatic recognisable horizon."**
- **'Open Downland extending from Roundway Down near Devizes to Lardon Chase overlooking the Thames at Streatley is dissected by dry valleys and long steep scarps, with limited tree cover and sense of remoteness and tranquillity.'**

6.4.63 The potential for the development to impact upon these identified 'special qualities' has been considered. Firstly, with regard to the Downs Plain and Scarp, it is not considered that the development would prevent the understanding and appreciation of the dramatic recognisable horizon when this is viewed from the Vale of White Horse. It is acknowledged that the proposals would be visible in some views towards the chalk plain from the vale; however, the manner in which the height of the proposed building reflects that of the existing adjacent former hangar buildings is such that the horizon would remain the primary focus of the view. In this regard, it is noted that in the same angles of view from the vale from which the proposal would be visible alongside the ridge, the existing infrastructure at the former airfield, including the former aircraft hangars, is already visible and does not currently prevent the ridge beyond from being the key characteristic of the view.

6.4.64 In terms of the Open Downland, it is the sense of remoteness and tranquillity which is the relevant characteristic for consideration. Firstly, whilst it is agreed that there is a relative sense of remoteness when compared with the surrounding landscape, it is not the case that the views looking outward from the Open Downland are free from development or human influence. In particular, when looking towards the site from those locations in the Open Downland from which longer distance views are available, elements of the middle

and far distance of the view include the borough of Swindon, with the Great Western Hospital a noticeable feature. This is in addition to the existing infrastructure at the site associated with the former airfield, where from the more elevated areas of the Open Downland, views of the runways themselves become increasingly apparent and in particular the solar panels associated with the Swindon Solar Farm are a clearly noticeable element of the view.

6.4.65 Notwithstanding these views of existing development, there is clearly a sense of being removed from the urban environment when within the Open Downland. It is not considered however that the proposed additional building would have a significant impact upon remoteness or tranquillity with the Open Downland. The most remote and tranquil areas of this landscape are those further within the heart of the Marlborough Downs, from which the ZTV plan included with the LVIA illustrated that the development would not be visible.

6.4.66 From the areas where the scheme would be visible it would not lie within 2km of the Open Downland, so would never be in the immediate foreground of the view. It would also clearly be perceived as lying within the lower surrounding landscape in which varying types of development are already a noticeable feature. The scale of the building in line with the existing hangars would ensure there would be no apparent change to the topography of the area and there would be no moving elements or features which may be more notable in the view.

Decommissioning

6.4.67 The proposed building is assumed to be a permanent structure, however were it to undergo decommissioning, the effects would be similar to those outlined in the Construction section above, with levels of effect gradually reducing rather than increasing as the building is dismantled.

6.5 MITIGATION AND ENHANCEMENT

Mitigation by Design

6.5.1 In order to reduce the likelihood of significant adverse landscape and visual effects, a mitigation strategy has been implemented within the design of Building ONE.

6.5.2 Consideration has been given to the orientation of the building, taking into account the topography of the site, proximity to existing services and access arrangements. The evaluation led to the development site running perpendicular to the former runway.

6.5.3 The most sensitive views towards the proposed building were considered to be from Barbury Castle, Hackpen Hill and The Ridgeway National Trail, on an elevated ridge, over 2.5km to the south of the site, within the North Wessex Downs AONB. The existing adjacent hangars form large scale, light coloured blocks in the wide panoramic views from these locations. In order to reduce the visual impact of the proposed building, it has been designed to have a lower profile than the immediately adjacent hangars.

6.5.4 To reduce the visual impact further, several options for the treatment of its exterior were considered, including using a single solid colour, and breaking up the solid colour with irregularly spaced narrow or thicker bands of another colour.

6.5.5 Having reviewed the options it was considered that the irregular spaced, thicker bands were the most effective in breaking up the visual massing of the proposed building in key long distance views. The 'Moorland Green' colour option was preferred to help it to blend into the wider landscape, in particular the grassed area immediately to the south.

Table 6.3: Mitigation

Ref	Measure to avoid, reduce or manage any adverse effects and/or to deliver beneficial effects	How measure would be secured		
		By Design	By S.106	By Condition
1	Orientation of the building reflecting the alignment of the former runway	X		
2	Scale of the building reflecting the existing hangar buildings	X		
3	External treatment (colour) of the building, using banding and a 'moorland green' colour.	X		

6.5.6 The Assessment of Likely Significant Effects in Section 6.4 above takes into account the mitigation measures described above, within the assessment of each receptor, in order to establish the residual effects.

6.6 CUMULATIVE AND IN-COMBINATION EFFECTS

6.6.1 Other developments in the vicinity of the site which are currently in planning, or consented but yet to be constructed, have been considered as part of this assessment for the potential for cumulative effects to arise, but none were found.

6.7 SUMMARY

Introduction

6.7.1 This LVIA has considered the baseline landscape and visual conditions relating to the proposed Building ONE site within the Science Museum Group site at Wroughton Airfield. An appropriate sized study area of 5km has been selected, based on the scale of the proposed development, and a Zone of Theoretical Visibility (ZTV) has been produced to help to identify the landscape and visual receptors with the potential for significant effects.

6.7.2 The effects on landscape features, landscape character and visual amenity have been assessed, taking into account the mitigation by design described in Section 6.5 above.

6.7.3 Finally any cumulative effects have been considered in relation to the proposed development and any other similar developments in planning of relevance.

Baseline Conditions**Landscape Features**

6.7.4 The existing land use of the site is currently an area of grassland within a former airfield, now in use by the Science Museum Group.

Landscape Character

6.7.5 The existing character of the site is one which is developed in nature with former military infrastructure, including a number of adjacent former hangar buildings, which are very similar in nature to the proposed development. This existing infrastructure serves to influence the character of the site and surrounding area such that the character continues to be perceived as that of a former airfield, notwithstanding the location of the site within the AONB.

Visual Amenity

6.7.6 The number of residential properties which offer the potential for residents to experience views towards the proposed development in close proximity to the site are very limited.

Likely Significant Effects

6.7.7 The proposed museum collections management facility is located on land at the Science Museum Group at Wroughton. The development proposal relates to the erection of a single museum collections management facility (use class B8) measuring approximately 284m by 92m and 12m in height, providing a development footprint of 27,000 m² with up to 10,000m² mezzanine level together with associated car parking, servicing and access arrangements.

6.7.8 The former airfield and all that is within the perimeter fence and within the ownership of the Science Museum Group is a single planning unit that is in use for museum related activities including the storage, preservation, research and display of historic items and artefacts.

Effects on Landscape**Landscape Features**

6.7.9 The development would represent a change to the current land use from an area of managed grassland to a museum collections management building resulting in a moderate level of effect to current land use, which is considered non-significant.

6.7.10 It is important to appreciate that a localised magnitude of change to land use such as this is an inevitable consequence of the development of the development of a museum collections management building such as this and that the adverse effect identified is of a scale which is typical of other similar developments throughout the UK.

Landscape Character

6.7.11 The development would be of a type which is similar in nature to the existing hangar buildings at the former airfield, but lower in height, and this would serve to limit the potential for the development to result in any notable impact to the character of the landscape.

6.7.12 Effects relate to the change in the current land use from an area of managed grassland to a museum collections management building. Notwithstanding that the site itself is currently managed grassland, given the existing airfield character of the site and the close proximity of the existing large scale former hangar buildings, the magnitude of change is assessed as low to medium resulting in a minor to moderate level of effect on the character of the site and its immediate environs, which is not significant.

6.7.13 The Avebury Plain character area extends across the full extent of the 5km study area in both directions from the site. Given the limited scale and nature of the development, the potential for any impact to the character of the landscape would be limited to only a small part of the character area, localised to the immediate environs of the site.

6.7.14 The Marlborough Downs character area is an expansive area of undulating chalk plateau extending north of the Kennet River Valley, with its boundaries defined by the elevated topography and Upper Chalk geology. This scarp and vale topography is such that elevated views of the site at the former airfield are gained from the northernmost edge of the character area, as part of a wide panorama of views, which include the solar energy development in the southern part of the former airfield and the built-up area of Swindon and the M4 corridor beyond.

6.7.15 In general, from this distance (at least 2.5km) a notable change in landscape character can already be discerned between the former airfield/ military site and the wider Downs Plain and Scarp character area in which it is located.

6.7.16 In the context of the existing difference between the character of the former airfield site and the remainder of the Downs Plain and Scarp landscape, the potential for there to be any effect on the character of the Marlborough Downs character area is limited. Whilst the sensitive nature of this part of the AONB landscape is acknowledged the magnitude of change on the character of the Marlborough Downs that would be brought about by the development would be no more than very low, resulting in a minor to negligible level of effect, which is not significant.

Effects on Visual Amenity

6.7.17 The Ridgeway National Trail is located approximately 2.5km to the south of the site at its closest point as the route follows the northernmost section of the Marlborough Downs. When viewed from the Ridgeway, the development would be contained within the envelope of the existing former airfield site, which, by the scale of the existing infrastructure, is currently a notable visual element in the baseline landscape. Given the sensitivity of the Ridgeway as a National Trail, although the new building would result in no more than a low impact on the view, this would represent a minor-moderate visual effect, which is not significant. However, the ability to understand and appreciate the view from the route would not be harmed to any significant degree, and this section of the Ridgeway would continue to remain a pleasant and enjoyable route to walk.

6.7.18 There would be a limited number of further rights of way from which the proposals would be visible, generally those located on the scarp slope where views are more elevated. However, in all cases the development would appear as a minor addition to the existing infrastructure at the former airfield, resulting in no more than minor to negligible visual effects, which are not significant.

6.7.19 Due to the high degree of screening by topography and vegetation present around the site, the number of roads from which motorists and passengers are likely to experience views is very limited. The only routes that would have the potential to experience more than a glimpse of the site would be the minor roads which run northwards down off the

Malborough Downs. The proposed building would appear as a minor additional element alongside the existing infrastructure at the former airfield. Whilst noticeable, the potential for new visual impacts to arise to the users of the roads would be limited, with no more than minor visual effects arising, which are not significant.

Mitigation and Enhancement

6.7.20 The proposed landscape and visual mitigation has been implemented by design, in the form of the orientation of the proposed building, its scale and its external treatment (colour) As such all effects described above are residual effects, taking into account these measures.

Conclusion

6.7.21 It is important to appreciate that some effect on landscape character and visual amenity is an inherent consequence of a new development of this type and scale. However, in this case any potential for adverse effects is limited by the existing infrastructure already located at the former airfield site, as well as vegetation and topography in the landscape. Those limited effects which have been identified therefore need to be balanced against the other benefits of the development.

Table 6.4: Summary of Effects, Mitigation and Residual Effects.

Receptor / Receiving Environment	Description of Effect	Nature of Effect	Sensitivity	Mitigation / Enhancement Measures	Magnitude of Effect	Significance of Residual Effects
Construction						
<i>There would be additional temporary construction phase effects on landscape character and visual amenity, but in all cases the additional effects would not elevate the level of effect above the operation phase effects set out below.</i>						
Operation						
Landscape Features	Direct Impact	Permanent	Low	Mitigation by Design	Very high	Moderate – non-significant
Landscape Character	Direct and Indirect Impact	Permanent	Medium - <i>Site and its immediate surrounds</i> High - <i>wider landscape</i>	Mitigation by Design	Low/medium - <i>Site and its immediate surrounds</i> Low - <i>wider landscape</i>	Moderate/minor - <i>Site and its immediate surrounds</i> Minor - <i>wider landscape</i>
Visual Receptors	Indirect Impact	Permanent	High – <i>residential receptors/ leisure users of PROW or minor roads</i> Medium – <i>road users</i> Low – <i>people in their place of work</i>	Mitigation by Design	Medium/high – <i>viewpoints in close proximity to the site</i> Low or less - Viewpoints in the wider landscape	Moderate (significant) - <i>small number of viewpoints in close proximity to the site</i> Moderate/minor or less - Viewpoints in the wider landscape
Cumulative and In-combination						
<i>No cumulative effects have been identified.</i>						

APPENDIX 6.1

Assessment Criteria

6.1 LANDSCAPE AND VISUAL ASSESSMENT CRITERIA

6.1.1 INTRODUCTION

6.1.1.1 This appendix presents the assessment criteria adopted for the assessment of landscape and visual effects arising from the proposed development.

6.1.2.1 The primary source of best practice for LVIA in the UK is The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (Landscape Institute and the Institute for Environmental Management and Assessment, 2013). The assessment criteria adopted to inform the assessment of effects has been developed in accordance with the principles established in this best practice document. It should however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 states:

6.1.3.1 'This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.'

6.1.4.1 The criteria set out below have therefore been developed specifically for this assessment to ensure that the methodology is appropriate and fit for purpose.

6.1.5.1 The purpose of an LVIA when undertaken in the context of an Environmental Impact Assessment (EIA) is to identify and describe any likely significant landscape and visual effects arising as a result of the proposals.

6.1.6.1 An LVIA must consider both:

- effects on the landscape as a resource in its own right (the **landscape effects**); and
- effects on specific views and visual amenity more generally (the **visual effects**).

Therefore, separate criteria are set out below for the assessment of landscape and visual effects.

- the features and character of the local landscape; and
- the visual amenity of people who view the site.

6.1.7.1 The judgements provided within the LVIA may then inform the planning balance to be carried out by the determining authority.

6.2.1 NATURE (SENSITIVITY) OF LANDSCAPE FEATURES

6.2.1.1 The nature or sensitivity of an individual landscape feature or element reflects its susceptibility to change and the value associated with it. Sensitivity is therefore a function of factors such as the feature's quality, rarity, contribution to landscape character, degree to which the particular element can be replaced and cultural associations or designations that apply. A particular feature may be more 'sensitive' in one location than in another often as a result of local value associated with the feature. Therefore, it is not possible to simply place different types of landscape feature into sensitivity bands. Where individual landscape features are affected, professional judgement is used as far as possible to give an objective evaluation of its sensitivity. Justification is given for this evaluation where necessary.

6.2.2.1 The nature or sensitivity of individual landscape features has been described as **very high, high, medium, low** or **very low**.

6.3.1 NATURE (SENSITIVITY) OF LANDSCAPE CHARACTER

6.3.1.1 The nature or sensitivity of landscape character reflects its susceptibility to change and the value associated with it. It is essentially an expression of a landscape's ability to accommodate a particular type of change. It varies depending on the physical and perceptual attributes of the landscape including but not necessarily limited to: scale; degree of openness; landform; existing land cover; landscape pattern and complexity; the extent of human influence in the landscape; the degree of remoteness/wildness; perception of change in the landscape; the importance of landmarks or skylines in the landscape; inter-visibility with and influence on surrounding areas; condition; rarity and scenic quality of the landscape, and the value placed on the landscape including any designations that may apply.

6.3.2.1 In this assessment, the nature or sensitivity of landscape character is considered with reference to a number of local character areas as defined in this LVIA for the purposes of this study. Information regarding the key characteristics of these character areas has been extrapolated from relevant published studies where possible but also informed by project specific field assessment. An assessment of landscape sensitivity to the development proposed has been undertaken employing professional judgement for relevant local landscape character areas.

6.3.3.1 The nature or sensitivity of landscape character has been described as **very high, high, medium, low** or **very low**.

6.4.1 NATURE (SENSITIVITY) OF VISUAL RECEPTORS

6.4.1.1 The nature or sensitivity of visual receptor groups reflects their susceptibility to change and the value associated with the specific view in question. Sensitivity varies depending on a number of factors such as the occupation of the viewer, their viewing expectations, duration of view and the angle or direction in which they would see the site. Whilst most views are valued by someone, certain viewpoints are particularly highly valued for either their cultural or historical associations and this can increase the sensitivity of the view. The following criteria are provided for guidance only and are not exclusive:

- **Very Low Sensitivity** – People engaged in industrial and commercial activities or military activities.
- **Low Sensitivity** - People at their place of work (e.g. offices); shoppers; users of trunk/major roads and passengers on commercial railway lines (except where these form part of a recognised and promoted scenic route).
- **Medium Sensitivity** - Users of public rights of way and minor roads which do not appear to be used primarily for recreational activities or the specific enjoyment of the landscape; recreational activities not specifically focused on the landscape (e.g. football); motel users.
- **High Sensitivity** – Residents at home; users of long distance or recreational trails and other sign posted walks; users of public rights of way and minor roads which appear to be used for recreational activities or the specific enjoyment of the landscape; users of caravan parks, campsites and 'destination' hotels; tourist attractions with opportunities for views of the landscape (but not specifically focused on a particular vista); slow paced recreational activities which derive part of their pleasure from an appreciation of setting (e.g. bowling, golf); allotments.
- **Very High Sensitivity** - People at recognised vantage points (often with interpretation boards), people at tourist attractions with a focus on a

specific view, visitors to historic features/estates where the setting is important to an appreciation and understanding of cultural value.

6.4.2.1 It is important to appreciate that it is the visual receptor (i.e. the person) that has a sensitivity and not a property, public right of way or road. Also, the sensitivity of a receptor group is not influenced by the number of receptors. As an example, although many people may use a motorway, this does not increase the sensitivity of each receptor using it. Likewise, a residential property may only have one person living in it but this does not reduce the sensitivity of that one receptor. Whilst the number of receptors affected at any given location may be a planning consideration, for the purposes of this assessment it does not alter the sensitivity of the receptor group.

6.4.3.1 Where judgements are made about the sensitivity of assessment viewpoints, the sensitivity rating provided is an evaluation of the sensitivity of the receptor group represented by the viewpoint and not a reflection of the number of people who may experience the view.

6.4.4.1 For some developments (e.g. wind energy developments) it is important not to confuse the concept of visual sensitivity with the perception of the development. For example, it is recognised that some people consider wind turbines to be unattractive, but others enjoy the sight of them.

6.5.1 NATURE (MAGNITUDE) OF EFFECTS ON LANDSCAPE CHARACTER

6.5.1.1 The magnitude of effect on landscape character is influenced by a number of factors including: the extent to which existing landscape features are lost or altered, the introduction of new features and the resulting alteration to the physical and perceptual characteristics of the landscape. Professional judgement has been used as appropriate to determine the magnitude using the following criteria as guidance only. In doing so, it is recognised that usually the landscape components in the immediate surroundings have a much stronger influence on the sense of landscape character than distant features whilst acknowledging the fact that more distant features can have an influence on landscape character as well.

- **Very Low Magnitude of Change** - Negligible loss or alteration to existing landscape features; no notable introduction of new features into the landscape; and negligible change to the key physical and/or perceptual attributes of the landscape.
- **Low Magnitude of Change** - Minor loss or alteration to existing landscape features; introduction of minor new features into the landscape; or minor alteration to the key physical and/or perceptual attributes of the landscape.
- **Medium Magnitude of Change** - Some notable loss or alteration to existing landscape features; introduction of some notable new features into the landscape; or some notable change to the key physical and/or perceptual attributes of the landscape.
- **High Magnitude of Change** - A major loss or alteration to existing landscape features; introduction of major new features into the landscape; or a major change to the key physical and/or perceptual attributes of the landscape.
- **Very High Magnitude of Change** - Total loss or alteration to existing landscape features; introduction of dominant new features into the landscape; a very major change to the key physical and/or perceptual attributes of the landscape.

6.6.1 NATURE (MAGNITUDE) OF EFFECTS ON VIEWS AND VISUAL AMENITY

6.6.1.1 Visual effects are caused by the introduction of new elements into the views of a landscape or the removal of elements from the existing view.

6.6.2.1 Professional judgement has been used to determine the magnitude of impacts using the following criteria as guidance only:

- **Very Low Magnitude of Change** - Negligible change in views;
- **Low Magnitude of Change** - Some change in the view that is not prominent but visible to some visual receptors;
- **Medium Magnitude of Change** - Some change in the view that is clearly notable in the view and forms an easily identifiable component in the view;
- **High Magnitude of Change** - A major change in the view that is highly prominent and has a strong influence on the overall view.
- **Very High Magnitude of Change** – A change in the view that has a dominating or overbearing influence on the overall view.

6.6.3.1 Using this set of criteria, determining levels of magnitude is primarily dependent on how prominent the development would be in the landscape, and what may be judged to flow from that prominence or otherwise.

6.6.4.1 For clarification, the use of the term 'prominent' relates to how noticeable the features of the development would be. This is affected by how close the viewpoint is to the development but not entirely dependent on this factor. Other modifying factors include: the focus of the view, visual screening and the nature and scale of other landscape features within the view. Rather than specifying general bands of distance at which the proposed development would be dominant, prominent or incidental to the view etc. the prominence of the proposed development in each view is described in detail for each viewpoint taking all the relevant variables into consideration.

6.7.1 TYPE OF EFFECT

6.7.1.1 The assessment identifies effects which may be **beneficial**, **adverse** or **neutral**. Where effects are described as neutral this is where the beneficial effects are deemed to balance the adverse effects.

6.7.2.1 For some developments (e.g. wind energy developments) it is recognised that some people consider the development to be unattractive but others enjoy the sight of it. A landscape and visual assessment for these developments therefore assumes that all identified landscape and visual effects are 'adverse' unless stated otherwise. This allows decision makers to assess a worst-case scenario.

6.8.1 DURATION OF EFFECT

6.8.1.1 For the purposes of this assessment, the temporal nature of each effect is described as follows:

- **Long Term** – over 5 years
- **Medium Term** – between 1 and 5 years
- **Short Term** – under 1 year

6.9.1 REVERSIBILITY OF EFFECT

The LVIA also describes the reversibility of each identified effect using the following terms:

- **Permanent** – effect is non reversible
- **Non permanent** – effect is reversible

6.10.1 LEVEL OF EFFECT AND IDENTIFICATION OF SIGNIFICANT EFFECTS

6.10.1.1 The purpose of an LVIA when produced in the context of an EIA is to identify and describe any significant effects on landscape and visual amenity arising from the proposed development.

6.10.2.1 Neither EC Directive 2011/12/EU nor the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 define a threshold at which an effect may be determined to be significant. In certain other environmental disciplines there are regulatory thresholds or quantitative standards which help to determine the threshold of what constitutes a significant effect. However in LVIA, any judgement about what constitutes a significant effect is ostensibly a subjective opinion expressed as in this case by a competent and appropriately qualified professional assessor.

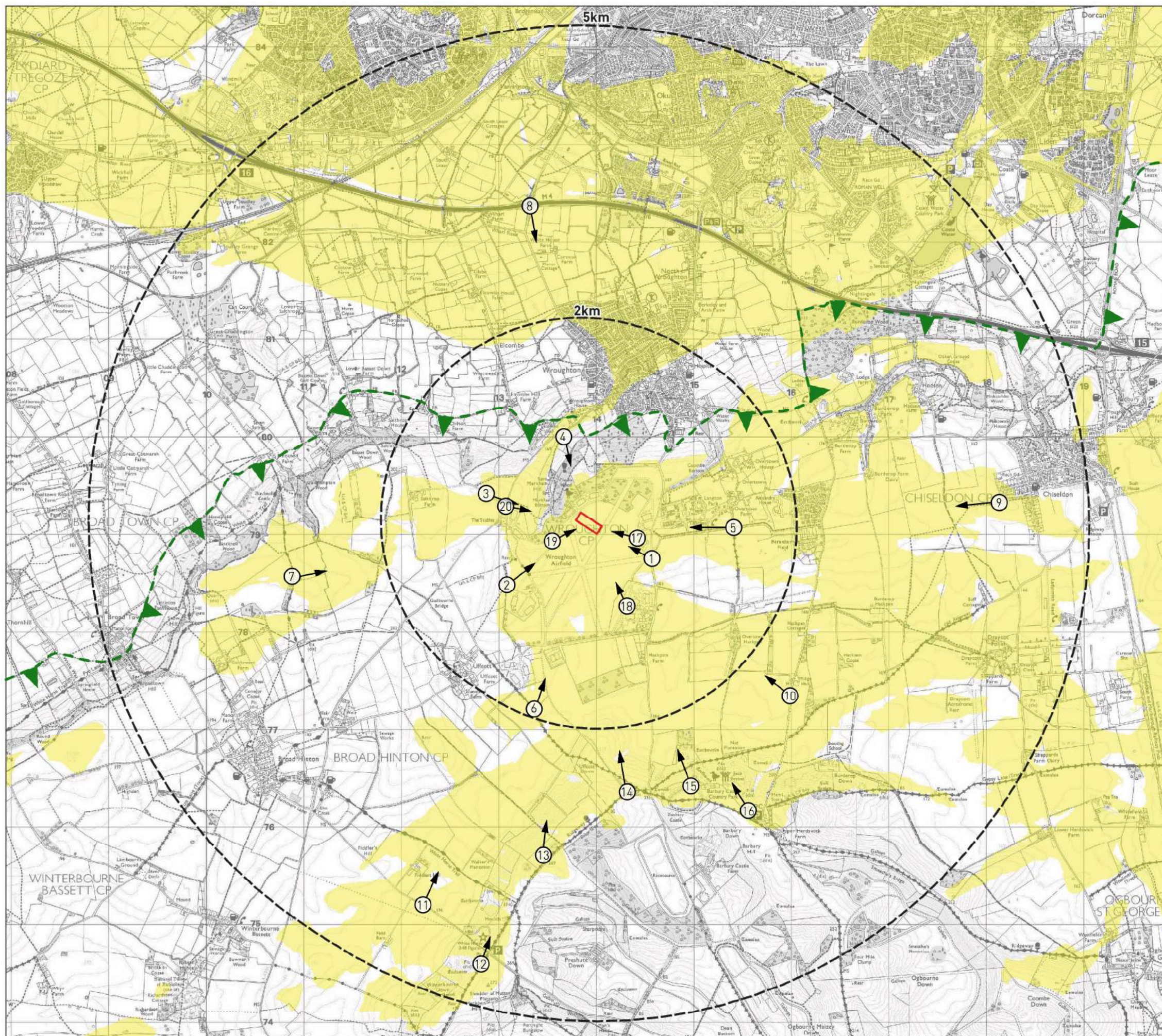
6.10.3.1 The level (relative significance) of landscape and visual effects is determined by combining judgements regarding the sensitivity of the landscape or view, magnitude of change, duration of effect and the reversibility of the effect. In determining the level of residual effects, all mitigation measures are taken into account.

6.10.4.1 The relative level of effect is described as major, major/moderate, moderate, moderate/minor, minor or minor/no effect. No effect may also be recorded as appropriate where the effect is so negligible it is not even noteworthy.

6.10.5.1 Those effects described as **major**, **major/moderate** and in some cases **moderate** may be regarded as **significant** effects as required by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

APPENDIX 6.2

Figures



KEY

- Indicative site location
- Zone of Theoretical Visibility (ZTV) - 13m
- 1 Viewpoint Locations
- ▲- North Wessex Downs AONB

ZTV Production Information -

- DTM data used in calculations is OS Terrain 5m
- Calculations based on a bare earth survey
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility. **It is generated using terrain data only and does not account for any screening that vegetation or the built environment may provide.** It is, as such, 'a worst case' ZTV and the actual extents of visibility are likely to be less extensive.

Revisions: -
First Issue -

Figure 1 - Site Context Plan with Zone of Theoretical Visibility (ZTV) and Viewpoint Locations

Wroughton Science Museum

Client: Science Museum Group

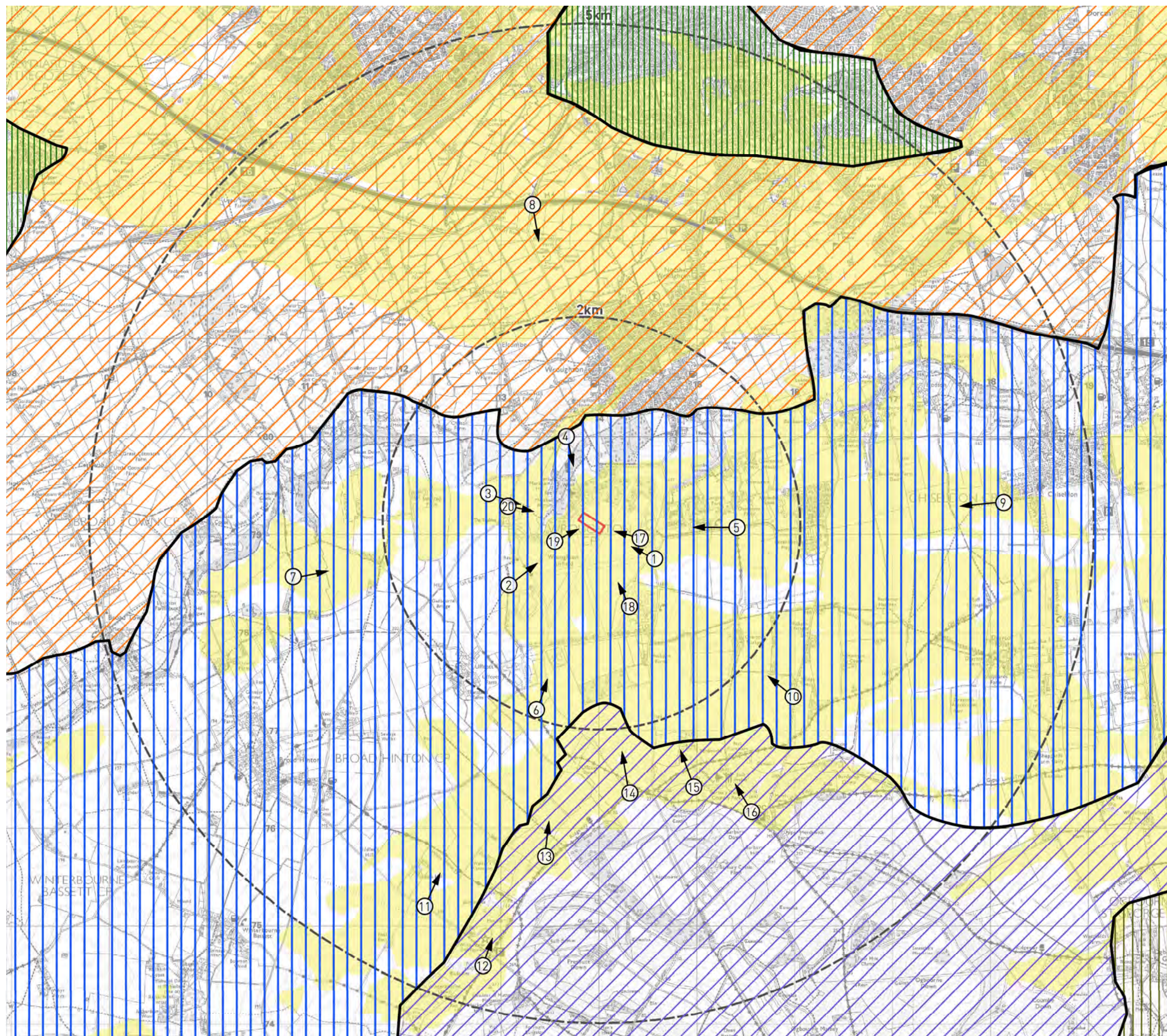
DRWG No: P16-1396_002 Sheet No: - REV: -

Drawn by: CB Approved by: DT

Date: 01/11/2017

Scale: 1:40,000 @ A3

Pegasus
Group



KEY

- Indicative site location
- Zone of Theoretical Visibility (ZTV) - 13m
- 1 Photo Locations

ZTV Production Information -

- DTM data used in calculations is OS Terrain 5m
- Calculations based on a bare earth survey
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility. **It is generated using terrain data only and does not account for any screening that vegetation or the built environment may provide.** It is, as such, 'a worst case' ZTV and the actual extents of visibility are likely to be less extensive.

Wiltshire Landscape Character Assessment

Landscape Character Type 1: Low Chalk Plain & Scarp

- LCA 1B: Marlborough Downs

Landscape Character Type 4: Low Chalk Plain and Scarp

- LCA 4A: Avebury Plain

Landscape Character Type 5: Chalk River Valley

- LCA 5A: Kennet Chalk River Valley

Landscape Character Type 8: Limestone Ridge

- LCA 8A: Swindon-Lyneham Limestone Ridge

Landscape Character Type 11: Rolling Clay Lowland

- LCA 11A: Calne Rolling Clay Lowland

Source: Wiltshire Landscape Character Assessment (December 2005)

Revisions: -
First Issue -

Figure 2 - Landscape Character Areas and Zone of Theoretical Visibility

Wroughton Science Museum

Client: Science Museum Group

DRWG No: P16-1396_003 Sheet No: - REV: -

Drawn by: CB Approved by: DT

Date: 01/11/2017

Scale: 1:40,000 @ A3

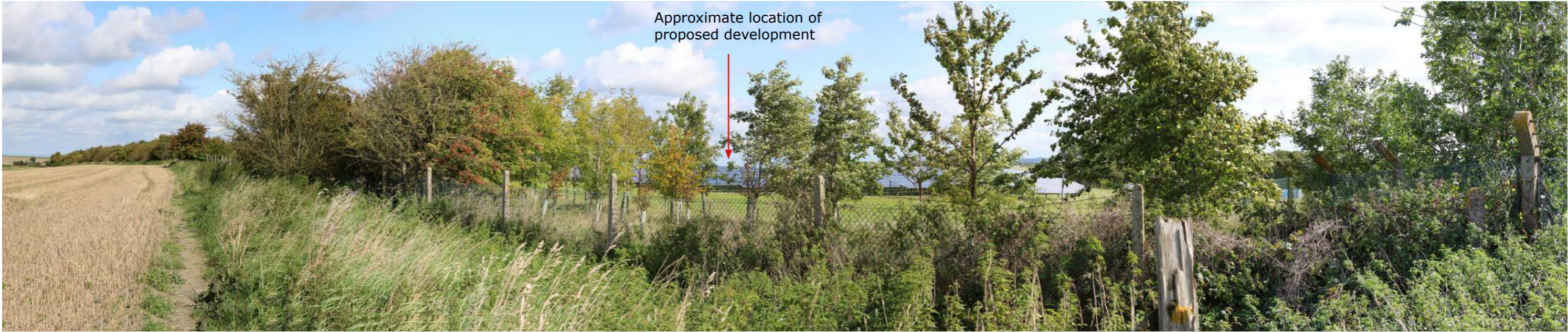
Pegasus
Group

APPENDIX 6.3

Photographic Records



VIEWPOINT 1
View from Minor Road, east of Wroughton Airfield.



VIEWPOINT 2
View from Public Footpath, west of Wroughton Airfield.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



PHOTO LOCATION 3

View from Minor Road, northwest of Wroughton Airfield (208m spot height).

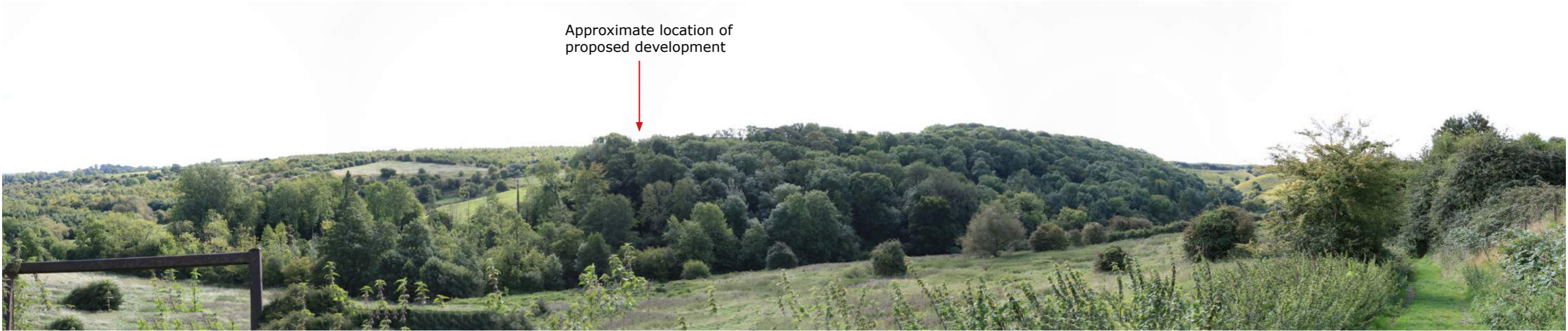


PHOTO LOCATION 4

View from Public Footpath, near A4361.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**

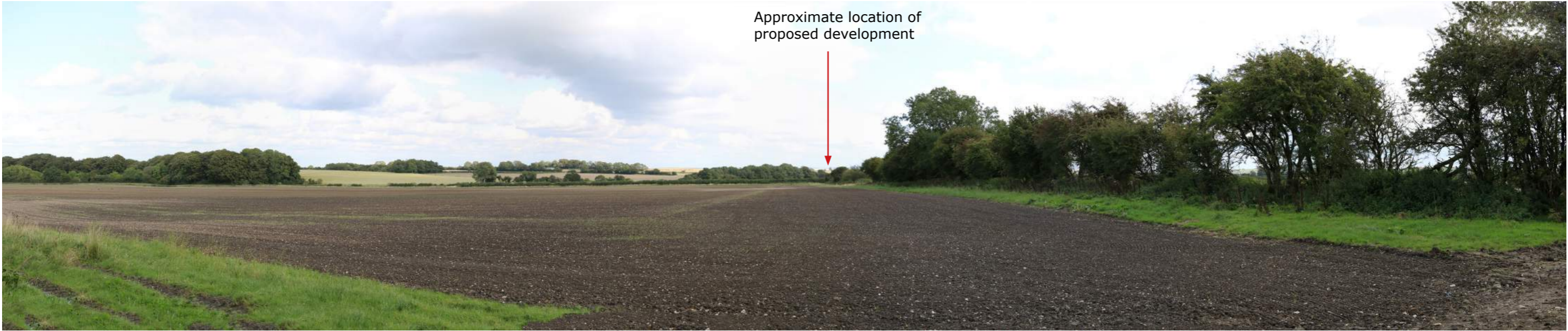


VIEWPOINT 5
View from Minor Road, south of Overtown Farm.

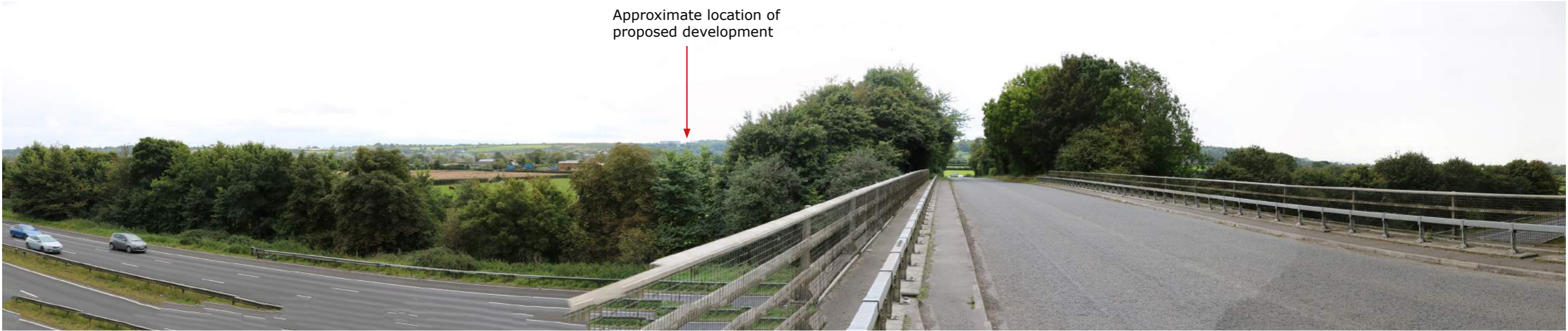


VIEWPOINT 6
View from Public Footpath, south-east of Uffcott.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 7
View from White Horse Trail, south of Binknoll Castle (206m spot height).



VIEWPOINT 8
View from Minor Road, overbridge of M4

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 9

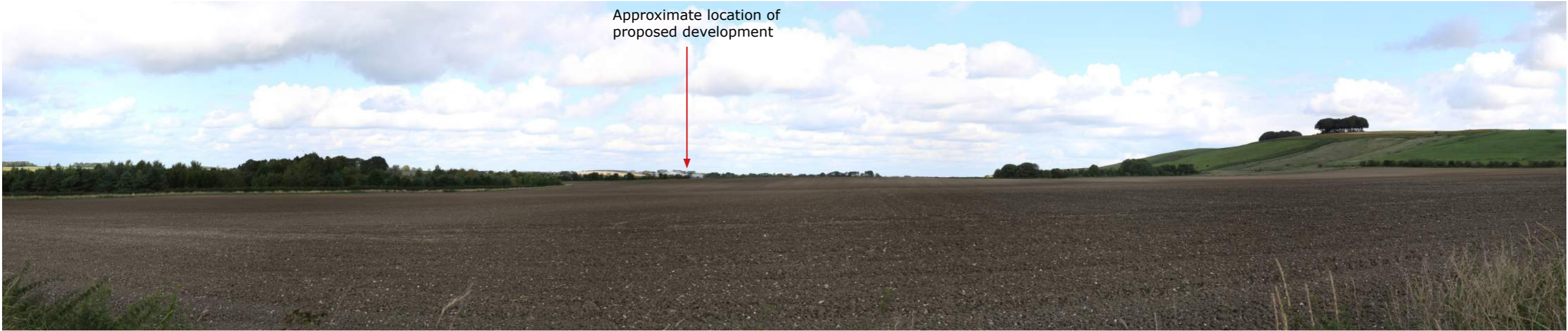
View from Public Footpath, Chiseldon.



VIEWPOINT 10

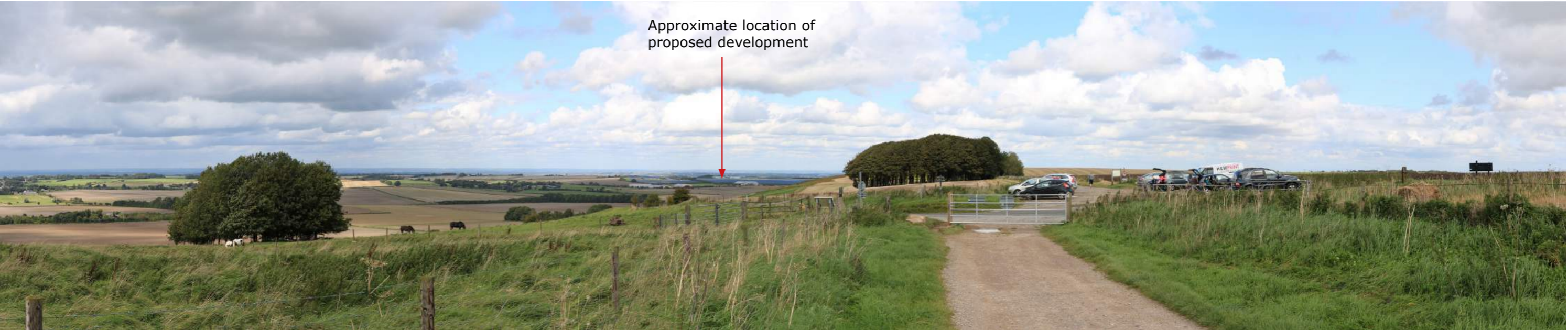
View from Minor Road, south of Midge Hall.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 11

View from Minor Road, Fiddler’s Hill.



VIEWPOINT 12

View from The Ridgeway, Hackpen Hill south of White Horse car park.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 13

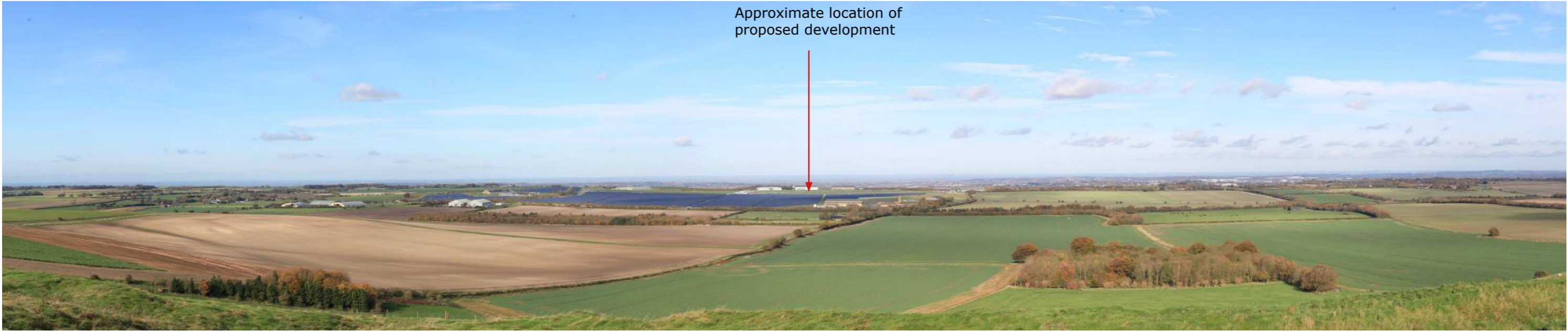
View from The Ridgeway, Hackpen Hill north of White Horse car park.



VIEWPOINT 14

View from The Ridgeway, west of Barbury Castle

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 15

View from Barbury Castle.



VIEWPOINT 16

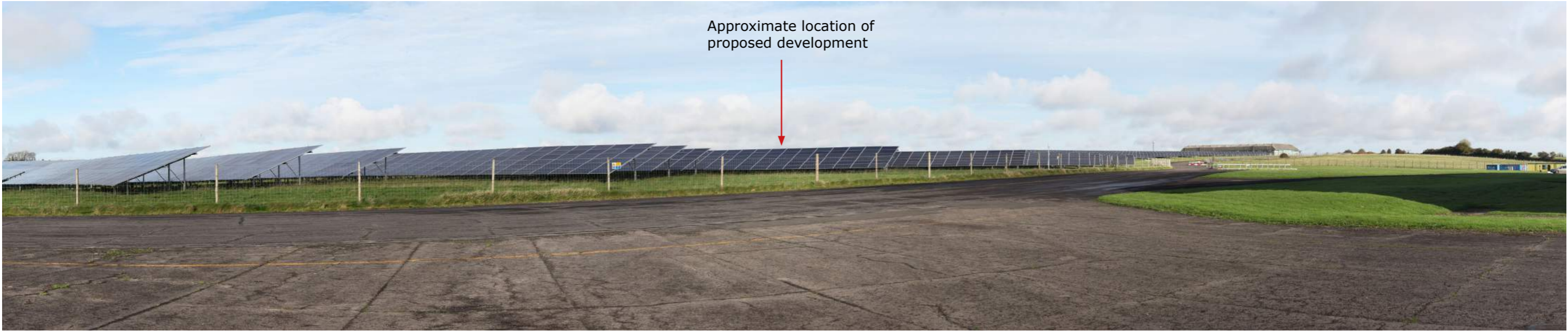
View from Barbury Castle, car park.

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 17

View from Swindon Karting Arena car park



VIEWPOINT 18

View from offices to south east of site

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**



VIEWPOINT 19

View from entrance road



VIEWPOINT 20

View from Red Barn Gate

**APPENDIX 6.3 - LVIA VIEWPOINTS
PHOTOGRAPHIC RECORD**

APPENDIX 6.4

Viewpoint Assessment

6.4 VIEWPOINT ASSESSMENT

6.4.1 INTRODUCTION

6.4.1.1 This Appendix provides an assessment of the visual effects of the Proposed Development from a selection of 16 viewpoints during the operational phase. For each of the assessment viewpoints a short description is given of the baseline view followed by a description of the features of the Proposed Development which would be visible from that viewpoint. For each viewpoint the commentary includes details of any vegetation, buildings or topography would affect the visibility of the Proposed Development. A comment on the sensitivity of the viewpoint, the magnitude of change experienced and the significance of visual impacts is given for each viewpoint. All effects during the operational phase of the Proposed Development are long term and permanent.

6.4.2.1 During the construction phase of the Proposed Development there would be additional visual effects in relation to construction activities including the movement of plant on site. The construction activity on site would be visible for a brief period, and as such these effects would all be short term and non-permanent. At all of the viewpoints listed below there would be no greater than a minor additional effect, tending towards no additional effect during the construction phase.

Viewpoint 1: Minor Road, east of Wroughton Airfield

6.4.3.1 This viewpoint is taken from the minor road which runs along the eastern boundary of the former airfield site. In the assessment criteria as set out in Appendix 6.1, users of minor roads which do not appear to be used primarily for recreation purposes are considered to have medium sensitivity to a change in their view. At this point the road is separated from the former airfield by a post and wire fence and clear views are available of the former runway, hangar buildings and the solar panels located in the southern part of the site. This section of route forms one of only a very small number of locations in close proximity to the site from which close range, direct views of the proposed development would be available.

6.4.4.1 At a distance of approximately 600m away, the new museum storage building would form a noticeable large new element of the view, but not one that would be especially incongruous when compared with the existing infrastructure present at the site. From this location, only its shorter, front façade would be visible, which would appear comparable in scale to the existing building in the foreground at approximately 150m away. The magnitude of change to the view from the addition of the new building would be medium to high, resulting in moderate visual effect. Despite the existing context of the view as described above, due to the large scale of the proposed building in relation to the close proximity to the viewpoint, the level of effect is considered to be significant.

Viewpoint 2: Public Footpath, west of Wroughton Airfield

6.4.5.1 This viewpoint is taken from the nearest public right of way to the site, which runs to the south-west, linking Uffcott/ Yew Tree Lane to a dirt track that leads to Science Museum Lane. From the short section of the route where the building would in theory be visible, the panels and new boundary planting associated with the solar energy development in the southern part of the former airfield site would serve to restrict any potential views. There would be no visual effect on the high sensitivity users of this footpath.

Viewpoint 3: Minor Road, northwest of Wroughton Airfield (208m AOD spot height)

6.4.6.1 To the west of the site, views are heavily restricted by the topography of the landscape and limited to isolated areas of slightly higher ground such as that represented by this viewpoint.

6.4.7.1 The viewpoint is taken from a local minor road to the north of the A4361 looking south-east, at an approximate distance of 700m from the former airfield. Lack of field boundary vegetation adjacent the road verge provides views towards the entrance to the Science Museum and associated buildings set amongst small pockets of mature vegetation, with the two aircraft hangars being visually dominant in the view. The southern scarp of the Marlborough Downs is visible in the distance. The site of the new museum storage building is just visible to the left of the residential property in the foreground of the view.

6.4.8.1 Vehicle passengers and pedestrians travelling through or passing the landscape using this road would be able to see the new building in the middle distance of the view, immediately adjacent to an existing former hangar present at the site. Given the context of the existing former airfield, whilst the new building would be noticeable it would not be a prominent feature in the view. The magnitude of change to the view from the addition of the new building would be low, resulting in a moderate/minor visual effect on the medium sensitivity users of this road, which is not significant.

Viewpoint 4: Public Footpath, near A4361

6.4.9.1 This viewpoint is taken from the beginning of a public footpath leading southwards from the A4361 towards Clouts Wood, at an approximate distance of 1.3km to the north of the site. Small field patterns are encountered in the foreground, with the deciduous woodland of Clouts Wood in the middle distance. The rising landform and woodland vegetation screens views towards the Site. There would be no visual effect on the high sensitivity users of this footpath.

Viewpoint 5: Minor Road, south of Overtown Farm

6.4.10.1 This viewpoint is taken from a minor road which runs on an east-west alignment to the south of the residential areas at Overtown farm and Thorney Park. One of the former hangars at the airfield site can be seen at the end of the road in the middle distance of the view, but vegetation screens the remainder of the site from view and limits the potential for any views of the proposed development. There would be no visual effect on the high sensitivity users of this footpath.

Viewpoint 6: Public Footpath, south-east of Uffcott

6.4.11.1 This viewpoint is taken from a Byway open to all traffic (BOAT) that runs from Uffcott to the Ridgeway National Trail, at distance to the south of the site of around 2km. The former aircraft hangars that are situated at the south-west corner of the former airfield are visible towards the foreground of the view, with glimpses of some of the solar panels associated with the solar farm development beyond. Whilst the ZTV suggests that the proposed new museum storage building would be visible from this location it is likely that intervening vegetation would either entirely screen the building from view, or limit views to a glimpse of the uppermost part of the building. The magnitude of change to the view from the addition of the new building would be very low to none, resulting in a negligible visual effect on the high sensitivity users of this footpath, which is not significant.

Viewpoint 7: White Horse Trail, south of Binknoll Castle (206m spot height)

6.4.12.1 The White Horse Trail, a promoted long distance walking route passes to the west and south-west of the site as it runs up to join with the Ridgeway. The majority of the route lies outside of the ZTV and would have no visibility of the proposals. There is the potential for a glimpsed view of the development from a short section of the route as it crests a highpoint in the landscape to the west of the site, as represented by this viewpoint.

6.4.13.1 The foreground of the view when looking towards the site is formed of arable fields interspersed by hedgerows and pockets of woodland. In a small gap in the vegetation one of the buildings at the entrance to the Science Museum Group site is visible, but is likely that vegetation would screen views of the proposed new museum storage building. Even if a glimpse of the new building were to be possible, at a distance of more than 3km away, there would be no potential for more than a very low to no change in the view, resulting in a negligible visual effect from this location on the high sensitivity users of this promoted long distance route, which is not significant.

Viewpoint 8: Minor Road, overbridge of M4

6.4.14.1 To the north of the site the majority of locations within 1km would have no view of the site due to the screening effect of the topography. Beyond this area, the ZTV indicates an area of theoretical visibility along the M4 corridor. However, in reality any views would be no more than glimpses, as illustrated in the photograph for viewpoint 8, taken on an overbridge of the M4.

6.4.15.1 From this viewpoint, the existing hangar buildings at the northern edge of the former airfield are just visible in the middle distance of the view as the road rises up in the landscape to cross over the motorway.

6.4.16.1 At a distance of more than 3km away, even if a glimpse of part of the new museum storage building were to be possible, seen next to the existing hangar, there would be no potential for more than a very low to no change in the view, resulting in a negligible visual effect from this location, on the medium sensitivity users of this road, which is not significant.

Viewpoint 9: Public Footpath, Chiseldon

6.4.17.1 This viewpoint is taken from a public footpath which also serves as an access road that leads to the recreation ground on the western edge of Chiseldon, at an approximate distance of 4km from the site. Rolling arable fields are visible in the foreground and middle distance. In the distance, small woodland copses associated with the residential areas at Beranburn Field and Alexandra House are visible where the topography rises. Due to intervening vegetation, undulating landform and the distance to the site, no part of the development would be visible from this location and there would be no effect on the high sensitivity users of this footpath.

Viewpoint 10: Minor Road, south of Midge Hall

6.4.18.1 This viewpoint is taken from a local road near Midge Hall, at an approximate distance to the south-east of the Site of 2.5km. Gently undulating farmland is visible in the foreground and middle distance, with linear belts of vegetation partially screening views further west. From this slightly elevated location, the existing former hangar buildings at the south-eastern and south-western boundaries of the airfield site are clearly visible, along with glimpses of the solar panels which are located in the southern portion of the former airfield.

6.4.19.1 Whilst the ZTV suggests that the proposed new museum storage building would be visible from this location it is likely that intervening vegetation would either entirely screen the building from view, or limit views to a glimpse of the uppermost part of the building. The magnitude of change to the view from the addition of the new building would be very low to none, resulting in a negligible visual effect on the medium sensitivity users of the minor road, which is not significant.

Viewpoint 11: Minor Road, Fiddler's Hill

6.4.20.1 This viewpoint is taken from a local road that leads from the A4361 to White Horse Hill, at a distance from the Site of around 4km, looking north-east. Open arable fields are visible in the foreground, with vegetation to Walker's Plantation visible in the middle distance. Further to the north-east as the topography rises the village of Uffcott is partially visible, along with a number of the former aircraft hangars and the solar panels located in the southern portion of the former airfield site. The scarp slope leading up to the Marlborough Downs is visible to the right hand side of the view. The proposed building would appear as a minor additional element alongside the existing infrastructure at the former airfield with any views limited to the uppermost part of the building. The magnitude of change to the view from the addition of the new building would be very low, resulting in a minor visual effect on the medium sensitivity users of the minor road, which is not significant.

Viewpoint 12: The Ridgeway, Hackpen Hill south of White Horse car park

6.4.21.1 The route of the Ridgeway in this section is a gravel single lane track which is generally level along a ridge with small localised dips. The viewpoint is located around 4.5km from the site. In the foreground of the view at the top of the ridge is a well-used car park and an interpretation board. The main focus of views however is to the north over the lowland vale, providing mid and long distance views towards Swindon and the higher ground beyond. The existing former airfield buildings are notable features in the view from the route, and are now interspersed by the solar panels which cover the southern part of the former airfield site and which collectively serve to give the former airfield a developed character which is in contrast to the wider landscape. The site of the proposed new museum storage building can be discerned as an area of managed grassland that lies in front of the northern most of the former hangars.

6.4.22.1 Notwithstanding, the high sensitivity of the Ridgeway as a National Trail, at this point on the route the proposed new building would result in no more than a very low impact on the view, which would represent a minor visual effect on the users of the trail, which is not significant.

Viewpoint 13: The Ridgeway, Hackpen Hill north of White Horse car park

6.4.23.1 This viewpoint is located approximately 3.5km from the site. As with Viewpoint 12 the view looking northwards from this point of the Ridgeway is of a wide panorama with the site visible in the middle distance and the built-up area of Swindon beyond. The area of managed grassland in which the proposed new museum storage building would be located can be seen, beyond the northernmost extent of the solar farm development.

6.4.24.1 At this point on the route the proposed new building would result in no more than a very low to low impact on the view, which would represent a minor visual effect on the high sensitivity users of the Ridgeway National Trail, which is not significant.

Viewpoint 14: The Ridgeway, west of Barbury Castle

6.4.25.1 This section of the Ridgeway is the closest to the proposal site. Here the track surfacing changes to chalk and the route descends fairly steeply before levelling out towards the road/track leading up to the base of the earthworks around Barbury castle. A byway not open to vehicles joins the Ridgeway in this section from the south-western section of the airfield and its entrance gate is visible in the foreground of the view.

6.4.26.1 From this location, the solar panels in the southern part of the former airfield form a notable feature in the middle distance of the view. The new museum storage building would lie just beyond these panels and in the context of this existing development would result in no more than a low impact on the view. This would represent a moderate/minor visual effect on the high sensitivity users of the Ridgeway National Trail, which is not considered significant.

6.4.27.1 Overall, the ability to understand and appreciate the view from the route at this and all other locations on the Ridgeway would not be harmed to any significant degree, and this section of the route would continue to remain a pleasant and enjoyable route to walk.

Viewpoint 15: Barbury Castle and Viewpoint 16: Barbury Castle, car park

6.4.28.1 Barbury Castle hill fort remains and its associated Country Park lie approximately 2.5km from the site to the south and are located along the Ridgeway National Trail. The Castle remains are a Scheduled Monument and the Country Park covers a surrounding area of 60 hectares, all of which is accessible to the public.

6.4.29.1 There are two viewpoints representing this area, from the Castle itself (Viewpoint 15) and from within the Country Park (Viewpoint 16), which was taken from near the car park. The existing view from this area is towards the currently redundant airfield and views of development are available in the broad panorama visible from the Castle, particularly the former aircraft hangars and solar farm development.

6.4.30.1 The Castle is considered to represent a very high sensitivity receptor and therefore although the proposed new building would result in no more than a low impact on the view, this would represent a moderate visual effect. However, whilst there would be some effect on views from the Castle when looking towards the site, the new building would be seen in the context of the existing buildings on the airfield, at a similar scale within the wider panoramic view. The overall experience of visiting the castle and the ability to understand and appreciate its landscape context would not be harmed, and therefore this level of effect is not considered to be significant.

Viewpoint 17: View from Swindon Karting Arena Car Park

6.4.31.1 The Swindon Karting Arena operates from Hangar C2 within the Wroughton SMG site. From the edge of the car parking area clear views are available of the former hangar buildings and if turning to look to the south-west, the solar panels located in the southern part of the wider SMG site.

6.4.32.1 The new museum storage building would form a noticeable large new element of the view, but not one that would be especially incongruous when compared with the existing infrastructure present at the site. Given the nature of the use of the karting area, the focus of visitors is unlikely to be on the wider views available from the area, so the sensitivity of users is considered to be medium. The magnitude of change to the view from the addition of the new building would be medium to high, resulting in moderate visual effect, albeit one from a non-publicly accessible location. Due to the close proximity of the proposed building to this viewpoint, at under 400m away, the level of effect is assessed to be significant.

Viewpoint 18: View from Offices in the south east of the site

6.4.33.1 Towards the south east of the wider SMG Wroughton site are a number of former hangars and other buildings which now serve as office space. From this area, the solar panels associated with the Swindon Solar Farm lie in the foreground of the view and would obscure any potential for views of the proposed development at ground level.

6.4.34.1 The office accommodation is generally at ground level but from any upper storey views that were available the development would be seen beyond the panels in the foreground and in the context of the existing hangars and would represent no more than a low magnitude of change in the view, resulting in a minor visual effect on the low sensitivity receptors of people at work within the offices, which is not considered significant.

Viewpoint 19: View from Entrance Road

6.4.35.1 This viewpoint is taken on the approach into the SMG Wroughton site. From here the proposed development would form a prominent element of the view, but in the context of the overall scale of the wider SMG Wroughton site and in particular the existing former hangar building, would not form a dominant or detracting element of the view. There would be a medium to high magnitude of change to the view, resulting in a moderate visual effect, from this location on the medium sensitivity users of the access route, which is not publicly accessible.

6.4.36.1 At a distance of under 350m away, and an open view towards to the proposed building, the level of effect is considered to be significant. However, the experience of users approaching the SMG site would however remain as per the existing former airfield character and the new building would not be incongruous in this context.

Viewpoint 20: View from Red Barn Gate

6.4.37.1 This viewpoint represents the view from the nearest residential properties to the site, which are located near to the main SMG Wroughton site entrance. From this location the development would lie in the middle distance of the view, beyond a degree of foreground vegetation screening, including at the boundaries to the property. From this location the development would be located around 700m to the east and at this distance would form a noticeable feature in the view, but not one which was prominent in the context of the wider overall view, largely due to the screening/filtering afforded by the intervening woodland vegetation.

6.4.38.1 Whilst it is acknowledged that all residential receptors are of high sensitivity, there would be no more than a low to medium magnitude in change to the view, resulting in no greater than a moderate/minor visual effect from those parts of the property and its curtilage from which the scheme were visible, which is not considered to be significant.

APPENDIX 6.5

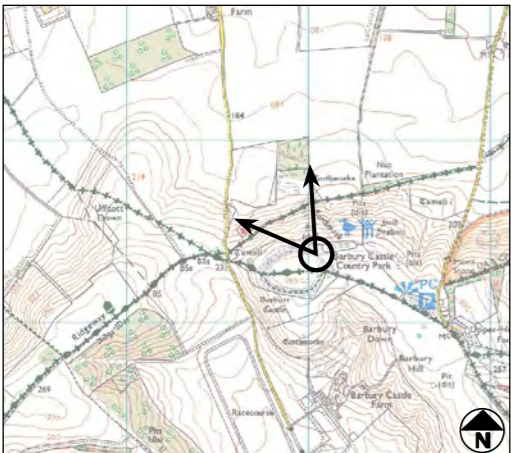
Photomontage Visualizations



Existing View



Illustrative Photomontage



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 12/09/2017 @ 10:49
OS reference : 415049, 176355
Viewpoint height : 264m
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

Appendix 6.5
Illustrative Photomontages

VIEWPOINT 15
View from Barbury Castle

Wroughton Science Museum

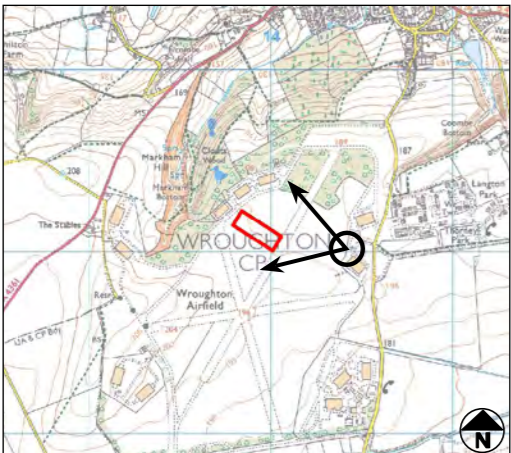
Client: Science Museum Group
DRWG No: P16-1396_03 Sheet No: 1 of 3
Images prepared by: **gwpa**architecture
Date: 19/12/2017



Existing View



Illustrative Photomontage



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 25/10/2017 @ 10:52
OS reference : 414417, 179007
Viewpoint height : 193m
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

Appendix 6.5
Illustrative Photomontages

VIEWPOINT 17
View from Swindon Karting Arena Car Park
Wroughton Science Museum

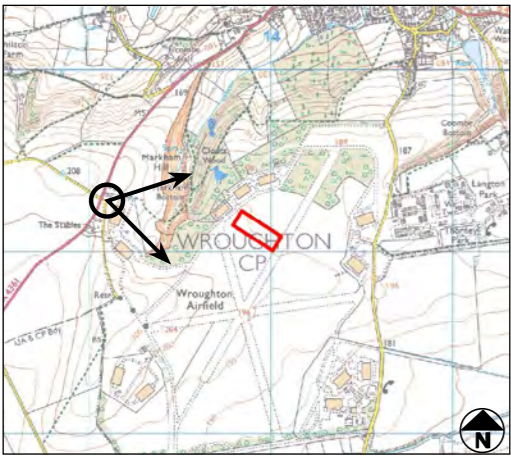
Client: Science Museum Group
DRWG No: P16-1396_03 Sheet No: 2 of 3
Images prepared by: **gwpa**rchitecture
Date: 19/12/2017



Existing View



Illustrative Photomontage



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 25/10/2017 @ 11:43
OS reference : 413088, 179288
Viewpoint height : 202m
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

Appendix 6.5
Illustrative Photomontages

VIEWPOINT 20
View from Red Gate

Wroughton Science Museum

Client: Science Museum Group
DRWG No: P16-1396_03 Sheet No: 3 of 3
Images prepared by: **gwpa**architecture
Date: 19/12/2017

BUILDING ONE

SCIENCE MUSEUM GROUP AT WROUGHTON

Environmental Statement

Chapter 7

CULTURAL HERITAGE

7 CULTURAL HERITAGE

7.1 INTRODUCTION

7.1.1 This Chapter of the ES presents an assessment of the likely effects of the Proposed Development upon archaeological remains within the Application Site and the designated assets within its surroundings.

7.1.2 A description of the methodology used in the assessment is provided. This is followed by a description of the relevant baseline conditions of the Application Site and the study area, together with the assessment of the likely effects of the Proposed Development. Appropriate mitigation measures are then identified in order to avoid, reduce or offset any adverse effects and/or provide enhancement. Taking account of the mitigation measures, the likely significance of residual effects is described, followed by a summary of likely significant cumulative effects.

7.1.3 The Chapter is accompanied by the following appendix.

- Appendix 7.1: Building ONE, Wroughton, Wiltshire: Heritage Assessment (Cotswold Archaeology 2017).

7.2 ASSESSMENT APPROACH

Methodology

Guidance Documents

7.2.1 This ES Chapter, the Heritage Statement (**Appendix 7.1**) and the methodology for the assessment of development effects have been informed by the following documents:

- National Planning Policy Framework (NPPF; 2012)¹;
- NPPF Planning Practice Guidance: Conserving and enhancing historic environment (March 2014)²;
- Standard and Guidance for Historic Environment Desk-Based Assessment, published by the Chartered Institute for Archaeologists (CIfA)³;
- Historic England's Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment (published by English Heritage in 2008)⁴;
- Historic England's Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking (2015)⁵;
- Historic England's Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2015)⁶;

¹ Department for Communities and Local Government (2012) National Planning Policy Framework

² Department for Communities and Local Government (2014) National Planning Policy Guidance: Conserving and Enhancing the Historic Environment

³ Chartered Institute for Archaeologists (2014) Standard and Guidance for Historic Environment Desk-Based Assessment, http://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_3.pdf

⁴ English Heritage (2008) Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment, English Heritage

⁵ Historic England (2015) Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking

Sources of Information

7.2.2 In order to collect historic environment data for the purposes of this Chapter, a minimum 1km study area around the Application Site was adopted in the Heritage Assessment, as this area was considered to provide sufficient contextual information about the Application Site and its surrounding landscape, from which to assess the archaeological potential and potential impacts on the archaeological resource. This study area is shown on Figure 2 of **Appendix 7.1**.

7.2.3 The following sources of publically available archaeological and historical information were consulted as part of the preparation of the Heritage Assessment (**Appendix 7.1**):

- National Heritage List for England for designated heritage assets, such as Listed Buildings and Scheduled Monuments;
- Wiltshire and Swindon Historic Environment Record (HER) for records of archaeology and heritage sites, finds and events recorded within the study area;
- Historic England Archives for records of additional sites and events;
- Wiltshire and Swindon History Centre, Chippenham for historic mapping, documentation and relevant published and grey literature; and
- Online sources, including British Geological Survey (BGS) and additional historic mapping.

7.2.4 In addition, previous heritage and archaeology report relating to the Application Site or its environs have been consulted including the following:

- A trial trench evaluation in 2006 which encompassed the Application Site⁷;
- A trial trench evaluation in 2005 to the north of the Application Site⁸; and
- A geophysical survey in 2013 to the south of the Application Site⁹;

7.2.5 Further information with regard to the methodologies utilised within the Heritage Assessment can be found in **Appendix 7.1**.

Settings Assessment

7.2.6 The document Historic Environment Good Practice Advice in Planning Guidance Note 3: The Setting of Heritage Assets¹⁰ provides the key industry-standard guidance on setting and development management, including assessment of the implications of development proposals of the significance of designated heritage assets. In relation to development within the setting of a heritage asset, the guidance states that the protection of the setting of designated assets does not necessarily preclude change.

7.2.7 A staged approach is recommended for settings assessment as this has been utilised as part of the Heritage Assessment, which provides details of the methodologies

⁶ Historic England (2015) Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets

⁷ Bashford, R. (2006) Archaeological Evaluation Report for the National Museum of Science and Industry, Wroughton, Oxford Archaeology grey literature report

⁸ Laws, G. (2005) Wroughton, National Museum of Science and Industry: Archaeological Evaluation Report, Oxford Archaeology grey literature report

⁹ Archaeological Services WYAS (2013) Wroughton Airfield Solar Park, Swindon, Wiltshire: Geophysical Survey, grey literature report

¹⁰ Historic England (2015) Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets

used (**Appendix 7.1**). In summary, step 1 requires heritage assets which may be affected by development to be identified. Step 2 of the settings process includes an assessment whether, how and to what degree the setting makes a contribution to the significance of the heritage assets, with the assessment of the effect of a development of the significance of an asset carried out as part of Step 3.

Assessment of Significance

Assessment of Significance of Heritage Assets

7.2.8 Heritage assets are defined by the NPPF as **“a building, monument site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest. Heritage assets include designated heritage assets, and assets identified by the local planning authority (including local listing)”**.

7.2.9 Heritage significance is defined as the value of a heritage asset to this and future generations because of their heritage interest. That interest may be archaeological, architectural, artistic or historic in nature. The assessment of significance within this chapter has been guided primarily by the key industry-standard policies and guidance contained in Conservation Principles, where it is described with reference to the following four key forms of value:

- Evidential value is derived from the potential of a place to yield evidence about past human activity. It is primarily associated with the physical remains or the historic fabric of the heritage asset. This value is proportionate to the potential of the asset to contribute to the understanding of the past. When there are no written records, such physical remains, including archaeological deposits, may provide the only source of information about the past;
- Historical value derives from the ways in which past people, events and aspects of life can be connected through a site to the present. It can be illustrative or associative in attribution. The illustrative aspect relates to the ability of the asset to provide links and insights into past communities and their activities. The associative aspect derives from the association of the asset with a notable historic family, person, event or movement;
- Aesthetic value is derived from the ways in which people draw intellectual and sensory stimulation from a place. This value may have developed through conscious design or be the result of the fortuitous evolution of the place over time. This aspect may include the physical form of the asset as well as its location within the setting; and
- Communal value, which derives from the meaning of a place for the people who relate to it. The commemorative and symbolic aspects of this value reflect the meanings of a heritage asset for the people who draw part of their identity from it or have emotional links to it (such as memorials raised by community effort). The social aspect of this value is associated with places perceived as source of identity or distinctiveness and spiritual value is attached to places of worship.

7.2.10 Significance derives not only from a heritage asset's physical fabric, but also from its setting. The setting of a heritage asset is defined as the surroundings within which it is experienced; its extent is not fixed and may change as the asset and its surroundings evolve. However, setting is not a heritage asset in its own right, nor is it a heritage designation in its own right. Its importance lies in what it contributes to the significance of the heritage asset. This contribution may be positive, negative or neutral.

7.2.11 Paragraph 128 of the NPPF is clear in its recognition of the need for local planning authorities to require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. It is also unequivocal on the

matter of scope, as it mentions that the level of detail should be proportionate to the importance of the asset, and no more than sufficient to understand the potential impact of a development on that significance.

7.2.12 The way in which heritage significance is expressed within this ES Chapter has been specifically developed, based on good practice, to ensure that it is fully aligned with the Planning (Listed Buildings and Conservation Area) Act 1990¹¹, the NPPF and Historic England's Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment¹².

7.2.13 The statements of significance development for each of the assets reflect the language of the Planning Act 1990, utilising terms such as character and appearance (of Conservation Areas), and architectural and historic interest (of Listed Buildings). Further frames of reference, found within Conservation Principles, allow for terms such as 'evidential', 'historical', 'aesthetic' and 'communal' to be used to convey the many heritage values that combine to make up the heritage significance of an asset.

7.2.14 The statements of significance describe 'what matters and why', i.e. which aspects of an asset and its setting contribute to the heritage significance of the asset and how. Although the statements rightly acknowledge the fabric of heritage assets as representing the principal embodiment and physical manifestation of their heritage significance, the surroundings of the assets, and the ways in which they can be experienced, often contribute to their overall significance. This will be assessed in line with the settings assessment methodology (**Appendix 7.1**).

7.2.15 Although terms such as High, Medium or Low value, and National, Regional or Local importance are often adopted in EIA to express a summary description of the 'relative significance' heritage assets, they are not universally recognised or accepted terms within heritage sector guidance and amongst heritage professionals. This is because these concepts require complex definitions to properly allow for their application, and do not directly relate to the language or key tests required in determining planning applications or heritage consents.

7.2.16 The criteria adopted for this ES Chapter are laid out in **Table 7.1**, with terminology used derived directly from the NPPF. The language used in this ES Chapter is entirely consistent with the NPPF and the Planning Act 1990, and provides the decision-maker with sufficient information to understand how change could bring benefit or harm to the heritage significance of an asset(s), thus enabling an informed judgement to be reached.

Table 7.1: Criteria for Assessing the Significance of Heritage Assets

Heritage Significance	Description of Criteria
Designated heritage assets of the highest significance	As defined in the NPPF, these include: Scheduled Monuments, Protected Wreck Sites, Battlefields, Grade I and II* Listed Buildings, Grade I and II* Registered Parks and Gardens, and World Heritage Sites. Heritage assets displaying considerable evidential, historic, aesthetic or communal value, as identified by Conservation Principles, which are of comparable significance to designated

¹¹ Planning (Listed Buildings and Conservation Areas) Act 1990 Act of UK Parliament

¹² Historic England (2015) Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking

Heritage Significance	Description of Criteria
	heritage assets of the highest significance, would also fall within this category.
Designated heritage assets of less than the highest significance	In accordance with the NPPF, these include, by elimination, Grade II Listed Buildings, Conservation Areas and Grade II Registered Parks and Gardens.
Non-designated heritage assets	Heritage assets, the significance of which has not yet been ascertained.
Uncertain	Heritage assets the significance of which has not yet been ascertained.
Negligible	Remains that do not have sufficient significance to warrant consideration in planning decisions, and which are therefore not considered to constitute heritage assets.

Assessment of Development Effects

7.2.17 The methodology employed here moves away from the more traditional 'scalar', quantitative, matrix-led approach, adopting a descriptive, qualitative presentation of the findings of the assessment. This is because the descriptions of anticipated development impacts upon heritage assets are qualitative rather than quantitative and the adopted approach allows for greater accuracy in understanding the potential harm the proposed development may cause to the significance of heritage assets. As with the approach adopted in assessing heritage significance of heritage assets, this approach directly reflects key concepts in planning policy and heritage guidance with regard to the assessment of development effects upon heritage assets. It therefore offers an appropriate way to define such effects. Clear statements of significance (the 'what matters and why' approach), and a sound understanding of the character of the proposed development, as presented in this assessment methodology, allow for a transparent articulation of the nature/degree of any identified effects.

7.2.18 The effects of the Proposed Development arise as a result of change to the heritage assets. The significance of a heritage asset can be harmed or lost through alteration, destruction or development within its setting. In terms of harm though changes to setting, as clearly illustrated within the NPPF, any attempt to convey the impact or harm of a development has to be framed within the tightly-defined parameters of harm to the significance of the heritage asset itself. This is a fundamental principle. In summary, a project could bring about change within the setting of a heritage asset, resulting in harm to its significance, or the way in which that significance is experienced. References such as 'harm to setting' are therefore avoided.

7.2.19 The assessment of the effect of the development upon cultural heritage resource takes into account numerous factors, including the scale of development, the type and extent of physical disturbance and the visual effects. The development effects may be:

- Direct or indirect. Direct effects arise from physical change to the resource, which affects its physical remains or fabric (i.e. excavations which may affect the archaeological remains or alterations to historic buildings). Indirect effects relate to changes within the setting of heritage assets;
- Permanent or temporary. Due to their character, direct effects upon the physical remains of heritage assets are permanent, and not reversible. However, effects on the settings of heritage assets may be temporary, if the development has a limited lifespan. These temporary effects can be short, medium or long-term.

- Beneficial, when the development leads to the enhancement of the heritage resource, or adverse, when it results in harm to, or loss of, the significance of a heritage asset. If the resource will not be affected by the proposed development, there will be no impact.

7.2.20 To further assist in the decision-making process, the following approach to the assessment of effects upon heritage assets (Table 7.2) is adopted. This has been done in order to improve the intelligibility of the assessment results for purposes of quick reference and ready comprehension. The language used here is entirely consistent with the NPPF and the Planning Act 1990, and provides sufficient information to reach informed judgement.

Table 5.2: Magnitude of Effect upon Heritage Assets

Level of Effect	Description	Applicable Policies
Heritage Benefit	The proposals would enhance the heritage significance of a heritage asset.	Enhancing the significance of a heritage asset is a desirable development outcome in respect of heritage. It is consistent with key policy and guidance, including the NPPF paragraphs 126, 131 and 137
No harm (neutral effect)	The proposals would preserve the significance of a heritage asset.	Preserving a Listed Building and its setting is consistent with Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990. Preserving or enhancing the character or appearance of a Conservation Area is consistent with Section 72 of the Act. Sustaining the significance of a heritage asset is consistent with paragraph 126 of the NPPF and should be at the core of any material local planning policies in respect of heritage.
Harm to Non-Designated Assets	The proposals would affect the heritage significance of a non-designated heritage assets.	Paragraph 135 of the NPPF states that the in determining planning application, the effects of the proposed development on the significance of non-designated heritage assets needs to be taken into account. A balanced judgement is required to weigh direct or indirect impacts on non-designated assets, having regard for the scale of harm and the significance of the asset.
Less than Substantial Harm	The proposals would result in a restricted level of harm to the significance of a designated heritage asset, such that the asset's contributing heritage values would be largely preserved (lower end). The proposals would lead to a notable level of harm to	This level of harm is defined within the NPPF specifically with regard to designated heritage assets. In determining an application, this level of harm should be weighed against the public benefits of the proposals (paragraph 134). Proposals involving change to a Listed Building or its setting, or any features of special architectural or historic interest

Level of Effect	Description	Applicable Policies
	the significance of a designated heritage asset. A reduced, but appreciable, degree of its heritage significance would remain (upper end).	which it possesses, or change to the character or appearance of Conservation Areas, must also be considered within the context of the Planning Act 1990.
Substantial Harm	The proposals would very much reduce the designated heritage asset's significance or vitiate that significance altogether.	Paragraphs 132 and 133 of the NPPF state that substantial harm or loss to designated heritage assets of the highest significance should be wholly exceptional and to assets of less than highest significance – exceptional. Proposed development leading to such harm should be refused unless it is demonstrated that this substantial harm is necessary to achieve substantial public benefits.

7.2.21 In line with EIA best practice, it is considered that 'substantial harm' to designated heritage asset would equate to a significant adverse effect in line with the language used within the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended 2015). 'Less than substantial harm' to designated heritage assets could also trigger the same significant effect, but no prescriptive criteria are proposed to prejudge this threshold, leaving it to professional judgement. With regard to the harm to non-designated assets, professional judgment will be used to ascertain whether the significant effect is triggered, taking into account the relative significance of such assets as well as the level of harm upon them.

Mitigation Measures and Residual Effects

7.2.22 When effects upon the cultural heritage resource have been identified, mitigation measures are proposed in order to prevent, reduce or offset any significant effects. It may also be possible to enhance heritage assets as part of the development. In such circumstances, the weight given to the heritage values of the asset should be proportionate to the significance of the asset and the development effect upon it. In order to assess residual effects following the implementation of the mitigation measures upon the significance of heritage assets, professional judgement is used.

Legislative and Policy Framework

7.2.23 The key legislative and policy documents are summarised below, with further details provided in **Appendix 7.1**.

Planning (Listed Buildings and Conservation Areas) Act 1990

7.2.24 The Planning (Listed Buildings and Conservation Areas) Act 1990¹³ states that **"in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State, shall have special regard to the desirability**

¹³ Planning (Listed Buildings and Conservation Areas) Act 1990 Act of UK Parliament

of preserving the building or its setting or any features of special architectural or historic interest that it possesses” (Section 66).

National Planning Policy Framework (NPPF)

7.2.25 The principal national guidance on the importance, management and safeguarding of the historic environment recourse within the planning process in the NPPF Section 12: Conserving and enhancing the historic environment¹⁴. The aim of this section is to ensure that Local Planning Authorities (LPA), developers and owners of heritage assets adopt a holistic and consistent approach to conserving the historic environment.

7.2.26 Heritage assets include designated and non-designated sites, and policies within the NPPF relate to both the treatment of heritage assets themselves, and of their settings, both of which are a material consideration in development decision making.

7.2.27 LPA are urged to request applicants to describe the significance of any heritage assets affected by a proposed development, including any contribution made to significance by their setting. The level of detail required in the assessment should be proportionate to the importance of the assets, and no more than sufficient to understand the potential effects of the proposal on their significance.

7.2.28 The key tenets of the NPPF are:

- when considering the effect of a development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be (Paragraph 132);
- significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to, or loss of, a Grade II listed building, park or garden should be exceptional. Substantial harm to, or loss of, designated heritage assets of the highest significance, should be wholly exceptional (Paragraph 132);
- where a proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal (Paragraph 134); and
- with regard to non-designated heritage assets, a balanced judgement will be required having due regard to the scale of any harm or loss, and to the significance of the heritage asset affected (Paragraph 135).

Local Planning Policy

7.2.29 The Application Site is located within Swindon Borough Council. Swindon Borough Local Plan 2026 (adopted in March 2015)¹⁵ comprises the primary planning policy document against which planning proposals within the LPA are assessed. Those policies which are relevant to heritage include:

- Policy EN10: Historic Environment and Heritage Assets; and
- Policy EN5: Landscape Character and Historic Landscape.

Scoping Criteria

¹⁴ Department for Communities and Local Government (2012) National Planning Policy Framework

¹⁵ Swindon Borough Council (2015) Swindon Borough Local Plan 2026, https://www.swindon.gov.uk/download/downloads/id/1699/swindon_borough_local_plan_2026.pdf

7.2.30 Prior to the preparation of this ES Chapter, a Heritage Assessment (**Appendix 7.1**) was undertaken, which identified the cultural heritage resource receptors that may be sensitive to the Proposed Development and as such need to be considered (scoped in) within the ES. As a consequence, the Cultural Heritage Chapter considers the following potential effects:

- Construction Phase – buried archaeological remains; and
- Operational Phase – potential effects on designated heritage assets through development within their setting.

Limitations to the Assessment

7.2.31 This assessment work is principally based on a desk-based study and utilised secondary information derived from a variety of sources, only some of which have been directly examined for the purpose of this assessment. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate. The records held by the HER and Historic England are not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

7.2.32 This assessment has been also informed by intrusive survey within the Application Site, including the previous trial trench evaluation¹⁶. However, it should be noted that the survey focussed on a small part of the Application Site, with large areas to the east and north devoid of any previous intrusive investigations.

7.3 BASELINE CONDITIONS

Site Description and Context

7.3.1 This section of the ES Chapter presents a summary of the historical and archaeological background of the Application Site, based on the Heritage Assessment (**Appendix 7.1**) and previous archaeological works. Heritage assets discussed below are illustrated on Figures 2 and 5 of **Appendix 7.1**.

7.3.2 The Site is located on the Lower Chalk Plain, a gently undulating ledge of marly chalk that extends to the north and west of the Marlborough Downs, at approximately 200m above Ordnance Datum (AOD). Approximately 1.3km south of the Site, the northern scarp of the Marlborough Downs rises steeply forming a prominent ridge of downland, c. 260m AOD.

Baseline Survey Information

Prehistoric and Romano-British

7.3.3 The trial trench evaluation in 2006, which included part of the Application Site, revealed remains potentially dating from the Bronze Age to the Roman period. A number of shallow linear features, which may possibly relate to a field system, were recorded, with Bronze Age pottery recovered from one of the features, in a trench excavated immediately west of the main body of the Application Site (**Appendix 7.1: Figure 2, A**). This indicates that some of the linear features may pre-date the early Iron

¹⁶ Bashford, R. (2006) Archaeological Evaluation Report for the National Museum of Science and Industry, Wroughton, Oxford Archaeology grey literature report

Age settlement (see below), however these features may also be associated with medieval or later activity.

7.3.4 The focus of the early Iron Age settlement, which comprised circular post-built structures with associated postholes and pits, extends into the north of the Application Site (**Appendix 7.1**: Figure 2, 2a). The settlement features were recorded in a number of trenches spread over an area of c. 1200m², and may represent a loose cluster of contemporary habitation, or possibly a shifting nucleus of settlement within the area¹⁷.

7.3.5 Additionally, a number of large features were revealed, with two main concentrations c. 200m east and c. 100m south of the Application Site (**Appendix 7.1**: Figure 2, 2b). These features are of uncertain date, although some Romano-British material was recovered from the upper fills. It is feasible that these could represent defensive features, due to their apparent alignment in the direction of Barbury hillfort, which is located c. 2.4km south-east of the Application Site. An alternative interpretation is that they are quarry pits, located on the periphery of associated settlement. Three features identified as linear ditches, and dated to the Romano-British period, were recorded in trenches in the north and to the north of the Site (**Appendix 7.1**: Figure 2, B). It has been tentatively suggested that these features represent a trackway.

7.3.6 In summary, the Application Site is known to contain Iron Age settlement remains, Romano-British features, and potential for possible Bronze Age linear features. It is likely that further associated remains survive elsewhere within the Application Site, particularly in the northern half in proximity to the presumed focus of the early Iron Age settlement.

Early Medieval and Medieval

7.3.7 The Application Site is located within the parish of Wroughton, a settlement and Saxon estate of early medieval origin. The Application Site is likely to have formed part of the agricultural hinterland of the settlement at Wroughton during the early medieval period and there are no early medieval finds or features recorded within the Application Site.

7.3.8 During the medieval period, the Application Site is likely to have formed part of the agricultural hinterland of the medieval settlements, as indicated by the potential medieval / post-medieval agricultural features recorded during the evaluation trenching within the Application Site. It is likely that further remains of these features survive elsewhere within the Application Site, particularly in the north where better preservation of the on-site stratigraphy was observed during the 2006 evaluation¹⁸.

Post-Medieval and Modern

7.3.9 Linear features recorded in the evaluation could be associated with post-medieval agricultural activity. Former open land at Wroughton was formally enclosed in 1796 and the Application Site is recorded to have formed part of a large open field known as 'Glebe' land, which indicates it was part of an ecclesiastical holding. By the time of the First Edition Ordnance Survey map of 1886, further enclosure had taken place and the Application Site was located across six agricultural fields and small parcels of land

¹⁷ Bashford, R. (2006) Archaeological Evaluation Report for the National Museum of Science and Industry, Wroughton, Oxford Archaeology grey literature report

¹⁸ Bashford, R. (2006) Archaeological Evaluation Report for the National Museum of Science and Industry, Wroughton, Oxford Archaeology grey literature report

associated with Wroughton Down, a probable farm dwelling (**Appendix 7.1**: Figure 2, 9b) which extended into the southern part of the Application Site, and Rectory Cottages in the western half of the Application Site (**Appendix 7.1**: Figure 4).

7.3.10 The Application Site remained in much the same condition until 1939 when Wroughton Airfield was established by the RAF to house No. 15 Maintenance Unit. Construction of the airfield began in 1939, with the first concrete runway finished in spring 1941; all three runways had been constructed by 1944. The Application Site incorporates two stretches of the former runway, and two areas of managed grass land between the former runway strips. No other features associated with the former World War Two airfield are recorded within the Application Site. There are a range of features, including hangars, a control tower, pill boxes and a Royal Observer Corps monitoring post that survive within the study area.

7.3.11 The Application Site has some potential for post-medieval agricultural remains. The Site also has some potential for the survival or buried remains associated with the Wroughton Down farmstead and Rectory Cottages. Any such remains are likely to have been highly truncated owing to the landscaping of the Site during the laying out of Wroughton Airfield.

7.3.12 After the war, Wroughton Airfield was reduced in size, with the managed grass land within the Application Site used in part for the grazing of sheep, though the principal use is for museum related activities. Following the closure of the airfield in 1978, it became a storage annex for part of the Science Museum's aircraft and other exhibits.

7.3.13 The Science Museum Group (SMG) utilise the site to fulfill their Statutory obligation to care, preserve and add to the objects in their collection. The Existing limitations to these objectives, with sensitive objects stored in unsatisfactory conditions in existing hangars at the site [and need to vacate their current store at Blythe House by March 2023] have been recognised as prime drivers behind the need to proceed with the current proposal. The requirements of SMG and the detailed benefits that will accrue from the proposed development are discussed elsewhere within the application material and are not further discussed here.

The Setting of Designated Heritage Assets

Summary of Designated Heritage Assets

7.3.14 Designated heritage assets within 1km of the Application Site include eight Listed Buildings, all listed at Grade II, comprising three dwellings, two milestones, and assets within the graveyard of Grade I Listed Parish Church of St John and St Helen (located just over 1km to the north of the Application Site). In addition, the Heritage Assessment considered a number of assets located beyond the 1km study area, including further Listed Buildings and a number of Scheduled Monuments (**Appendix 7.1**: Figure 5).

7.3.15 It is recognised that the surviving features of the WWII airfield can be considered as non-designated heritage assets. English Heritage has undertaken "a thorough review of England's 20th century military heritage, including studies of airfields, airfield defences and Cold War monuments. Wroughton was considered within this assessment but neither Wroughton itself nor any of the individual military structures at the site were recommended for designation. Therefore, whilst Wroughton was studied by the EH designation team and they recognised that it was a good example of its type, they did not conclude that it, or any of its components, were of a quality or significance that warranted protection through designation.

7.3.16 Whilst the new structure will clearly represent a change to the open character of the airfield it has been considered in the context of the continuing evolution of the site and its increasing role as a museum store. The nearest structure to the proposed new building is an existing new museum storage structure. Whilst two hangars, also used for museum storage, stand close by their function and historic context has already been altered and it is considered that their significance will not be harmed by the current proposal.

7.3.17 The walkover survey carried out as part of the Heritage Assessment has established that there would be no non-physical effects on the majority of the designated heritage assets located within the environs of the Site. The designated heritage assets which could be susceptible to indirect effects as a result of the Proposed Development, and thus included in a detailed settings assessment, include:

- Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument;
- Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle; and
- Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monuments; and
- Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument.

7.3.18 The detailed settings assessment, the conclusions of which have been summarised within this ES Chapter, is included within the Heritage Assessment (**Appendix 7.1**).

Barbury Castle

7.3.19 Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument (**Appendix 7.1: Figure 5, D7**) is a large multi-vallate Iron Age hillfort located c. 2.4km south of the Application Site. It survives in a good condition, and is known from part excavation to contain archaeological and environmental evidence relating to its construction, economy and the landscape in which it was built. The hillfort has two rings of banks and ditches that enclose an oval area of 4.5ha. There are two original entrances, situated at the east and west ends of the enclosure. Also included within the scheduling is a Bowl Barrow, located to the immediate north-west of the hillfort, which is likely to comprise a funerary monument dating from the Neolithic to the Bronze Age (thus pre-dating the hillfort). The interpretation of this feature as a Bronze Age barrow is likely, but not certain. This monument likely forms part of a barrow cemetery alongside a group of three barrows and a Saucer Barrow located to the west (**Appendix 7.1: Figure 5, D8 & D9**). The Barrow is likely to contain both archaeological and environmental evidence.

7.3.20 The Scheduled Monument occupies a prominent ridge-top location at the western end of Barbury Down. The ridge-top location is at a natural high point in the landscape and gives extensive views in all directions. To the north lies the agricultural landscape of the Lower Chalk Plateau, the Application Site and a solar farm, beyond which lie the clay vales around Swindon. To the south, west and east lies a mixed rural landscape and the thinly settled chalk downs with a prominent north facing escarpment that extends from west to east. The immediate environs of Barbury Castle Hillfort and Bowl Barrow comprise unenclosed, permanent grassland that is a remnant of former downland pastures.

The Barrow Cemetery

7.3.21 Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monument, and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monument (**Appendix 7.1: Figure 5, D8 and D9**, respectively) are

separate designations, however, these were found to share a common setting and, as such, have been assessed together and will be discussed as the Barrow Cemetery.

7.3.22 The western barrow mound of Three Bowl Barrows is 18m in diameter and 1m high, the central mound is 15m across and 0.7m high, and the eastern mound has been levelled and is no longer visible as an earthwork. Saucer Barrow is 21m in diameter and 0.2m high, surrounded by a ditch and lower outer bank. The ditch has become partially infilled, but survives as an earthwork 3m wide and 0.4m deep. The outer bank is 3m wide and 0.5m high on the downhill side. All four barrows are likely to represent Neolithic – Bronze Age burial monuments.

7.3.23 These Scheduled Monuments are set within a small dip on the ridge to the west of Barbury Castle. The barrows are located immediately west of Barbury Castle and, as such, their wider environs are as defined above. These barrows form part of a barrow cemetery which includes the Bowl Barrow immediately north-west of Barbury Castle Hillfort, described above.

Two Bowl Barrows

7.3.24 Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument (**Appendix 7.1**: Figure 5, D10) are aligned north-south. The northern barrow measures 28m in diameter and 0.7m high and the southern barrow mound is 26m in diameter and 0.5m high. The mounds are surrounded by interconnecting ditches, which although no longer visible on the surface have been recorded from aerial photographs. Both barrows are believed to be funerary monuments dating from the late Neolithic to the Late Bronze Age.

7.3.25 The barrows are situated on a low crest below the Barbury Escarpment to the north east of Barbury Castle Hillfort. The wider setting of this scheduled monument is as described above.

Significance of Identified Sensitive Receptors

7.3.26 The following section discusses the heritage significance of potential sensitive cultural heritage receptors with regard to the Proposed Development. This is also summarised in **Table 7.1**, below.

Known and Potential Archaeological Remains

7.3.27 The assessment of significance is informed by the results of the evaluation undertaken in 2006¹⁹. The construction works for Wroughton Airfield resulted in some truncation to buried archaeological deposits within its footprint, particularly to the south and west of the Application Site. As a result, archaeological deposits appear to be best preserved in the north of the Application Site, whilst the significance of deposits to the south was found to have been compromised.

7.3.28 It should be noted that whilst the evaluation recorded a number of features within the Application Site, there remains the potential for further remains to be present, especially within areas of the Application Site which were not subject to the investigation (central, north-eastern and eastern areas of the Application Site). Whilst it is not possible to ascertain the heritage significance of any of these assets without any investigations, any such significance remains uncertain, any such remains, based on the

¹⁹ Bashford, R. (2006) Archaeological Evaluation Report for the National Museum of Science and Industry, Wroughton, Oxford Archaeology grey literature report

archaeological potential of the Application Site, would unlikely be of highest significance and would most probably comprise non-designated heritage assets.

Linear Features of Bronze Age – Post-Medieval Date

7.3.29 Linear features, partially excavated within the Application Site, could be associated with Bronze Age activity, although a later date is also possible (**Appendix 7.1**: Figure 2, A). Further such remains may also be present within the Application Site.

7.3.30 The exact nature and date of these features remains uncertain. However, should these features be of prehistoric or Romano-British origin, they would be of evidential and historical (illustrative) value in their contribution towards our understanding of the nature and extent of activity within the local landscape. The significance of such remains would likely be of greater archaeological interest than later agricultural remains, although, as likely agricultural features, they would still not be of sufficient archaeological interest to comprise heritage assets of the highest significance. These features would constitute non-designated heritage assets of archaeological interest.

7.3.31 If the linear features represent lynchets or ridge and furrow, presumably of medieval / post-medieval origin, they would be of much more limited evidential and historical value, making only a small contribution towards our understanding of local land use during these periods, and making a neutral contribution towards our understanding of medieval and post-medieval agricultural practices more broadly. Such features would be a non-designated heritage asset of limited heritage interest.

Remains of an Early Iron Age Settlement

7.3.32 The remains of an early Iron Age settlement have been recorded in the north of the Application Site, and there is potential for further associated features to be present (**Appendix 7.1**: Figure 2, 2a).

7.3.33 The significance of such remains is derived from their potential evidential and historic (illustrative) values and their ability to enhance our understanding of the nature of prehistoric settlement within the local landscape, and more widely, particularly in terms of landscape preferences and settlement size. However, whilst such remains would be of heritage significance, they would not be of sufficient archaeological interest to comprise heritage assets of the highest significance and would constitute non-designated heritage assets of archaeological interest.

Potential Iron Age or Romano-British Linear Features

7.3.34 The remains of possible Iron Age/Romano-British linear features are recorded within the Application Site and its environs (**Appendix 7.1**: Figure 2, 2b and B). The heritage significance of such remains associated with prehistoric and/or Romano-British activity would derive from their evidential and historic (illustrative) values contributing towards our understanding of local land use during these periods. Whilst such remains would be of heritage significance, they would not be of sufficient archaeological interest to comprise heritage assets of the highest significance and would constitute non-designated heritage assets of archaeological interest.

Potential Early Medieval to Modern Agricultural Remains

7.3.35 The Site is likely to have formed part of the agricultural hinterland of the established settlement at Wroughton from the early medieval period until the establishment of Wroughton Airfield in the 20th century. As such, there is some potential for early medieval – modern agricultural remains to survive within the Site, such as infilled boundary and drainage ditches or infilled furrows relating to former ridge

and furrow cultivation. Such remains have little potential to contribute towards our understanding of medieval and post-medieval farming practices and would at most comprise non-designated heritage assets of limited archaeological interest.

Potential Remains of Post-Medieval and Modern Buildings

7.3.36 There is some limited potential for the remains of former buildings, associated with Wroughton Down and Rectory Cottages, to be present within the Application Site (**Appendix 7.1**: Figure 2, 9b and Figure 4). Any such remains would be anticipated to be highly truncated, owing to landscaping associated with the laying out of Wroughton Airfield. If present, any buried remains of these structures, such as foundations and floor surfaces, would comprise non-designated heritage assets of limited interest.

Remains Associated with Wroughton Airfield

7.3.37 The remains of the Wroughton Airfield runways, now utilised as an internal roadway, survive within the Application Site, and are of some limited evidential and historic (illustrative) value, in their ability to demonstrate the layout and construction techniques of the former World War Two airfield. The former runways lie outside of the footprint of the proposed new building, however, the associated car parking and service yard would extend onto the surface of the runway. No significant physical effects are anticipated in relation to this proposed use of the runways, and both the physical remains of the runway and the legibility of its alignment will be preserved. On this basis, it is considered that the Proposed Development will not result in any adverse effects on the significance of the former airfield runways and they are not considered a sensitive receptor with regard to the Proposed Development.

Designated Heritage Assets

7.3.38 The section below provides a summary of the assessment of significance and setting undertaken, with the full details included within the Heritage Assessment (Appendix 5.1).

Barbury Castle

7.3.39 Barbury Castle derives its significance primarily from the evidential and historic (illustrative) values embodied within the buried and earthwork remains, as an example of an Iron Age defensive site. The Bowl Barrow also derives its significance primarily from the evidential and historic (illustrative) values embodied within its physical remains, as an example of a prehistoric funerary monument. Both monuments also derive significance from the potential of their evidential value to yield further information on Iron Age monumental construction, economy and environmental conditions, and Bronze Age prehistoric funerary practice and environment. Both assets are also considered to derive some significance from their communal value for those people for whom it figures within their collective experience and memory.

7.3.40 In addition, the following aspects of the asset's setting make a contribution to its significance:

- The Hillfort's ridgeway location and association with the historic communications route;
- The River Ogg valley, c. 4km to the east, as the Hillfort (and Liddington Castle) is likely to have been positioned to control access to the valley, which provided an important route onto the Marlborough Downs;
- The immediate surrounds which comprise unenclosed permanent grassland, as well as association with prehistoric agricultural and settlement remains. These contemporary landscape features make a positive contribution towards the historic

(illustrative and associative) value of the Hillfort, affording an understanding of its contemporary landscape context, and thus make a positive contribution towards the significance;

- Association with other hillforts located along the ridgeline (i.e. Liddington Castle and Uffington), and shared visibility;
- The group value of the Bowl Barrow as part of the wider barrow cemetery and association with other funerary remains in the wider landscape;
- Panoramic views from the Hillfort, especially along the ridgeline towards other hillforts and the barrow cemetery, but also northwards across the as such views emphasise a further component of the hillfort's hinterland. The Application Site dilutes the quality of these views to a degree, however, the prevailing rural character of the landscape remains legible, and such views are still considered to make a positive contribution;
- Views towards the Hillfort as they allow for the monument to be appreciated in its landscape context and for its dominance and monumentality to be seen; and
- With regard to the Bowl Barrow, views of the cemetery are a key element of its experience, facilitating an appreciation of the wider prehistoric, ritual landscape. The sense of quietness and tranquillity provided by the prevailing agricultural landscape which surrounds the Bowl Barrow affords a sense of remoteness and isolation which makes a positive contribution towards its significance.

7.3.41 By virtue of its designation, Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument is a heritage asset of highest significance.

The Barrow Cemetery

7.3.42 The Three Bow Barrows: Part of the Barrow Cemetery west of Barbury Castle and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle derive significance primarily from the evidential and historic (illustrative) value manifested within their buried and earthwork remains, as examples of prehistoric funerary monument. The Barrow Cemetery also draws evidential value of their potential for buried remains, which may yield further information on prehistoric funerary practices.

7.3.43 The setting of the barrows also contributes to their significance and the key aspects of the setting are summarised below:

- The group value and intervisibility between the individual barrows within this cemetery group, inducing the barrow scheduled with the Hillfort (see above);
- Their topographic location, in a small dip on the ridge to the west of Barbury Castle, with the siting of the barrow likely associated with the routeway;
- The wider landscape is considered to have a neutral contribution to the significance of these barrows in terms of physical surroundings, however it allows for the monuments to be experienced within a tranquil rural area which affords a sense of wildness and remoteness; and
- Views which allow to experience the topographic position of the barrows as well as views in which the monuments can be experienced (from immediate surroundings as the monuments are not easily perceptible from distance.

7.3.44 By virtue of its designation, the Scheduled Monuments are heritage assets of highest significance.

Two Bowl Barrows

7.3.45 The Scheduled Monument derives its significance primarily from the evidential and historic (illustrative) value manifest within their remains, and their archaeological potential.

7.3.46 The setting of the barrows also contributes to their significance, with its key aspects summarised below:

- The group value of the barrows within the Scheduled Monument and likely visibility and historical association with other contemporary funerary monuments;
- The asset's topographic location - on a low crest overlooking the Lower Chalk plateau – which allows for limited views over the landscape (including in the direction of the Application Site). The local prominence associated with this location;
- Surrounding undeveloped arable and grassland fields which afford the assets a sense of remoteness and wildness, although the road to the east slightly affects this experience; and
- The views in which the barrows can be seen, especially from the elevated positions along the escarpment to the south. From the north or the road, the assets are not clearly perceptible.

7.3.47 By virtue of its designation, the Scheduled Monument is a heritage asset of highest significance.

Summary of Sensitive Receptors

7.3.48 **Table 5.3** provides a summary of the significance of heritage assets that have been discussed above, with terminology derived directly from the NPPF.

Table 5.3: Summary of Significance of Sensitive Receptors

Heritage Significance	Description of Criteria
Designated heritage assets of the highest significance	Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monument, and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monument ('the Barrow Cemetery') Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument
Designated heritage assets of less than the highest significance	None
Non-designated heritage assets	Linear Features of Bronze Age – Post-Medieval Date Remains of an Early Iron Age Settlement Potential Iron Age or Romano-British Linear Features Remains Associated with Wroughton Airfield Potential Early Medieval to Modern Agricultural Remains (limited, if any, archaeological interest) Potential Remains of Post-Medieval and Modern Buildings (limited, if any, heritage interest)
Uncertain	Potential archaeological remains
Negligible	None

7.4 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Identification of the Effects of the Proposed Development

Construction Phase Effects

7.4.1 The physical effects of the Proposed Development upon the known and as yet unidentified archaeological resource (as listed in **Table 5.3**) would primarily result from groundworks associated with the construction of the new museum storage unit, which might include:

- Any preconstruction ground investigation works;
- Excavation of building foundations;
- Excavation of any service trenches; and
- Any stripping and excavations associated with the creation of the service yard and parking (if located beyond/truncating the runway surface).

7.4.2 Whilst there may be some temporary impacts during the construction phase upon the designated heritage assets (i.e. scaffolding; movement of machinery), these impacts will be relatively limited and temporary when compared with the completed development and therefore it was considered that the discussion of impacts upon designated heritage assets should refer to the Proposed Development in its Operation Phase.

Operation Phase Effects

7.4.3 No additional impacts upon the buried archaeological remains are anticipated following the completion of the Proposed Development. As such, these receptors are scoped out of discussion as part of the Operation Phase.

7.4.4 With regard the potential non-physical effects upon designated heritage assets, the Proposed Development has the potential to introduce change into the wider environs of the designated assets which may be susceptible to the Proposed Development (as identified in **Table 5.3**).

Decommissioning Phase Effects

7.4.5 No further effects on the historic environment resource are anticipated as a result of the decommissioning phase and this has been scoped out of the assessment.

Evaluation of Identified Effects

Construction

7.4.6 The effects of the Proposed Development upon the known and potential archaeological resource within the Application Site would be direct, permanent, irreversible and adverse and are likely to result in complete or partial loss of heritage significance of any potential buried archaeological features or deposits. These effects are anticipated especially within the footprint of the proposed building, with other areas of the Application Site unlikely to be significantly affected.

7.4.7 As a result of the construction activities, the archaeological remains are likely to be removed. Within the footprint of the proposed museum storage building, this includes known non-designated heritage assets of archaeological interest: the remains of an early Iron Age settlement (**Appendix 7.1**: Figure 2, 2a) and Iron Age/Romano-British linear features (**Appendix 7.1**: Figure 2, B), and potential previously unrecorded archaeological remains of uncertain significance.

7.4.8 The construction activities would lead to harm or total loss of significance of these non-designated heritage assets and without the implementation of appropriate mitigation, this would result in a Significant Adverse Effect.

7.4.9 Further recorded remains of archaeological interest (i.e. the recorded features of Bronze Age – post-medieval date), the remains associated with Wroughton Airfield as well as the features identified that are of limited, if any, archaeological interest (i.e. the medieval and later agricultural remains or buried remains associated with former buildings at the Application Site) are located outside the footprint of the proposed new building and are unlikely to be affected by the Proposed Development (Neutral Effect).

Operation

7.4.10 As described above, it has been established in the Heritage Assessment (**Appendix 7.1**) that the Proposed Development would not affect the significance of the majority of designated heritage assets within the environs of the Application Site and as such there would be no development effects upon these assets (Neutral Effects). The potential sensitive receptors, as identified above, are discussed in more detail below as the Proposed Development has the potential to lead to long-term/permanent and indirect changes within these assets' settings.

Barbury Castle

7.4.11 The Application Site is located within the low lying landscape north of Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument (**Appendix 7.1**: Figure 5, D7). The Proposed Development would not result in any reduced visibility to those key vistas identified above, and the intervisibility with contemporary assets which make a positive contribution to the significance of the Scheduled Monument would be preserved.

7.4.12 The Heritage Assessment (Appendix 7.1) has established that the Proposed Development would introduce new built form within the existing setting of the Scheduled Monument, although only a limited number of views (i.e. from the west, from the ramparts of the Hillfort and from the Bowl Barrow) would be changed as a result. However, it is considered that the proposed museum storage building would sit within the established context of existing built form (i.e. immediately in front of existing aircraft hangars and the existing storage building, with relatively expansive Swindon Solar Farm to the south), and is of a sympathetic design with regards to height and external treatment. As such, the Proposed Development would not result in a change to the character of the existing setting of the Hillfort. The proposed building would not result in any perceivable increase in noise or movement with regard to the experience of the Scheduled Monument. On this basis, the Proposed Development would not harm the significance of the scheduled monument through alteration of its setting.

7.4.13 The Proposed Development would result in the removal of archaeological remains of an early Iron Age settlement, which have the potential to provide information on the historic context of the Hillfort. However, these features lie within the Application Site, which is not considered to form part of the setting of the Hillfort which contributes to its significance and these remains cannot be experienced as part of the asset's setting. As such, the removal of these archaeological remains would not result in harm to the significance of the Hillfort through alteration of its setting, and further investigation of such remains, through a programme of archaeological works, would provide an opportunity to investigate contemporary landscape associated with the Scheduled Monument.

7.4.14 The Application Site shares no perceivable historic associations with the Bowl Barrow.

7.4.15 In summary, the proposed development would not result in harm to the significance of the Scheduled Monument, in accordance with the NPPF (Neutral Effect).

The Barrow Cemetery

7.4.16 The Site shares no perceivable historical associations with the Barrow Cemetery Scheduled Monuments (**Appendix 7.1**: Figure 5, D8 and D9, respectively).

7.4.17 The Heritage Assessment has established that the Proposed Development would be visible in views to the north from the Barrow Cemetery. However, the new buildings would not reduce visibility between the Barrow Cemetery and any of those key associated and contemporary assets within its environs. The Proposed Development would be seen within the context of extant structures (buildings and solar farm) at Wroughton Airfield, which is not considered to contribute positively towards the significance of the Barrow Cemetery. As such, the Proposed Development would not alter the existing character of this aspect of the setting of the Barrow Cemetery. On this basis, it can be summarised that the Proposed Development would not harm the significance of the Barrow Cemetery through alteration of its setting, in accordance with the NPPF (Neutral Effect).

Two Bowl Barrows

7.4.18 The Application Site shares no perceivable historical associations with Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument (**Appendix 7.1**: Figure 5, D10). The Proposed Development would be visible from the slightly elevated position that Two Bowl Barrows occupy, however, the views towards associated and contemporary assets, which lie to the west and to the east along the ridgeway would not be altered and additionally, the new proposed buildings would be situated amongst existing built form of a similar scale, and the character of the wider surroundings of the asset would therefore not be changed. On this basis, the Proposed Development would not lead to harm to the significance of Two Bowl Barrows Scheduled Monument, in line with the NPPF, resulting in a Neutral Effect.

7.5 MITIGATION AND ENHANCEMENT

7.5.1 Where significant effects are anticipated, mitigation may be necessary to adequately address these effects, in order to reduce or offset the harm (effect on) to the importance (significance) of non-designated heritage assets.

7.5.2 The NPPF makes the following provisions in respect of impacts to the significance of non-designated heritage assets: **“the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset”** (Paragraph 135). It also states that local councils should **“require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact”** (Paragraph 141).

Mitigation by Design

Designated heritage assets

7.5.3 The Heritage Assessment (**Appendix 7.1**) has established that the scale and positioning of the new building, as well as consideration of the treatment of the exterior of the building, have ensured that the Proposed Development would not lead to harm to any designated heritage assets located in the vicinity of the Application Site (Neutral Effect) and no further mitigation with regard to these assets is required (either by design or as additional mitigation).

Buried Archaeological Remains

7.5.4 The impacts upon the archaeological remains, which may lead to substantial effects, would occur during the construction phase and therefore any mitigation considered necessary would be implemented prior to or during this phase of development.

7.5.5 It has been established that archaeological remains will be preserved in situ within areas outside of the footprint of the new proposed building (and any associated excavations, i.e. for services), leading to Neutral Effect, and no additional mitigation measures are necessary with regard to these remains.

7.5.6 Within areas where impacts are anticipated, it is proposed, in the first instance, to carry out a geophysical survey to further characterise the archaeological resource, its extent, type and significance. The results of the geophysical survey and their implications in terms of Environmental Assessment will be detailed in an Addendum to this ES Chapter. The results will be used to inform any further archaeological investigations (see below).

Additional MitigationBuried Archaeological Remains

7.5.7 As no concentrations of potentially highly significant archaeological remains have been identified (i.e. remains of significance commensurate with designated heritage assets of highest significance) within the areas where impacts are anticipated, it is considered that mitigation through preservation in situ would not be required and thus any damage to the archaeological resource resulting from construction could be satisfactorily mitigated by preservation by record.

7.5.8 A proportionate programme of archaeological survey and mitigation, by means of field investigation and recording, would be agreed in liaison with the archaeological advisor to the LPA. The results of the previous archaeological evaluation, the Heritage Assessment (**Appendix 7.1**) and geophysical survey (underway) will be used to inform the need for further characterisation of the archaeological remains, which will likely include a further evaluation necessary to inform the mitigation strategy.

7.5.9 Following this, an appropriate and proportionate mitigation strategy would be determined in consultation with the archaeological advisor. Such mitigation strategies, proportionate to the significance of the individual assets affected, will ensure that they are subject to preservation by record at an appropriate stage in the development process. This will partially offset their loss through the knowledge gained through the investigations. For the archaeological remains the mitigation may include, as appropriate, excavation, strip map and sample investigation, or archaeological monitoring of ground works during construction (known as a watching brief), with appropriate post-excavation analysis and dissemination of results.

7.5.10 The mitigation strategies discussed above will partially offset the loss of the archaeological resource through the knowledge gained in the course of the investigations. This will, to an extent, reduce the effects on archaeological remains.

Table 5.4: Mitigation

Ref	Measure to avoid, reduce or manage any adverse effects and/or to deliver beneficial effects	How measure would be secured		
		By Design	By S.106	By Condition

ENVIRONMENTAL STATEMENT

Cultural Heritage

1	Archaeological fieldwork (geophysical survey)	x		
2	Archaeological fieldwork (intrusive surveys) and mitigation			x

Enhancements

7.5.11 An additional benefit offered by archaeological works may be implemented following the investigations, including the promotion of local history in schools and local communities, and the enhancement of the public's understanding of past activities in their local area through appropriate signage, interpretation, exhibitions and/or talks.

7.6 SUMMARY

Introduction

7.6.1 This Chapter has considered the likely significant effects of the Proposed Development upon the cultural heritage resource, including buried archaeological remains within the Application Site and designated heritage assets (Scheduled Monuments and Listed Buildings) located within the Site's environs. It has been established that subject to appropriate mitigation being implemented, the Proposed Development would not result in significant adverse effects upon the cultural heritage resource within the Application Site and in its surroundings.

Baseline Conditions

7.6.2 The heritage resource which has been considered within this Chapter includes the known and potential buried archaeological remains which may be affected as part of the construction stage and designated heritage assets, located within the environs of the Application Site, which could potentially be affected as a result of change within the settings of these assets introduced following the completion of the Proposed Development.

7.6.3 Previous archaeological investigations within the Application Site and in its environs revealed the presence of buried archaeological remains associated with prehistoric and later activity. These included early Iron Age settlement features, linear features of Iron Age/Romano-British origin, as well as shallow linear features, which could have been associated with Bronze Age activity (although later, perhaps post-medieval origin, is also possible). It is likely that further remains of later prehistoric or Romano-British date may be encountered within the Application Site.

7.6.4 The Application Site appears to have been located within agricultural landscape, likely from the early medieval period until the establishment of Wroughton Airfield, and therefore there is the potential for the presence of features associated with agricultural practices. Buried remains associated with former dwellings of post-medieval or modern date, recorded on historic maps, as well as features associated with Wroughton Airfield, established in 1939, may also be present.

7.6.5 The potential for the Proposed Development to affect the significance of designated heritage assets within the environs of the Application Site has also been assessed, including eight Grade II Listed Buildings within 1km of the Application Site and a number of Scheduled Monuments in the wider landscape. It has been established that the Proposed Development would not affect the majority of the designated heritage assets, although a small number of Scheduled Monuments were selected for a more detailed assessment, including:

- Barbury Castle: a Hillfort and Bowl Barrow Scheduled Monument;
- Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle Scheduled Monuments; and
- Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down Scheduled Monument.

Likely Significant Effects

7.6.6 It has been established that the Proposed Development has the potential to affect known archaeological remains associated with an early Iron Age settlement and with Iron Age or Romano-British linear features, as well as potential previously unrecorded archaeological remains. Stripping and excavations associated with the construction of the proposed new building (and any associated landscaping or services) have the potential to truncate or totally remove the archaeological remains within their footprint. Such effects would result in harm to or total loss of significance of these buried archaeological features, leading to a Significant Adverse Effect.

7.6.7 It has been established that other identified archaeological remains within the Application Site are located outside the footprint of the Proposed Development and as such would not be harmed (Neutral Effect).

7.6.8 It has been established that the Proposed Development would not affect the significance of the designated heritage assets located within the environs of the Application Site. It has been ascertained that whilst the new building to be erected will become perceptible in views from a number of Scheduled Monuments (including Barbury Castle, the Barrow Cemetery and Two Bowl Barrows), this Proposed Development would not change the character of the wider surroundings of the assets and as such the character of their settings in which they can be experienced would remain unchanged (Neutral Effect).

Mitigation and Enhancement

7.6.9 It has been established that the Proposed Development would not lead to harm to any designated heritage assets located in the vicinity of the Application Site, including the Scheduled Barbury Castle and barrows, and no further mitigation with regard to these assets is required (Neutral Effect).

7.6.10 It has been ascertained that there will be no effects associated with the Proposed Development on archaeological remains recorded within areas outside of the footprint of the new proposed building (and any associated excavations, i.e. for services), leading to Neutral Effect. No additional mitigation measures are necessary with regard to these remains.

7.6.11 The Proposed Development has the potential to affect known archaeological remains associated with an early Iron Age settlement and with Iron Age or Romano-British linear features, as well as potential previously unrecorded archaeological remains. As it has been ascertained that these remains would not be of the highest heritage significance, mitigation through preservation in situ would not be required and any harm could be satisfactorily mitigated by preservation by record.

7.6.12 It has been proposed that a proportionate programme of archaeological survey and mitigation, by means of field investigation and recording, would be agreed in liaison with the archaeological advisor. The results of the previous archaeological evaluation, the Heritage Assessment and geophysical survey (underway) would inform the need for further evaluation and mitigation, which would comprise preservation by record at an

appropriate stage in the development process. For the archaeological remains the mitigation may include, as appropriate, excavation, strip map and sample investigation, or archaeological monitoring of ground works during construction (known as a watching brief), with appropriate post-excavation analysis and dissemination of results. It is considered that appropriate mitigation would partially offset the harm to the archaeological remains through the knowledge gained through the investigations.

7.6.13 Additional benefits offered by archaeological works, which may be implemented following the investigations, include the promotion of local history in schools and local communities, and the enhancement of the public's understanding of past activities in their local area through appropriate signage, interpretation, exhibitions and/or talks.

7.6.14 Whilst not discussed in detail in this chapter the significant benefits to the care of the collection managed by SMG, itself an internationally important collection of heritage items, as part of their statutory duty should not be overlooked. That this collection is currently housed in inappropriate conditions in structures not designed for the specialist task they perform is relevant to the discussion.

Conclusion

7.6.15 The Proposed Development at the Application Site, if the mitigation measures identified are implemented, is considered acceptable and there would be no adverse significant residual effects. There would be no harm to the designated heritage assets and harm to buried archaeological remains within the Application Site can be adequately mitigated by way of preservation by record.

7.6.16 **Table 5.5** provides a summary of effects, mitigation and residual effects. This must be provided for each Technical Chapter.

ENVIRONMENTAL STATEMENT

Cultural Heritage

Table 5.5: Summary of Effects, Mitigation and Residual Effects.

Receptor / Receiving Environment	Description of Effect	Nature of Effect *	Sensitivity Value **	Magnitude of Effect **	Heritage Significance ***	Significance of Effects ****	Mitigation / Enhancement Measures	Residual Effects *****
Construction								
Remains of an Early Iron Age Settlement	Asset will be removed by construction works	Direct. Permanent	N/A	N/A	Non-designated heritage asset	Harm to or loss of significance (Significant Adverse Effect)	Preservation by record (further archaeological surveys)	Harm offset by knowledge gained – not significant effect
Potential Iron Age or Romano-British Linear Features	Asset will be removed by construction works	Direct. Permanent	N/A	N/A	Non-designated heritage asset	Harm to or loss of significance (Significant Adverse Effect)	Preservation by record (further archaeological surveys)	Harm offset by knowledge gained – not significant effect
Potential archaeological remains	Asset will be removed by construction works	Direct. Permanent	N/A	N/A	Non-designated heritage asset	Harm to or loss of significance (Significant Adverse Effect)	Preservation by record (further archaeological surveys)	Harm offset by knowledge gained – not significant effect
Linear Features of Bronze Age – Post-Medieval Date	None (asset will be preserved)	No harm	N/A	N/A	Non-designated heritage asset	Neutral Effect (no harm)	Not required	Neutral Effect
Remains Associated with	None (asset will be preserved)	No harm	N/A	N/A	Non-designated	Neutral Effect (no harm)	Not required	Neutral Effect

ENVIRONMENTAL STATEMENT

Cultural Heritage

Wroughton Airfield					heritage asset	harm)		
Potential Early Medieval to Modern Agricultural Remains	None (asset will be preserved)	No harm	N/A	N/A	Non-designated heritage asset of limited archaeological interest	Neutral Effect (no harm)	Not required	Neutral Effect
Potential Remains of Post-Medieval and Modern Buildings (limited, if any, heritage interest)	None (asset will be preserved)	No harm	N/A	N/A	Non-designated heritage asset of limited heritage interest	Neutral Effect (no harm)	Not required	Neutral Effect
Operation								
Barbury Castle Scheduled Monument	Development within setting	Indirect. Permanent	N/A	N/A	Designated heritage asset of the highest significance	Neutral Effect (no harm)	Not required	Neutral Effect
The Barrow Cemetery Scheduled Monuments	Development within setting	Indirect. Permanent	N/A	N/A	Designated heritage asset of the highest significance	Neutral Effect (no harm)	Not required	Neutral Effect
Two Bowl Barrows Scheduled Monument	Development within setting	Indirect. Permanent	N/A	N/A	Designated heritage asset of the highest significance	Neutral Effect (no harm)	Not required	Neutral Effect
Cumulative and In-combination								

ENVIRONMENTAL STATEMENT

Cultural Heritage

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Notes:

- * Enter either: Permanent or Temporary / Direct or Indirect
- ** Only enter a value where a sensitivity v magnitude effects has been used – otherwise ‘Not Applicable’
- *** Enter either: International, European, United Kingdom, Regional, County, Borough/District or Local
- **** Enter either: Major / Moderate / Minor / Negligible AND state whether Beneficial or Adverse (unless negligible)

APPENDIX 7.1

Heritage Assessment

Building ONE Wroughton Wiltshire

Heritage Assessment



Report prepared for:
Science Museum Group

CA Project: 6420

CA Report: 17601

December 2017




Building ONE Wroughton Wiltshire

Heritage Assessment

CA Project: 6420

CA Report: 17601

prepared by	Joanne Robinson, Heritage Consultant
date	December 2017
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issue	4

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ILLUSTRATIONS

Figure 1: Site location plan

Figure 2: Selected heritage assets

Figure 3: Extract from the Wroughton enclosure map of 1796

Figure 4: Extract from the First Edition Ordnance Survey map of 1886

Figure 5: The Site in relation to proximate designated heritage assets

In text photographs

Photograph 1: View towards the Site from the eastern entrance to Barbury Castle Hillfort

Photograph 2: View towards the Site from the western entrance of Barbury Castle Hillfort

Photograph 3: View from Saucer Barrow, view to the north towards the Site

Photograph 4: View from the east of Two Bowl Narrows, view to the north-west towards the Site

1. INTRODUCTION

- 1.1. In September 2017, Cotswold Archaeology (CA) was commissioned by the Science Museum Group (SMG) to undertake a Heritage Assessment in respect of land at the Science Museum Group at Wroughton (SMGW), Wiltshire (hereafter referred to as 'the Site'). The report has been prepared to accompany a planning application at the site and also supports an Environmental Statement Chapter on Archaeology and Cultural Heritage.
- 1.2. The airfield site extends to 220ha and contains the remnants of the former RAF Wroughton military air base including the runways, hangars and associated buildings, as well as woodland and private open space. The site is a primary storage facility for SMG. It also houses the Swindon Solar Farm on the southern half of the site and the Hive research facility for the University of Bath.
- 1.3. The proposed development will comprise the construction of a new storage facility (known as Building ONE), designed to accommodate up to 27,000m² of internal space with up to an additional 9,645m² of mezzanine space. Associated parking and a service yard will be positioned alongside the storage facility. The collections management facility will be used to house over 80% (approximately 340,000) of the SMG's collection in stable, accessible conditions.
- 1.4. The site for Building ONE (hereafter referred to as 'the Site') is positioned in the northern part of the former airfield. It measures c.15ha in area (including access road) and comprises an area of grassland and sections of the taxiways and runways. The Site is situated 1.4km south of the settlement of Wroughton (Figure 1).

Objectives and professional standards

- 1.5. Cotswold Archaeology (CA) is a Registered Organisation (RO) with the Chartered Institute for Archaeologists (CIfA). This report has been prepared in accordance with the 'Standard and Guidance for Historic Environment Desk-Based Assessment' published by the Chartered Institute (2014).
- 1.6. The composition and development of the historic environment within the Site and wider landscape are discussed. A determination of the significance of any heritage assets located within the Site, and any heritage assets beyond the Site boundary that may potentially be affected by the development proposals, is presented. Any

potential development effects upon the significance of these heritage assets (both adverse and / or beneficial) are then described.

- 1.7. This approach is consistent with the Chartered Institute's 'Standard and Guidance for Heritage Desk-Based Assessment', which provides that, insofar as they relate to the determination of planning applications, heritage desk-based assessments should:

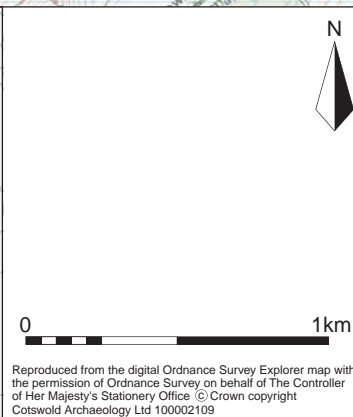
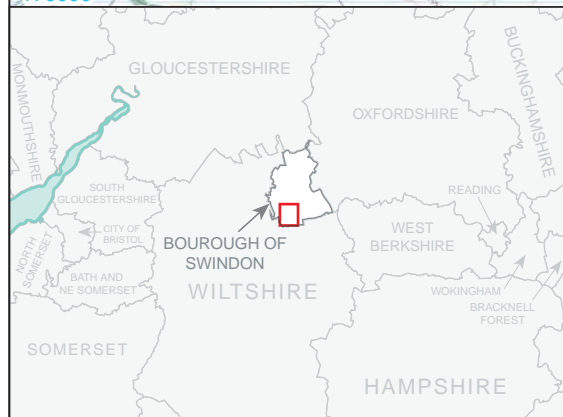
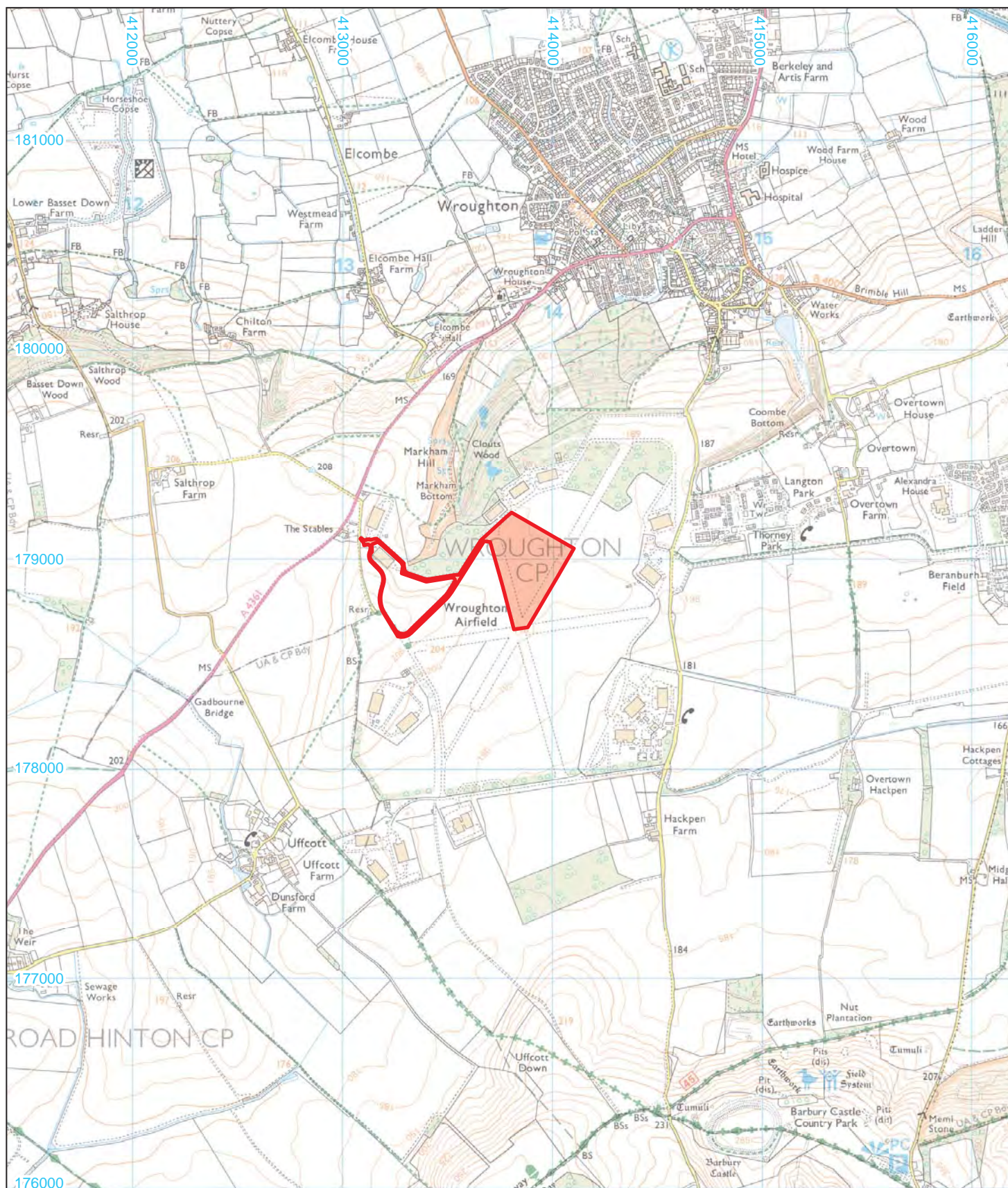
'...enable reasoned proposals and decisions to be made [as to] whether to mitigate, offset or accept without further intervention [any identified heritage] impact' (ClfA 2014, 4).

- 1.8. The 'Historic Environment Good Practice Advice in Planning Note 2: Decision-Taking in the Historic Environment' (Historic England 2014), further clarifies that a desk-based assessment should:

'...determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area, and the impact of the proposed development on the significance of the historic environment, or will identify the need for further evaluation' (Historic England 2014, 3).

Statute, policy and guidance context

- 1.9. This assessment has been undertaken within the key statute, policy and guidance context presented within Table 1.1. The applicable provisions contained within these statute, policy and guidance documents are referred to, and discussed, as relevant, throughout the text. Fuller detail is provided in Appendix 1.



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PROJECT TITLE
 Building ONE, Wroughton, Wiltshire

FIGURE TITLE
 Site location plan

DRAWN BY AO	PROJECT NO. 6420	FIGURE NO.
CHECKED BY DJB	DATE 19/10/2017	1
APPROVED BY DC	SCALE @A4 1:25,000	

Statute and guidance	Description
Planning (Listed Buildings and Conservation Areas) Act (1990)	Act of Parliament placing a duty upon the Local Planning Authority (or, as the case may be, the Secretary of State) to afford due consideration to the preservation of Listed buildings and their settings (under Section 66(1)), and Conservation Areas (under Section 72(2)), in determining planning applications.
National Heritage Act 1983 (amended 2002)	One of four Acts of Parliament providing for the protection and management of the historic environment, including the establishment of the Historic Monuments & Buildings Commission, now Historic England.
Swindon Borough Local Plan (2026)	Comprises the local development plan (local plan), as required to be compiled, published and maintained by the local authority, consistent with the requirements of the NPPF (2012). Intended to be the primary planning policy document against which planning proposals within that local authority jurisdiction are assessed. Where the development plan is found to be inadequate, primacy reverts to the NPPF (2012).
National Planning Policy Framework (2012)	Provides the English government's national planning policies and describes how these are expected to be applied within the planning system. Heritage is subject of Chapter 12 (page 30).
Conservation Principles (Historic England 2008)	Guidance for assessing heritage significance, with reference to contributing heritage values, in particular: <i>evidential</i> (archaeological), <i>historical</i> (illustrative and associative), <i>aesthetic</i> , and <i>communal</i> .
Good Practice Advice in Planning: Note 2 (GPA2): Managing Significance in Decision-Taking in the Historic Environment (Historic England, 2015a)	Provides useful information on assessing the significance of heritage assets, using appropriate expertise, historic environment records, recording and furthering understanding, neglect and unauthorised works, marketing and design and distinctiveness.
Good Practice Advice in Planning: Note 3 (GPA3): The Setting of Heritage Assets (Historic England, 2015b)	Provides guidance on managing change within the settings of heritage assets, including archaeological remains and historic buildings, sites, areas, and landscapes.

Table 1.1 Key statute, policy and guidance

2. METHODOLOGY

Data collection, analysis and presentation

- 2.1. This assessment has been informed by a proportionate level of information sufficient to understand the archaeological potential of the Site, the significance of identified heritage assets, and any potential development effects. This approach is in accordance with the provisions of the NPPF (2012) and the guidance issued by Historic England (2015a) and ClfA (2014). The data has been collected from a wide variety of sources, summarised in Table 2.1.
- 2.2. Prior to obtaining data from these sources, an initial analysis was undertaken in order to identify a relevant and proportionate study area. This analysis utilised industry-standard GIS software, and primarily entailed the generation of a digital terrain model (DTM) incorporating available topographic, elevation and historic landscape data.
- 2.3. On this basis a 1km study area, centred on the Site, was considered sufficient to capture the relevant Historic Environment Record (HER) and Historic England Archive (HEA) data, and provide the necessary context for understanding archaeological potential and heritage significance in respect of the Site. All of the spatial data held by the HER – the primary historic data repository – for the land within the study area, was requested. All of the records returned have been considered, analysed and further refined in order to narrow the research focus onto those of relevance to the present assessment. *Not all HER records are therefore referred to, discussed or illustrated within the body of this report, only those that are relevant.*
- 2.4. A site visit was undertaken on 17 October 2017 as part of this assessment. The primary objectives of the site visit were to assess the Site's historic landscape context, including its association with any known or potential heritage assets, and to identify any evidence for previous truncation of the on-site stratigraphy, particularly in relation to the construction of the airfield. The site visit also allowed for the identification of any previously unknown heritage assets within the Site, and assessment of their nature, condition, significance and potential susceptibility to impact. The wider landscape was examined, as relevant, from accessible public rights of way.

Source	Data
National Heritage List for England (NHLE)	Current information relating to designated heritage assets, and heritage assets considered to be 'at risk'.
Wiltshire and Swindon Historic Environment Record (HER)	Heritage sites and events records, Historic Landscape Characterisation (HLC) data, and other spatial data supplied in digital format (shapefiles) and hardcopy.
Historic England Archives (HEA)	Additional sites and events records, supplied in digital and hardcopy formats.
Wiltshire and Swindon Historic Centre	Historic mapping, historic documentation, and relevant published and grey literature.
Environment Agency (EA) website	LiDAR imagery and point cloud data, available from the Environment Agency website.
Old-Maps, National Library of Scotland & other cartographic websites	Historic (Ordnance Survey and Tithe) mapping in digital format.
British Geological Survey (BGS) website	UK geological mapping (bedrock & superficial deposits) & borehole data.
Cranfield University's LandIS Soil Portal	UK soil mapping.
Reports relating to previous archaeological works	Held by both the HER and HEA, or otherwise available via the Archaeological Data Service (ADS) website, or individual contractor online archives.

Table 2.1 Key data sources

Assessment of heritage significance

- 2.5. The significance of known and potential heritage assets within the Site, and any beyond the Site which may be affected by the proposed development, has been assessed and described, in accordance with paragraph 128 of the NPPF (2012), 'Historic Environment Good Practice Advice in Planning Note 2' (Historic England 2015a) and the guidance issued by ClfA (2014). Determination of significance has been undertaken according to the industry-standard guidance on assessing heritage value provided within 'Conservation Principles' (Historic England 2008). This approach considers heritage significance to derive from a combination of discrete heritage values, principal amongst which are: **i)** evidential (archaeological) value, **ii)** historic (illustrative and associative) value, **iii)** aesthetic value, **iv)** communal value, amongst others. Further detail of this approach, including the detailed definition of those aforementioned values, as set out, and advocated, by Historic England, is provided in Appendix 1 of this report.

Assessment of potential development effects (benefit and harm)

- 2.6. The present report sets out, in detail, the ways in which identified susceptible heritage assets might be affected by the proposals, as well as the anticipated extent of any such effects. Both physical effects, i.e. resulting from the direct truncation of archaeological remains, and non-physical effects, i.e. resulting from changes to the setting of heritage assets, have been assessed. In regard to non-physical effects or 'settings assessment', the five-step assessment methodology advocated by Historic England, and set out in GPA3 (Historic England, 2015b), has been adhered to (presented in greater detail in Appendix 1).
- 2.7. Identified effects upon **designated** heritage assets have been defined within broad 'level of effect' categories (Table 2.2). These are consistent with key national heritage policy and guidance terminology, particularly that of the NPPF (2012). This has been done in order to improve the intelligibility of the assessment results for purposes of quick reference and ready comprehension. These broad determinations of level of effect should be viewed within the context of the qualifying discussions of significance and impact presented in Chapter 5.
- 2.8. It should be noted that the overall effect of development proposals upon the designated heritage asset are judged, bearing in mind both any specific harms or benefits (an approach consistent with the Court of Appeal judgement *Palmer v. Herefordshire Council & ANR* Neutral Citation Number [2016] EWCA Civ 1061).
- 2.9. In relation to non-designated heritage assets, the key applicable policy is paragraph 135 of the NPPF (2012), which states that:
- 'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgment will be required having regard to the **scale of any harm or loss** and the **significance of the heritage asset**' [our emphasis].*
- 2.10. Thus with regard to non-designated heritage assets, this report seeks to identify the significance of the heritage asset(s) which may be affected, and the scale of any harm or loss to that significance.

Level of effect	Description	Applicable statute & policy
Heritage benefit	The proposals would better enhance or reveal the heritage significance of the designated heritage asset.	Enhancing or better revealing the significance of a designated heritage asset is a desirable development outcome in respect of heritage. It is consistent with key policy and guidance, including the NPPF (2012) paragraphs 126 and 137.
No harm	The proposals would preserve the significance of the designated heritage asset.	Preserving a Listed building and its setting is consistent with s66 of the Planning (Listed Buildings and Conservation Areas) Act (1990). Preserving or enhancing the character or appearance of a Conservation Area is consistent with s72 of the Act. Sustaining the significance of a designated heritage asset is consistent with paragraph 126 of the NPPF, and should be at the core of any material local planning policies in respect of heritage.
Less than substantial harm (lower end)	The proposals would be anticipated to result in a restricted level of harm to the significance of the designated heritage asset, such that the asset's contributing heritage values would be largely preserved.	In determining an application, this level of harm should be weighed against the public benefits of the proposals, as per paragraph 134 of the NPPF (2012).
Less than substantial harm (upper end)	The proposals would lead to a notable level of harm to the significance of the designated heritage asset. A reduced, but appreciable, degree of its heritage significance would remain.	Proposals involving change to a Listed building or its setting, or any features of special architectural or historic interest which it possesses, or change to the character or appearance of Conservation Areas, must also be considered within the context of Sections 7, 66(1) and 72(2) of the 1990 Act. <i>The provisions of the Act do not apply to the setting of Conservation Areas.</i> Proposals with the potential to physically affect a scheduled monument (including the ground beneath that monument) will be subject to the provisions of the Ancient Monuments and Archaeological Areas Act (1979); <i>these provisions do not apply to proposals involving changes to the setting of scheduled monuments.</i>
Substantial harm	The proposals would very much reduce the designated heritage asset's significance or vitiate that significance altogether.	Paragraphs 132 and 133 of the NPPF (2012) would apply. Sections 7, 66(1) and 72(2) of the Planning Act (1990), and the Ancient Monuments and Archaeological Areas Act (1979), may also apply.

Table 2.2 Summary of level of effect categories (benefit and harm) referred to in this report in relation to designated heritage assets, and the applicable statute and policy.

Limitations of the assessment

- 2.11. In addition to the historic environment data provided by both the HER and HEA, this assessment has reviewed reports for those previous intrusive works undertaken within the Site and its immediate environs. The assumption is made that this data, as well as that derived from other secondary sources, is reasonable accurate. The records held by the HER and HEA are not a record of all surviving heritage assets, but a record of the discovery of a wider range of archaeological and historical components of the historic environment. The information held is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.
- 2.12. With regards to the assessment of the setting of heritage assets, sufficient access was granted, via public rights of way, to all those designated heritage assets which were identified as being potentially sensitive to the proposed development. The walkover survey was undertaken in overcast conditions, however, visibility was good, and allowed for a full assessment to be undertaken. The walkover survey was undertaken in October, when the screening effect of vegetation is much reduced, affording a clear appreciation of the 'worst case scenario', where the setting of a heritage asset is influenced or defined by the screening effect of vegetation.

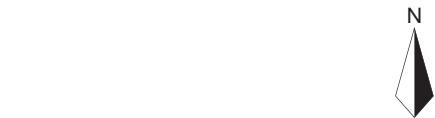
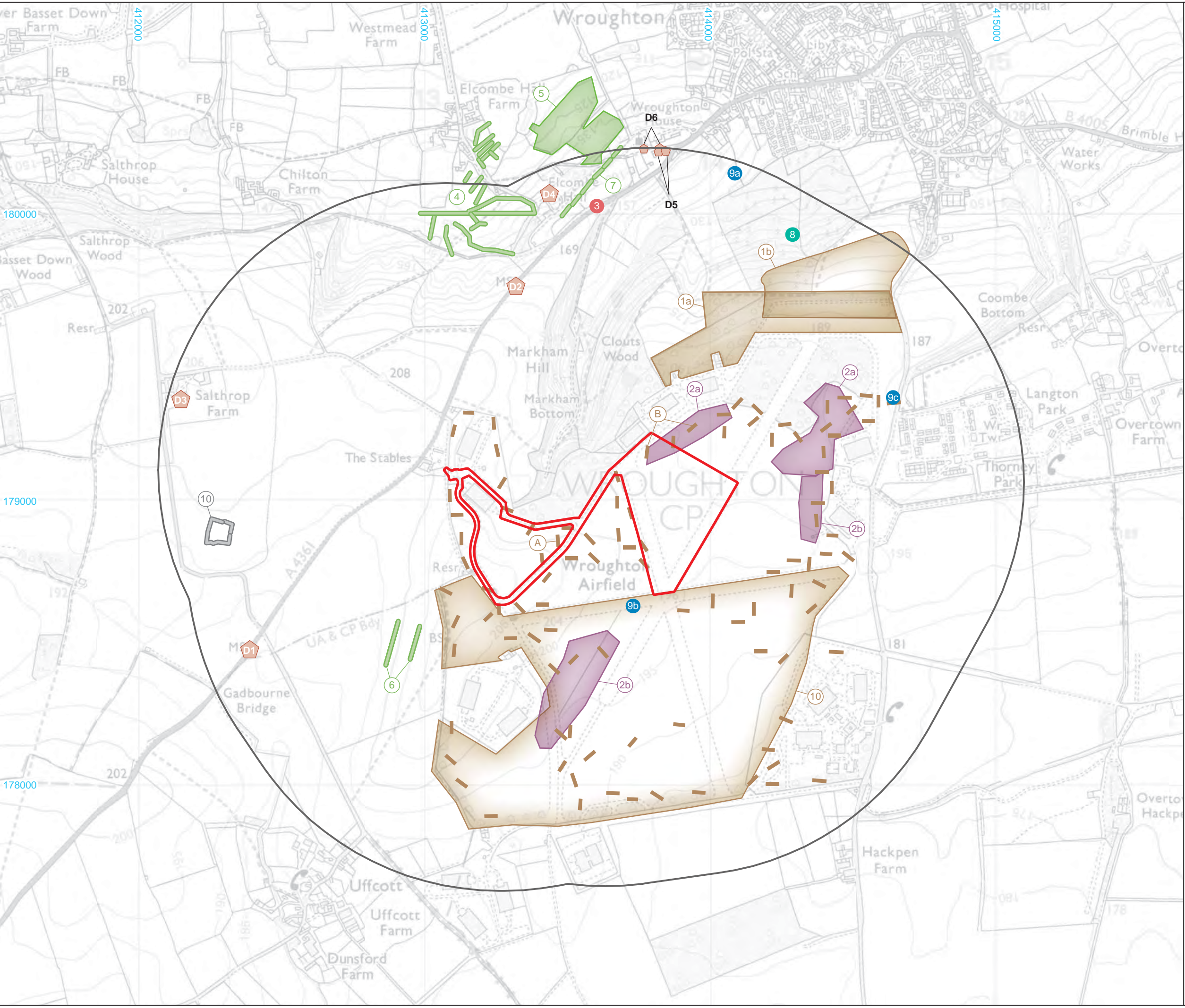
3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Landscape context

- 3.1. The Site is located on the Lower Chalk Plain, a gently undulating ledge of marly chalk that extends to the north and west of the Marlborough Downs, at approximately 200m AOD. Approximately 300m north of the Site, the Lower Chalk Plain ends abruptly with a steep northern scarp formed of Upper Greensand that drops to the clay vales to the north. A narrow, spring formed coombe cuts south into the chalk at Markham Bottom, its head is situated c. 330m north of the Site. Approximately 1.3km south of the Site the northern scarp of the Marlborough Downs rises steeply forming a prominent ridge of downland, c. 260m AOD. This ridge is made of Middle and Upper Chalk deposits that are more pure, and harder than those of the Lower Chalk.
- 3.2. Historic Landscape Characterisation (HLC) data records the Site within an area of 'military' land use, which reflects the Site's former use as part of Wroughton Airfield. Prior to the establishment of the airfield in the 20th-century the Site comprised modern enclosure, having otherwise remained part of a large open field since the time of the formal enclosure of Wroughton parish in 1796.

Designated heritage assets

- 3.3. There are no designated heritage assets within the Site.
- 3.4. There are no World Heritage Sites (the most proximate World Heritage Site is Avebury, c.8km to the south), scheduled monuments, registered parks and gardens or registered battlefields within the 1km study area. There are a number of Scheduled monuments within the wider environs of the Site, beyond the Study Area, which will be discussed, where relevant, in the period sections below.
- 3.5. There are eight listed buildings within the study area, all listed at grade II, comprising: three dwellings (one with an associated grade II listed ornamental table which incorporates a medieval font, Figure 2, **D3 - 5**); two milestones (Figure 2, **D1** and **D2**); and the wall of the grade I listed Parish Church of St John and St Helen (which falls just outside of the study area) and an associated tomb (Figure 2, **D6**). Where relevant, these listed buildings are discussed in greater detail in the period summaries below.



- Site boundary
- Study area
- Grade II Listed Building
- Previous archaeological works
- 2006 evaluation trenches
- Prehistoric/Romano-British
- Romano-British
- Medieval
- Post-medieval
- Modern
- Undated



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PROJECT TITLE
Building ONE, Wroughton, Wiltshire

FIGURE TITLE
Selected heritage assets

-
- 3.6. Any non-physical effects of designated heritage assets, i.e. through alteration of their settings, are discussed in Section 5, The Setting of Heritage Assets.

Previous archaeological works

- 3.7. The Site was included in a programme of evaluation trenching in 2006 as part of a separate planning application for the construction of a National Collections Centre and an associated landscaping project. To summarise, the evaluation revealed evidence for early Iron Age settlement, comprising post-built circular structures and associated post-holes and pits within the Site and immediately north and north-east of the Site. Large linear features of possible Iron Age/Romano-British date were also recorded within the Site and its environs, including possible elements of a Romano-British field system. Evidence for modern landscaping was recorded within the Site and its environs associated with the construction of the former airfield, including levelling and infilling; some evidence of truncation as a result of this landscaping was observed to the south of the Site, and is believed to have 'compromised' the survival of archaeological features in this area (Bashford, 2006). The results of this evaluation are discussed in greater detail in the period sections below.
- 3.8. An earlier programme of evaluation trenching, comprised of two phases was undertaken in the north of the Site in 2005, in respect of an application for a proposed new planting of woodland (Figure 2, Phase 1: **1a** and Phase 2: **1b**). The trenching recorded a 20th-century gun emplacement, and undated extraction, ditches and a hollow way (Laws, 2005).
- 3.9. A geophysical (magnetometer) survey was undertaken in the southern half of the former airfield in 2013 (Figure 2, **10**) (Archaeological Services WYAS 2013), which didn't identify any archaeological finds or features, but noted that ferrous material relating to the laying out of the airfield and the spreading of material associated with the demolished Wroughton Down Farm, may have been masking any buried archaeological deposits, particularly in the north of the Site.
- 3.10. The Site was also included in The Avebury Project, an assessment undertaken by the Royal Commission on the Historical Monuments of England (RCHME, now Historic England), which set out to look for evidence for medieval and post-medieval settlement within the wider context of Avebury World Heritage Site (RCHME, 1996).

Those sites identified within the study area are discussed within the period sections below.

- 3.11. Neither the HER or the HEA record any further relevant previous archaeological works within the Site or study area.

Prehistoric – Romano-British

- 3.12. The 2006 evaluation trenching, which included part of the Site, recorded buried archaeological remains potentially dating from the Bronze Age to the Roman period. The focus of the early Iron Age settlement, as mapped by the HER, is reproduced on Figure 2 (2a). This area of potential settlement focus, which comprised circular post-built structures with associated postholes and pits, extends into the north of the Site. The settlement features were recorded in a number of trenches spread over an area of c. 1200m², and may represent a loose cluster of contemporary habitation, or possibly a shifting nucleus of settlement within the area (Bashford, 2006). The 2005 evaluation to the north of the Site didn't record any Iron Age settlement remains, indicating that the settlement didn't extend any further north, and disturbance relating to the laying out of the airfield has resulted in heavy truncation to the stratigraphy to the south of the identified settlement remains, south of the Site (*ibid*). However, a small number of potentially associated features were recorded in those trenches enclosed by the access roads to the west of the main site area, which have been interpreted as peripheral remains of the settlement (*ibid*), indicating potential for further associated features in the south of the Site.
- 3.13. A number of shallow linear features, which may be associated with the settlement (possibly relating to a field system), were recorded across area investigated. Bronze Age pottery was recovered from one of the features, in a trench excavated immediately west of the main body of the Site (Figure 2, A), indicating that some of the linear features may pre-date the early Iron Age settlement. However the regular spacing of the shallow linears could potentially be indicative of a later date – potentially suggesting the remains of lynchets or ridge and furrow (*ibid*), with the Bronze Age pottery representing residual material.
- 3.14. The evaluation trenching also recorded a number of large features (the exact form of which could not be established conclusively within the confines of the evaluation trenches), with two main concentrations (as mapped by the HER) recorded c. 200m east and c. 100m south of the Site, as depicted on Figure 2 (2b). These features,

which could represent quarrying, or linear features, are of uncertain date due to the paucity of dating material recovered; some Romano-British material was recovered from the upper fills. The fills of these features suggested that they were not open for any significant time, and that they were situated well away from the core of any associated activity. Possible interpretations of these features include linear features of a defensive nature, on the basis of their size and their apparent alignment in the direction of Barbury hillfort, which is located c. 2.4km south-east of the Site (*ibid*). An alternative interpretation is that they are quarry pits, located on the periphery of associated settlement (*ibid*). Three features identified as linears with confidence, and dated to the Romano-British period, were recorded in trenches in the north and north of the Site (Figure 2, **B**). It has been tentatively suggested that these features represent a trackway.

- 3.15. Elsewhere within the study area, the HER and HEA record chance finds of Bronze Age tools and Romano-British coins. These finds represent material which is no longer *in-situ*, i.e. material which has been removed from its original point of deposition by later processes and activity. However, a particular concentration of Romano-British finds, recovered by field walking, is recorded c. 760m north of the Site (Figure 2, **3**). These finds include pottery, animal bone, baked clay and other finds, and may be indicative of proximate buried remains.
- 3.16. In summary, the Site is known to contain Iron Age settlement remains, Romano-British features, and potential for possible Bronze Age linear features / medieval – post-medieval agricultural features. It is likely that further associated remains survive elsewhere within the Site, particularly in the northern half in proximity to the presumed focus of the early Iron Age settlement.

Early medieval and medieval

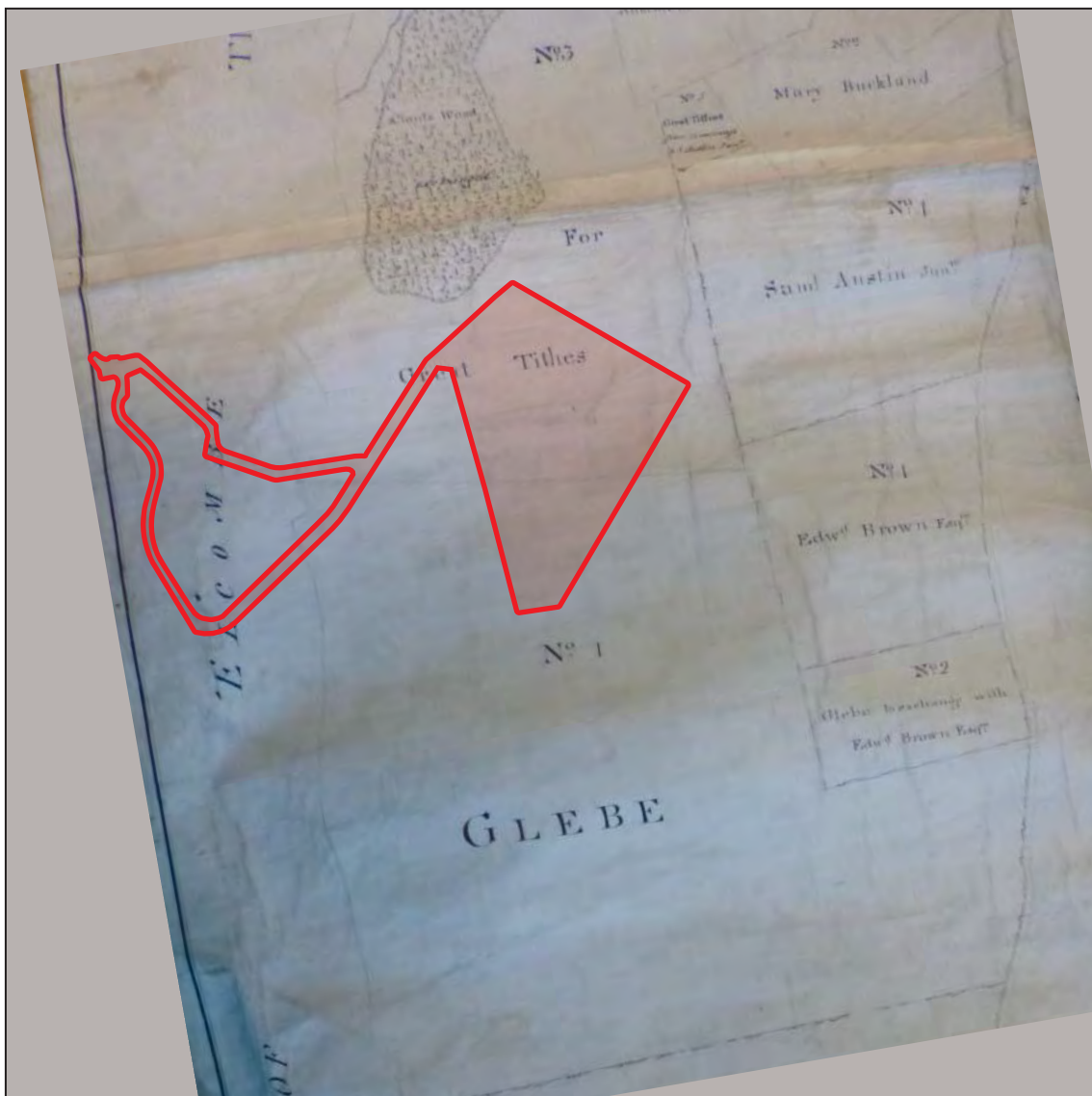
- 3.17. There are no early medieval finds or features recorded within the Site. As noted above, previous evaluation trenching within the Site recorded linear features which may represent medieval or later agricultural features. No above ground remains of these features survive owing to landscaping undertaken during the laying out of Wroughton Airfield in the 20th-century. Some slight undulations were observed across the Site, but these almost certainly relate to the 20th-century landscaping and, potentially, to modern agricultural activity.

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- 3.18. The Site is located within the parish of Wroughton. The Domesday Survey of AD 1086 records Wroughton by the name of 'Elendune', the name of the principal Saxon estate, which is referred to in Anglo-Saxon charters of AD 844 and 956, and is thought to have been a larger, older estate which underwent a process of subinfeudation (Crowley, 1980). The Survey recorded a very large settlement of 68 households, with resources such as meadow, pasture, woodlands and six mills (Powell-Smith, nd). The presence of such a well-established settlement at the time of the Survey indicates pre-medieval origins. A find spot of four sherds of Saxon pottery is recorded within the study area, immediately south of Wroughton. These sherds are likely to have originated from deposits associated with the early medieval settlement at Wroughton, having been moved by later activity and development. The Site is likely to have formed part of the agricultural hinterland of the settlement at Wroughton during the early medieval period.
- 3.19. During the medieval period Ellendune's lowland part became known as Wroughton (meaning 'settlement on the river Worfe'), but the name only begun to apply exclusively to the whole parish in the 15th century (*ibid*). The parish of Wroughton, like others in the locality, extends from north to south, and comprises a lowland area of Kimmeridge Clay in the north and the Lower Chalk plateau in the south (Crowley, 1980). This allowed for a good balance of agriculture with sheep husbandry and corn in the south and pasture on the heavier soil to the north. This agricultural regime would have been typical for the chalk downs where sheep and corn husbandry was practiced, with sheep grazed on the high downlands by day in order to manure the chalk soils, which rapidly lose their fertility (Brown *et al*, 2005).
- 3.20. Settlement continued at Wroughton during the medieval period, and the HER records further evidence for medieval settlement c. 1km north of the Site, where earthworks indicating a possible deserted settlement are recorded (Figure 2, 5), with a possible medieval hollow way to the south (Figure 2, 7). Further earthworks are recorded to the south-west of the aforementioned deserted medieval settlement, including building platforms, boundaries and lynchets (Figure 2, 4). Further possible medieval lynchets are recorded c. 300m south-west of the Site (Figure 2, 6). A number of medieval find spots are recorded within the study area; this material is likely to have originated from these known / presumed areas of medieval settlement, having been disturbed from their original point of deposition by later processes, including farming activity such as ploughing.

-
- 3.21. As in the preceding period, the Site is likely to have formed part of the agricultural hinterland of the known and presumed medieval settlement within the Site environs, as indicated by the potential medieval / post-medieval agricultural features recorded during the evaluation trenching within the Site. It is likely that further remains of these features survive elsewhere within the Site, particularly in the north where better preservation of the on-site stratigraphy was observed during the 2006 evaluation trenching.

Post-medieval and modern

- 3.22. Linear features recorded across the 2006 evaluation trenching area, and potentially within the Site, have been interpreted as the possible remains of medieval – post-medieval agricultural features such as ridge and furrow or lynchets. As previously noted, no above ground remains of these features survive owing to the landscaping of the Site during the laying out of Wroughton Airfield in the 20th century.
- 3.23. The medieval sheep and corn farming regime on the chalk downs intensified during the post-medieval period aided by various agricultural improvements. However, by the late 18th century, this method of farming went into decline, owing to various factors, such as the use of artificial fertilisers and the increase in rearing sheep for meat rather than for wool (Brown *et al*, 2005). Open land generally resisted enclosure where the sheep and corn regime persisted, but was eventually enclosed by an Act of Parliament. Former open land at Wroughton was formally enclosed in 1796. The Site formed part of a large open field at this time (Figure 3), indicating that it most likely remained under the sheep and corn regime. The Site is recorded as ‘Glebe’ land, and was thus part of an ecclesiastical holding at this time.
- 3.24. By the time of the First Edition Ordnance Survey of 1886, the former Glebe land in which the Site had been situated had been subject to further enclosure (Figure 4). At this time, the main Site area occupied five agricultural fields, probably associated with Wroughton Down, located south of the Site (Figure 2, **9b**). The access tracks crossed a further three fields as well as a strip parcel associated with Rectory Cottages, formerly situated south of the access roads. The Site remained in much the same condition on the Second Edition Ordnance Survey map of 1900 and the Third Edition Ordnance Survey map of 1923 (not reproduced).



Extract from the Wroughton enclosure map of 1796



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PROJECT TITLE

Building ONE, Wroughton, Wiltshire

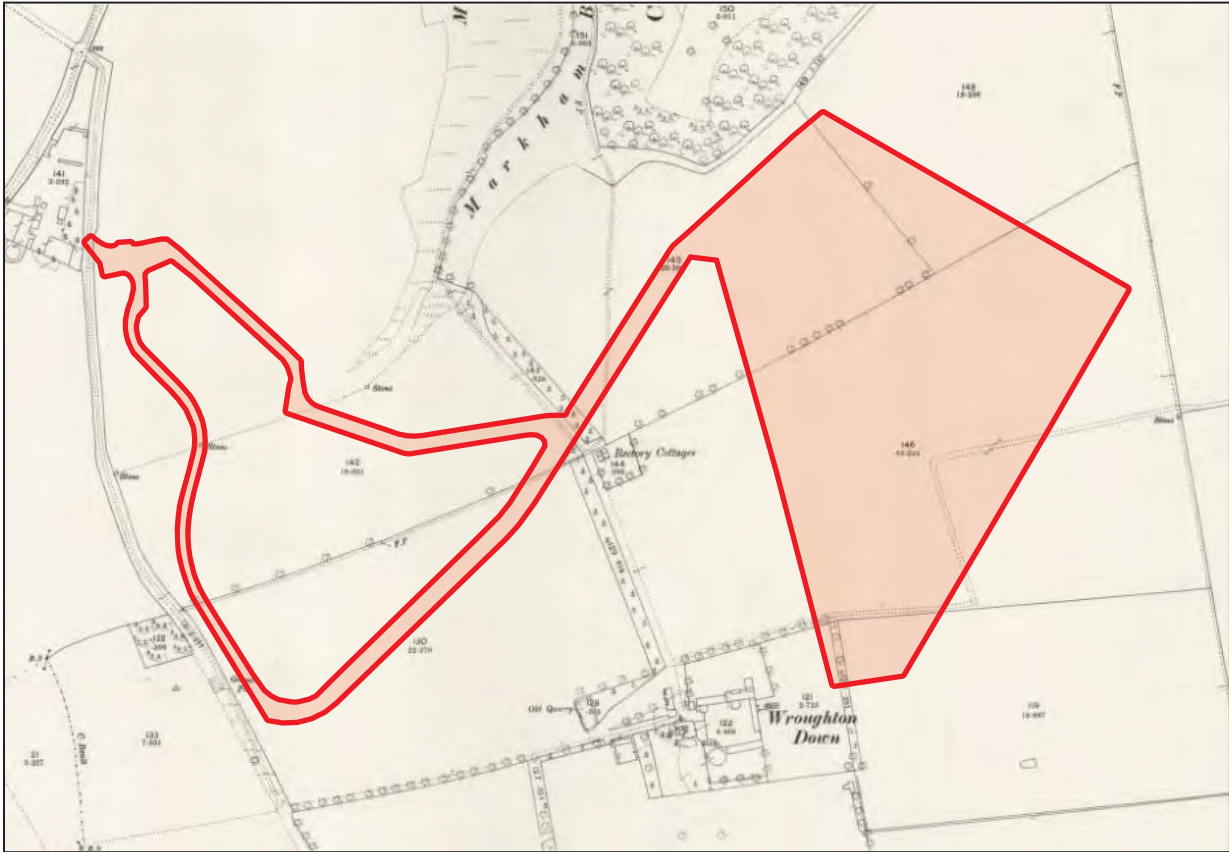
FIGURE TITLE

Historic map

DRAWN BY AO PROJECT NO. 6420
 CHECKED BY DJB DATE 19/10/2017
 APPROVED BY DC SCALE@A4 approx. 12,500

FIGURE NO.

3



Extract from the First Edition Ordnance Survey map of 1886



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PROJECT TITLE

Building ONE, Wroughton, Wiltshire

FIGURE TITLE

Historic map

DRAWN BY AO PROJECT NO. 6420
 CHECKED BY DJB DATE 19/10/2017
 APPROVED BY DC SCALE@A4 approx. 7500

FIGURE NO.

4

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- 3.25. The most major change to the Site in the 20th century is associated with the removal of those rural and agricultural dwellings within the Site (and in its environs) in order to lay out Wroughton Airfield. The airfield was constructed by the RAF to house No. 15 Maintenance Unit. Construction of the airfield began in 1939, with the first concrete runway finished in spring 1941; all three runways had been constructed by 1944, and the airfield was an active wartime establishment which employed over 700 civilians by the end of 1941 (Gibbs, 1992). The Site incorporates two stretches of runway, and an area of grass land between the runway strips; no other features associated with the former World War Two airfield are recorded within the Site. The western access routes comprise existing access to the Site. Other components of the airfield lie within the study area, including hangars, the control tower, pill boxes and Royal Observer Corps monitoring post. Other buildings and structures relating to the use of the airfield in WWII lie in the wider landscape.
- 3.26. After the war, the air force was greatly reduced, and Wroughton Airfield also reduced in size, with some of the outlying dispersal areas having been sold to farmers by the 1960s; as part of the landscape management regime grasslands within the Site are used in part for the grazing of sheep, though the principal use is for museum related activities. The airfield did continue to provide aircraft services, including aircraft maintenance and scrappage, up until its closure in 1978, shortly after which it became a storage annex for part of the Science Museum's aircraft and other exhibits.
- 3.27. Aside from sparse, largely agricultural settlement such as that mapped at the Site, settlement during these periods remained principally focussed at Wroughton; good examples of surviving post-medieval and modern buildings include the grade II listed Elecombe Hall (Figure 2, **D4**) and Ivery House (Figure 2, **D5**). The continuing farming economy is also demonstrated by farm houses within the study area, including the grade II listed Upper Salthrop Farmhouse (Figure 2, **D3**), and a number of non-designated partially extant and some now demolished farmsteads and outfarms (Figure 2, **9a - c**).
- 3.28. The Site has some potential for post-medieval agricultural remains. The Site also has some potential for the survival or buried remains associated with the Wroughton Down farmstead and its associated structures, and Rectory Cottages.

Should such remains survive, they would be anticipated to be highly truncated owing to the landscaping of the Site during the laying out of Wroughton Airfield.

Undated

- 3.29. The HER records an undated square cropmark enclosure, c. 800m west of the Site (Figure 2, **10**). The exact nature and date of this features remains unknown.

4. ARCHAEOLOGICAL SIGNIFICANCE & POTENTIAL EFFECTS

Previous truncation within the Site

- 4.1. A programme of evaluation trenching undertaken in 2006 identified that the laying out of Wroughton Airfield in the 20th-century had resulted in some truncation to any buried archaeological deposits within its footprint, particularly to the south and west of the Site. As a result of this truncation, archaeological deposits are best preserved in the north, and to the north of the Site, whilst the significance of deposits to the south of the Site was found to have been compromised.

The significance of known and potential archaeological remains within the Site

- 4.2. This assessment has identified that no designated archaeological remains are located within the Site; no *designated* archaeological remains will therefore be adversely physically affected by development within the Site. Known and potential *non-designated* archaeological remains identified within the Site comprise:

- Partially excavated shallow linear features of potential Bronze Age – post-medieval date;
- Partially excavated remains of an early Iron Age settlement;
- Potential remains of possible Iron Age / Romano-British linear features;
- Potential remains of early-medieval – modern agricultural features; Potential buried remains of post-medieval and modern dwellings and associated outbuildings; and
- Remains of the former Wroughton Airfield runways.

- 4.3. The significance of these assets is discussed further below.

Partially excavated linear features of Bronze Age – post-medieval date

- 4.4. Remains of linear features have been partially excavated within the Site. One of the linears (located outside of the Site) recorded Bronze Age material, although their regular spacing has also been suggested to indicate a later date, with the features potentially representing lynchets or ridge and furrow, largely attributed to the medieval and post-medieval periods. Equally, the proximity of these features to the early Iron Age and Romano-British activity suggests that they may be associated with this period of activity.
- 4.5. The exact nature and date of these features remains uncertain. However, should these features be prehistoric in date, they would be of evidential and historical (illustrative) value in their contribution towards our understanding of the nature and

extent of prehistoric activity within the local landscape. The features would also be of some evidential and historical value if they are Romano-British in date, as such features would contribute towards our understanding of the nature and extent of Romano-British activity within the local landscape, which is poorly understood at present. If the linear features represent lynchets or ridge and furrow, which would presumably be medieval / post-medieval in date, they would be of much more limited evidential and historical value, making only a small contribution towards our understanding of local land use during these periods, and making a neutral contribution towards our understanding of medieval and post-medieval agricultural practices more broadly.

- 4.6. Whilst such remains would be of some heritage significance on the basis of their evidential and historical value, they would not be anticipated to be of such significance that they would require preservation *in-situ*, or otherwise constrain development within the Site.

Remains of an early Iron Age settlement

- 4.7. The remains of an early Iron Age settlement have previously been recorded in the north of the Site, and there is potential for further associated features to survive within the remaining Site area. Such remains would be of evidential and historic (illustrative) value, enhancing our understanding of the nature of prehistoric settlement within the local landscape, and more widely, particularly in terms of landscape preferences and settlement size.

- 4.8. However, whilst such remains would be of heritage significance, they would not be anticipated to be of such significance that they would require preservation *in-situ*, or otherwise constrain development of the Site.

Potential remains or Iron Age / Romano-British linear features

- 4.9. The remains of possible Iron Age/Romano-British linear features are recorded within the Site and its environs, the exact nature and extent of which remain uncertain. Further remains would be of some evidential and historic (illustrative) value in their ability to better establish the nature of the activity during this period, and thus in their contribution towards our understanding of local land use during these periods.

- 4.10. Whilst such remains would be of some heritage significance on the basis of their evidential and historic (illustrative) value, they would not be of such significance that

they would require preservation *in-situ*, or otherwise constrain development of the Site.

Potential remains of early-medieval – modern agricultural features

- 4.11. The Site is likely to have formed part of the agricultural hinterland of the established settlement at Wroughton during the early medieval – post-medieval periods, and is known to have remained in agricultural use from at least the 19th-century, up until the establishment of Wroughton Airfield in the 20th century. As such, there is some potential for early medieval – modern agricultural remains to survive within the Site, such as infilled boundary and drainage ditches, field boundary post-holes and infilled furrows relating to former ridge and furrow cultivation.
- 4.12. Medieval and post-medieval agricultural remains would make only a small contribution towards our understanding of the local land use during these periods, and would make a neutral contribution towards our understanding of medieval and post-medieval farming practices more broadly. On this basis, such remains would be of very limited heritage value, but would not be of sufficient heritage value to require preservation *in-situ* or otherwise constrain development within the Site.

Remains of Wroughton Airfield runways

- 4.13. The remains of the Wroughton Airfield runways survive within the Site, and are utilised as an internal roadway. The wider runway remains are also used for other activities including commercial driving events and as a testing facility for the automated barrier system for Dartford Tunnel barrier upgrades. The solar farm to the south of the Site extends over the runways. The remains of the former runways within the Site are of some limited evidential and historic (illustrative) value, in their ability to demonstrate the layout and construction techniques of the former World War Two airfield. The runways lie outside of the footprint of the proposed new museum store, however, the associated car parking and service yard will extend onto the surface of the runway aligned north-east / south-west. No significant physical effects are anticipated in relation to this proposed use of the runways, and both the physical remains of the runway and the legibility of its alignment will be preserved. On this basis, it is considered that the proposed development will not result in any adverse effects on the significance of the former airfield runways.

Potential development effects

- 4.14. The proposed development comprises the construction of a new museum storage facility in the north of the Site, with associated parking and a service yard utilising

the north-east / south-west aligned runway surface. No further development is currently proposed within the remaining site area.

- 4.15. Any truncation (physical development effects) upon known and potential archaeological remains identified within the Site would primarily result from groundworks associated with the construction of the new museum storage unit. Such groundworks might include pre-construction impacts associated with any ground investigation works, and construction ground works, including the excavation of the buildings foundations and the excavation of any service trenches. Such works have the potential to truncate and / or wholly remove those known and potential heritage assets defined above, with the exclusion of the potential buried remains of Wroughton Down and Rectory Cottage, and the surviving World War Two runways, which lie beyond the footprint of the proposed development, and would remain unaffected by the proposed development.

5. THE SETTING OF HERITAGE ASSETS

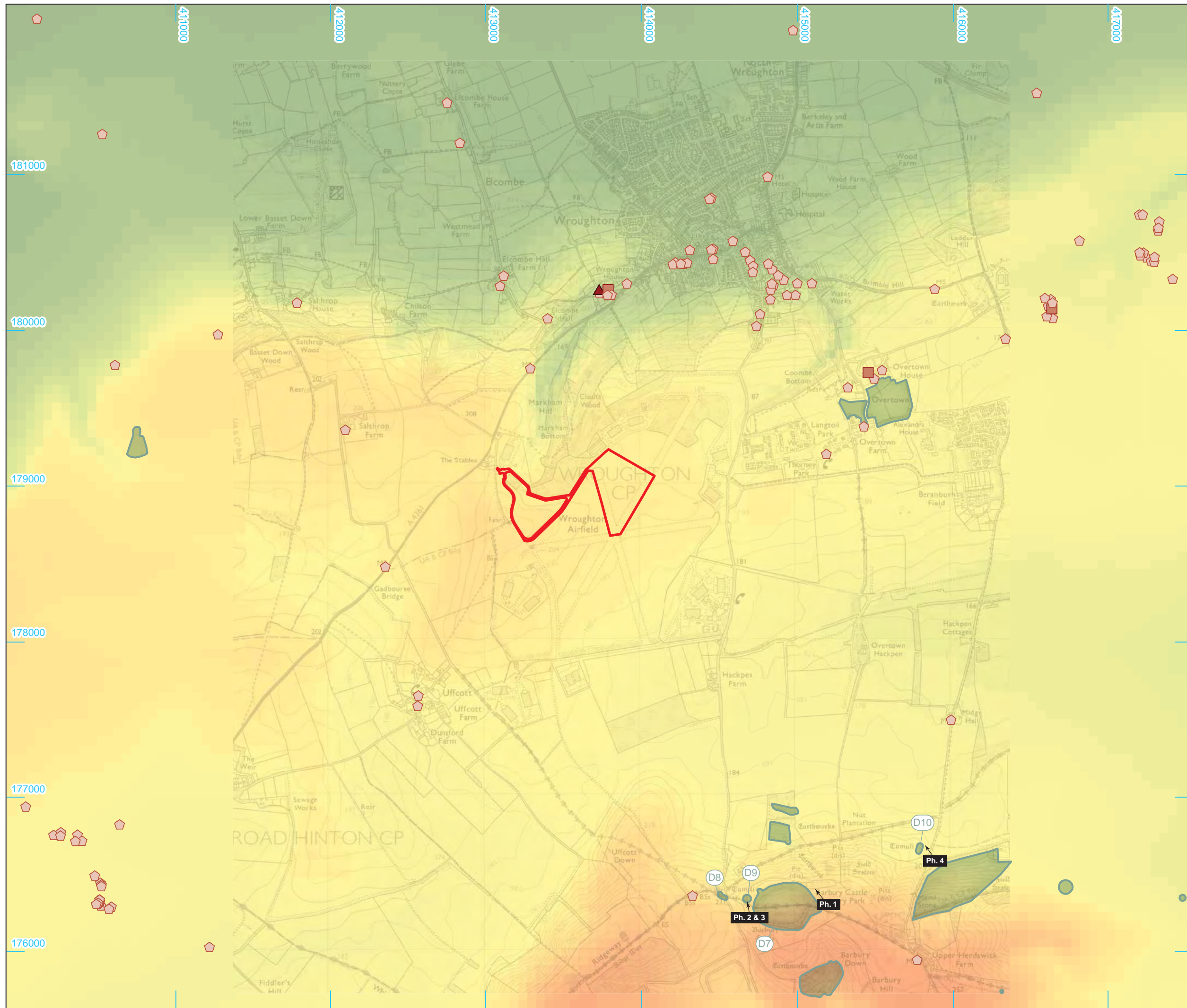
- 5.1. This section considers potential non-physical effects upon the significance of susceptible heritage assets within the Site environs. Non-physical effects are those that derive from changes to the setting of heritage assets as a result of new development.

Step 1: Identification of heritage assets potentially affected

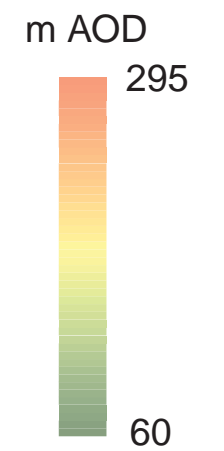
- 5.2. Step 1 of Historic England's 'Good Practice Advice in Planning: Note 3' (GPA3) is to identify *'the heritage assets affected and their settings'* (see Appendix 1). GPA3 notes that Step 1 should focus on those heritage assets for which *'the development is capable of affecting the contribution of [their] setting to [their] significance or the appreciation of [their] significance'* (GPA3, page 7).
- 5.3. The heritage assets summarised in Table 5.1 below are those that have been identified, as part of Step 1, as potentially susceptible to impact as a result of changes to their setting. These assets have been identified using a combination of GIS analysis and field examination, which has considered, amongst other factors, the surrounding topographic and environmental conditions, built form, vegetation cover, and lines of sight, within the context of the assets' heritage significance.
- 5.4. The Site visit, and study area walkover, identified that whilst there are a large number of designated assets within the Site environs (see Figure 5) there would be no non-physical impact upon the significance of any other heritage assets as a result of changes to the use and/or appearance of the Site. The Site shares no perceivable historical associations with any further designated heritage assets, nor does it feature in any key views towards, or designed views from any other designated heritage assets. As such, the Site does not form part of the setting of any other heritage asset from which they draw significance. As such, the proposed development would not harm the significance of any other heritage assets through alteration of their setting.
- 5.5. The remaining features of the WWII airfield have been considered as non-designated heritage assets. Whilst the new structure will clearly represent a change to the open character of the airfield it has been considered in the context of the continuing evolution of the site and its increasing role as a museum store. The nearest structure to the proposed new building is an existing new museum storage structure. Whilst two hangars, also used for museum storage, stand close by their

function and historic context has already been altered and it is considered that their significance will not be harmed by the current proposal.

- 5.6. It is of value to note that English Heritage's booklet 'Historic Military Aviation Sites: Conservation management guidance' (2003) records that it has carried out "a thorough review of England's 20th century military heritage, including studies of airfields, airfield defences and Cold War monuments. A thematic survey report of military aviation sites and structures, first issued as a consultation document in 2000, has identified approximately 170 buildings and structures deemed worthy of listing at 33 separate sites" across the country. Wroughton was considered and said, after Kemble, to be "the best example of an airfield landscape" but neither Wroughton itself nor any of the individual military structures at the site were recommended for designation. The implications of this are clear, Wroughton was studied by the EH designation team and whilst they recognised that it was a good example of its type, they did not conclude that it, or any of its components, were of a quality or significance that warranted protection through designation.
- 5.7. For these reasons no detailed assessment of the impacts of the current proposal on the setting of the airfield and its related structures has been undertaken.



- Site boundary
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed
- Scheduled Monument
- Photograph location



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PROJECT TITLE
Building ONE, Wroughton, Wiltshire

FIGURE TITLE
The Site in relation to proximate designated heritage assets

Heritage Asset	Description	Setting
<p>Barbury Castle: a Hillfort and Bowl Barrow</p> <p>Scheduled monument</p> <p>Figure 5, D7</p>	<p>Barbury Castle is a large multi-vallate Iron Age hillfort located c. 2.4km south of the Site. It survives in a good condition, and is known from part excavation to contain archaeological and environmental evidence relating to its construction, economy and the landscape in which it was built. The hillfort has two rings of banks and ditches that enclose an oval area of 4.5ha. There are two original entrances, situated at the east and west ends of the enclosure. Also included within the scheduling is a Bowl Barrow located to the immediate north-west of the hillfort. The Bowl Barrow is likely to comprise a funerary monument dating from the Neolithic to the Bronze Age (thus pre-dating the hillfort). The interpretation of this feature as a Bronze Age barrow is likely, but not certain (Bowden, 1998). This monument is a part of a barrow cemetery alongside a group of three barrows and a Saucer Barrow located to the west (Figure 5, D8 & D9). The Barrow is likely to contain both archaeological and environmental evidence.</p>	<p>Barbury Castle Hillfort and Bowl Barrow are located on a prominent ridge-top at the western end of Barbury Down. The ridge-top location is at a natural high point in the landscape and gives extensive views in all directions. To the north lies the agricultural landscape of the Lower Chalk Plateau, the Site and a solar farm, beyond which lie the clay vales around Swindon. To the south, west and east lies a mixed rural landscape and the thinly settled chalk downs with a prominent north facing escarpment that extends from west to east. The immediate environs of Barbury Castle Hillfort and Bowl Barrow comprise unenclosed, permanent grassland that is a remnant of former downland pastures.</p>
<p>Three Bowl Barrows: Part of the Barrow Cemetery west of Barbury Castle; and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle</p> <p>Scheduled monuments</p> <p>Figure 5, D8, and D9</p>	<p>The western barrow mound of Three Bowl Barrows is 18m in diameter and 1m high, the central mound is 15m across and 0.7m high, and the eastern mound has been levelled and is no longer visible as an earthwork.</p> <p>Saucer Barrow is 21m in diameter and 0.2m high, surrounded by a ditch and lower outer bank. The ditch has become partially infilled, but survives as an earthwork 3m wide and 0.4m deep. The outer bank is 3m wide and 0.5m high on the downhill side. All four barrows are likely to represent Neolithic – Bronze Age burial monuments.</p> <p>Both of these separate designations were found to share a common setting and, as such, have been assessed together.</p>	<p>Three Bowl Barrows and Saucer Barrow are set within a small dip on the ridge to the west of Barbury Castle. The barrows are located immediately west of Barbury Castle and, as such, their wider environs are as defined above. These barrows form part of a barrow cemetery which includes the Bowl Barrow immediately north-west of Barbury Castle Hillfort, described above.</p>
<p>Two Bowl Barrows 680m North of Upper Herdswick Farm,</p>	<p>Two bowl barrows aligned north-south. The northern barrow measures 28m in diameter and 0.7m high and the southern barrow mound is 26m in</p>	<p>Situated on a low crest below the Barbury Escarpment to the north east of Barbury Castle Hillfort. The wider setting of this</p>

Heritage Asset	Description	Setting
Barbury Down Scheduled monument Figure 5, D10	diameter and 0.5m high. The mounds are surrounded by interconnecting ditches, which although no longer visible on the surface have been recorded from aerial photographs. Both barrows are believed to be funerary monuments dating from the late Neolithic to the Late Bronze Age.	scheduled monument is as described above.

Table 5.1 Heritage assets identified as part of Step 1

- 5.8. The Site visit, and study area walkover, identified that whilst there are a large number of designated assets within the Site environs (see Figure 5) there would be no non-physical impact upon the significance of any other heritage assets as a result of changes to the use and/or appearance of the Site. The Site shares no perceivable historical associations with any further designated heritage assets, nor does it feature in any key views towards, or designed views from any other designated heritage assets. As such, the Site does not form part of the setting of any other heritage asset from which they draw significance. As such, the proposed development would not harm the significance of any other heritage assets through alteration of their setting.

Steps 2 – 3: Assessment of setting and potential effects of the development

- 5.9. This section presents the results of Steps 2 to 4 of the settings assessment, which have been undertaken in regard to those potentially susceptible heritage assets identified in Table 5.1. Step 2 considers the contribution that setting makes to the significance of potentially susceptible heritage assets. Step 3 then considers how, if at all, and to what extent any anticipated changes to the setting of those assets, as a result of development within the Site, might affect their significance.

Barbury Castle; A Hillfort and Bowl Barrow scheduled monument (Figure 5, D7)

- 5.10. Barbury Castle Hillfort (hereafter ‘the Hillfort’) derives significance primarily from the evidential and historic (illustrative) value embodied within its buried and earthwork remains, as an example of an Iron Age defensive site. The Bowl Barrow also derives its significance primarily from the evidential and historic (illustrative) value embodied within its physical remains, as an example of a prehistoric funerary monument. Both the Hillfort (which is known to contain archaeological deposits within its earthworks, as noted above) and the Bowl Barrow also derive significance from the known and potential evidential value of their buried remains to yield further

information on Iron Age monumental construction, economy and environmental conditions, and Bronze Age prehistoric funerary practice and environmental conditions. Both the Hillfort and Bowl Barrow are publically accessible, furnished with interpretation panels, and frequented by tourists and the local community as part of the wider Barbury Castle Country Park landscape. As such, both assets are also considered to derive some significance from their communal value for those people for whom it figures within their collective experience and memory.

Setting – the asset's physical surrounds

- 5.11. The scheduled monument occupies a ridgeway location. Although there is conflicting evidence on the antiquity of the ridgeway as a routeway, the east and west entrances, and the east / west aligned routeway through the Hillfort, suggest a relationship with this route. It is likely that the Hillfort controlled communications and passage across this route, and therefore this aspect of its setting makes a positive contribution towards its historic (illustrative) value, and thus its heritage significance. Another aspect of the local topography which is considered to form part of the setting of the Hillfort is the River Og valley, c. 4km to the east. It is possible that the Hillfort and Liddington Castle were positioned to control access into the valley, which provides an important access route into the Marlborough Downs to the south.
- 5.12. The immediate surrounds of the scheduled monument comprise unenclosed, permanent grassland, which is a remnant of former downland pastures. This landscape has a high historical integrity, and has witnessed a low degree of change over time. This surrounding land use still largely reflects the mixture of pasture and arable agriculture which is reminiscent of the contemporary landscape of the Hillfort, and thus makes a positive contribution towards its historic (illustrative) value. Remains of prehistoric field lynchets and boundaries are recorded throughout the landscape surrounding the Hillfort, and are particularly extensive to the east and south, at Burderop Down, Preshute and Smeathe's Ridge. It is likely that the early Iron Age settlement recorded to the north of the Hillfort (i.e. within and to the north of the Site) formed a satellite settlement within its hinterland. The Hillfort would have served as a defensive enclosure for this settlement and any further, presently unknown, settlements within its environs. These contemporary landscape features make a positive contribution towards the historic (illustrative and associative) value of the Hillfort, affording an understanding of its contemporary landscape context, and thus make a positive contribution towards the significance.

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- 5.13. A number of contemporary (Iron Age) features lie within the wider environs of the Hillfort, including other hillforts located on the ridgeline. From the Hillfort, contemporary hillforts at Liddington, Uffington and Martinsell are visible, and views from the Hillfort that include these contemporary monuments form key vistas, which make a positive contribution towards its historic (illustrative) value. Other contemporary hillforts within the wider environs include those on the Lower Chalk scarp to the north (Blinknoll, Ringsbury and Blunsdon). Whilst not visible from the Hillfort, these assets also make a positive contribution towards its historic (illustrative and associative) value, forming part of its wider contemporary landscape.
- 5.14. With regard to the Bowl Barrow at the Hillfort, this scheduled monument forms part of a wider barrow cemetery which extends to the west of the Hillfort, occupying the lower lying aspect of the ridgeway (see Figure 5, **D8** and **D9**). Intervisibility between barrows was an important consideration of their positioning, and their continuing intervisibility affords an appreciation of the wider barrow cemetery as a whole. The proximate, contemporary and associated scheduled barrows make a positive contribution towards the significance of the Bowl Barrow at the Hillfort. Many barrows are located within the wider environs of the Bowl Barrow at Barbury Castle Hillfort, beyond the cemetery group defined above, particularly to the east and south. These contemporary and associated assets make a positive contribution towards the historic (illustrative) value of the Bowl Barrow at Barbury Castle Hillfort, forming part of the wider prehistoric ritual landscape, and thus make a positive contribution towards its significance.

Setting – the experience of the asset

- 5.15. The experience of the Hillfort and Bowl Barrow is best expressed through views. Panoramic views are possible from the Hillfort, which emphasise its relationship with the surrounding contemporary landscape features. These views are likely to reflect the original design intentions of the hillfort builders, allowing extensive views across its associated hinterland. Specifically important views from the Hillfort comprise the views north-eastwards along the ridgeline towards contemporary Iron Age hillforts visible in the distance, as well as the view westwards from the hillfort towards the adjacent barrow cemetery. These views facilitate and appreciation of the historic landscape context of the Hillfort, and this make a positive contribution towards its significance. Other views which are considered to contribute towards the

significance of the Hillfort are those to the north and south. Views to the south across the Marlborough Downs extend across a relatively remote landscape, emphasising the Hillfort's relative isolation and its association with a traditionally agricultural landscape. The view north from the Hillfort extends across the lower-lying vale chalklands and claylands, which are likely to have formed an important part of the hinterland of the Hillfort, offering a different environment to exploit. As such, the views northwards across the vale emphasise a further component of the hillfort's hinterland. The Site dilutes the quality of these views to a degree, owing to its prominence within them, however, the prevailing rural character of the landscape to the north remains legible, thus views to the north are still considered to make a positive contribution towards the hillfort.

- 5.16. Views towards the Hillfort are also considered to make a positive contribution towards its significance, affording an appreciation of its landscape context, as well as its dominance within that landscape, which is a key contributor to its monumentality as a former defensive structure.
- 5.17. With regard to the experience of the Bowl Barrow, as noted above, views of the associated assets to the west are considered to be a key element of its experience, facilitating an appreciation of the wider prehistoric, ritual landscape. The sense of quietness and tranquillity provided by the prevailing agricultural landscape which surrounds the Bowl Barrow affords a sense of remoteness and isolation which makes a positive contribution towards its significance.

Summary of the potential development effects

- 5.18. The proposed development Site lies within the low lying landscape north of the scheduled monument. Due to its low lying position, the proposed development would not result in any reduced visibility to those key vistas identified above, and the intervisibility with contemporary assets which make a positive contribution to both the Hillfort and the Bowl Barrow would be preserved.
- 5.19. The proposed development would result in the introduction of new built form within the existing setting of the scheduled monument. Views of this existing built form are restricted within the Hillfort itself, and the approach to the east, owing to the size of the ramparts (Photograph 1, below). The existing built form, and thus the proposed development Site, are visible in views from the west (and from the ramparts themselves), and from the Bowl Barrow (Photograph 2, below), however, the area

of extant development at the Site, perceptible in these views, is not considered to make a positive contribution towards the significance of the monument. The proposed collections management facility would sit within the established context of existing built form on the Site, immediately in front of three existing aircraft hangars, and surrounded to the south by a relatively expansive solar farm and, as such, would not result in a change to the character of the existing setting of the Hillfort. The proposed collections management facility wouldn't result in any perceivable increase in noise or movement with regard to the experience of the scheduled monument. On this basis, the proposed development will not harm the significance of the scheduled monument through alteration of its setting.

5.20. Excavation within the Site has identified remains of an early Iron Age settlement, contemporary with the Hillfort. Such remains, as noted above, make a positive contribution towards the significance of the Hillfort, providing information on its historic context. The proposed development would result in the removal of these assets. However, these features are not visible above ground, and lie within the modern context of the Site, which isn't considered to form part of the setting of the Hillfort which contributes to its significance. As such, whilst the buried remains of the early Iron Age settlement within the Site make a positive contribution towards its historic (illustrative) value, in line with the NPPF and guidance provided within GPA3, which state that the setting of a heritage asset is the surroundings in which a heritage asset is experienced, these remains are not considered to form part of the setting of the Hillfort. As such, their removal would not result in harm to the significance of the Hillfort through alteration of its setting, and further investigation of such remains, through a programme of archaeological works, would provide an opportunity to enhance our understanding of the contemporary landscape associated with the scheduled monument.

5.21. The Site shares no perceivable historic associations with the Bowl Barrow.

5.22. In summary, the proposed development would not result in harm to the significance of the Hillfort and Bowl Barrow through alteration of their setting.



Photograph 1: View towards the Site from the eastern entrance to Barbury Castle Hillfort



Photograph 2: View towards the Site from the western entrance of Barbury Castle Hillfort

Three Bow Barrows: Part of the Barrow Cemetery west of Barbury Castle; and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle (Figure 5, D8 and D9)

- 5.23. The Three Bow Barrows: Part of the Barrow Cemetery west of Barbury Castle and Saucer Barrow: Part of the Barrow Cemetery west of Barbury Castle (hereafter ‘the Barrow Cemetery’) derive significance primarily from the evidential and historic (illustrative) value manifested within their buried and earthwork remains, as examples of prehistoric funerary monument. The Barrow Cemetery also draws evidential value of their potential for buried remains, which may yield further information on prehistoric funerary practices.

Setting – the asset’s physical surrounds

- 5.24. The Barrow Cemetery includes the Bowl Barrow immediately north-west of the Hillfort (Figure 5, **D7**). All three separately designated barrows and barrow groups share good intervisibility. The associated Bowl Barrow at the Hillfort makes a positive contribution towards the historic (illustrative) value of the Barrow Cemetery as part of a prehistoric funerary complex. This grouping forms the key and immediate setting of the Barrow Cemetery from which it draws significance.
- 5.25. There has been a great deal of archaeological investigation, analysis and interpretation of the location of Bronze Age barrows, especially within the context of the Wessex Chalklands, which has shown that whilst ridge top or false crest locations are a common situation for barrows, the large majority of barrows are actually located in valley side or valley bottom locations. The perception that the favoured locations for barrows were ridge tops is probably a result of the survival of prominent examples on these locations, whereas the vast majority, located on flatter more favourable agricultural land, have been destroyed by farming activity and can now only be seen as ring ditches, often recorded from aerial photography. It is now understood that the motivations behind the siting of barrows by Bronze Age communities were subtle and complex. The location of the Barrow Cemetery within the dip in the landscape may indicate that this topographic feature was of some importance to the community who inhabited this area. It is likely that it formed a routeway from the lower chalk plateau to the higher downland area of the Marlborough Downs and it may also have been regarded as a boundary between these two distinctive landscapes. Marking this routeway/boundary may have been the primary factor in the decision to create these monuments.

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- 5.26. The wider landscape environs of the Barrow Cemetery are predominantly comprised of 18th-century and later field enclosure, modified in the post-war period through boundary removal to create large arable fields. It is interspersed with woodland belt plantations and scattered farmsteads and villages such as Uffcott. This landscape makes a neutral contribution towards the significance of the Barrow Cemetery in terms of their physical environs. Imposed across the 18th-century rural landscape is a Second World War industrial airfield at Wroughton, and the solar farm to the south of the Site. The Site is associated with large hangars and other industrial buildings. Beyond the Site to the north the views afforded from the ridge are predominantly of an urban or industrial landscape. This landscape does not contribute positively to the value of the monuments. Both aspects of the wider landscape are considered to make a neutral contribution towards the significance of the Barrow Cemetery.

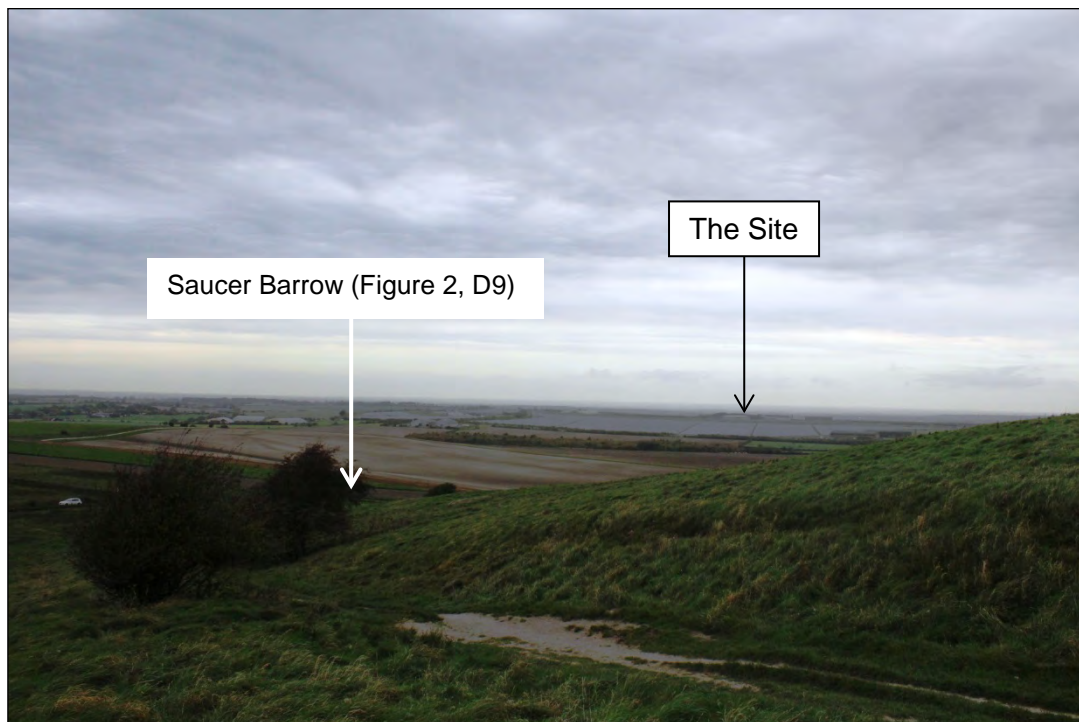
Setting – the experience of the asset

- 5.27. The topographic situation of the Barrow Cemetery, within a dip in the ridge line, allows views out into the wider landscape to the north and south, but results in a more enclosed and intimate feel overall, directing focus towards the barrows themselves. Although the escarpment is strongly defined when viewed from the Lower Chalk areas to the north the barrow group is not easily visible from distances further than its immediate locale.
- 5.28. Whilst the surrounding agricultural landscape makes a neutral contribution towards the significance of the Barrow Cemetery in terms of its physical surrounds, the prevailing sense of tranquillity and quiet provided by the rural landscape affords a sense of wildness and remoteness. This experience makes a positive contribution towards the significance of the Barrow Cemetery as an emotive, funerary landscape.

Summary of the potential development effects

- 5.29. The Site shares no perceivable historical associations with the Barrow Cemetery.
- 5.30. The proposed development would be visible in views to the north from the Barrow Cemetery. However, as above, the low lying nature of the Site means that the proposed development will not reduce visibility between the Barrow Cemetery and any of those key associated and contemporary assets within its environs.

- 5.31. Wroughton Airfield is not considered to contribute positively towards the significance of the Barrow Cemetery. The proposed collections management facility would comprise an addition to the Site, situated amongst the well-established built form of the Site, including three large aircraft hangars (Photograph 3, below). Due to its position within the Site, amongst similar existing structures, the proposed development would not alter the existing character of this aspect of the setting of the Barrow Cemetery. In particular, it wouldn't result in the expansion of the Site into the agricultural landscape which is considered to make a positive contribution towards the experience of this scheduled monument, nor would it result in any perceivable increase in noise or movement.
- 5.32. On this basis, the proposed development would not harm the significance of the Barrow Cemetery through alteration of its setting; those aspects of the setting of the Barrow Cemetery which are considered to contribute positively towards its significance would be preserved following the construction of the proposed collections management facility.



Photograph 3: View from Saucer Barrow, view to the north towards the Site

Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down (Figure 5, D10)

- 5.33. As with the Barrow Cemetery, Two Bowl Barrows 680m north of Upper Herdswick Farm, Barbury Down (hereafter 'Two Bowl Barrows') derive significance primarily from the evidential and historic (illustrative) value manifest within their remains, and their archaeological potential.

Setting – the asset's physical surrounds

- 5.34. Unlike the Barrow Cemetery, Two Bowl Barrows are situated on a low crest on the Lower Chalk below the downland escarpment. The barrows' location on a low crest overlooking the Lower Chalk plateau allows for limited views over the landscape to the north (including the Site) and east. As noted above in relation to the Barrow Cemetery, the wider landscape environs of Two Bowl Barrows are largely comprised of modern field enclosure, utilised as both arable and grassland, as well as for solar energy. The wider environs also include the Site and its associated built form, the solar farm to its south, and relatively scattered settlement; these aspects of the wider setting make a neutral contribution towards the significance of Two Bowl Barrows in terms of their physical environs.
- 5.35. As noted above, the choice of location for barrows is often the result of subtle and complex motivations. Two Bowl Barrows are located some way below the ridge of the chalk scarp, but are clearly located on spur of land that represents a high point within the immediate area. This might suggest that whilst the builders placed less emphasis on the visibility of Two Bowl Barrows within in the wider landscape, but still ensured that they were locally prominent. A low lying position could also be a reflection of status, for example, with elevated and more prominent positions reserved for those of a higher status.
- 5.36. Two Bowl Barrows are located on private land, and are not directly accessible. However, it is very likely that they share intervisibility with contemporary monuments along the line of the escarpment, albeit somewhat reduced to the denuded state of both Two Bowl Barrows and some of their contemporary monuments. Contemporary barrows within the environs of Two Bowl Barrows, with which they share intervisibility, provide historic context of the scheduled monument as part of a wider funerary landscape and, as such, make a positive contribution towards their historic (illustrative) value.

Setting – the experience of the asset

- 5.37. The immediate setting of the scheduled monument comprises an arable field that is under cultivation. To the west, south and south-east the field is surrounded by permanent grassland that is a remnant of former downland pastures. Whilst the present land use and its organisation are not contemporary with Two Bowl Barrows, as noted above, its open, undeveloped character results in a quiet, tranquil experience, affording a sense of remoteness and wildness, and makes a positive contribution towards the significance of Two Bowl Barrows as part of an emotive, funerary landscape. This experience is reduced to a small degree by the presence of a road immediately east of the scheduled monument, although the adverse effects of the road (i.e. the introduction of noise and movement) are somewhat lessened by the minimal traffic along this route.
- 5.38. Due to the low lying position of Two Bowl Barrows, they are best experienced from the south, from the elevated position afforded by the escarpment; from the landscape to the north, and from the roadside immediately east of the scheduled monument, the barrows are hard to discern owing to the denuded state of the mounds.

Summary of the potential development effects

- 5.39. As with those barrows assessed above, the Site shares no perceivable historical associations with the Barrow Cemetery.
- 5.40. There was no direct access to Two Bowl Barrows, however, it was established from the roadside immediately east that the Site would be visible from the slightly elevated position that Two Bowl Barrows occupy (Photograph 4, below). As such, the proposed development would be visible in views to the north from Two Bowl Barrows. However, the proposed development would not interrupt or alter the character of views towards associated and contemporary assets, which lie to the west (including **D8** and **D9** on Figure 5) and to the east along the ridgeway.
- 5.41. As described above, the Site is not considered to contribute positively towards the significance of Two Bowl Barrows and the proposed new storage unit would, of course, comprise an addition to it. However, as before, the proposed development would not alter the existing character of this aspect of the setting of Two Bowl Barrows, as it would be situated amongst existing built form of a similar scale,

wouldn't result in the expansion of the Site into the agricultural landscape which is considered to make a positive contribution towards the experience of this scheduled monument, nor would it result in any perceivable increase in noise or movement which might alter its current experience.

- 5.42. On this basis, the proposed development would not harm the significance of Two Bowl Barrows through alteration of their setting; those aspects of the setting of the Two Bowl Barrows which are considered to contribute positively towards their significance would be preserved following the construction of the proposed collections management facility.



Photograph 4: View from the east of Two Bowl Narrows, view to the north-west towards the Site

Summary of potential non-physical development effects on designated heritage assets

- 5.43. In summary, this assessment has found that the proposed development will not harm the significance of any designated heritage assets through alteration of their setting.

6. CONCLUSIONS

Archaeology

- 6.1. There are no designated heritage assets, or heritage assets of commensurate value to that of a designated heritage asset, within the Site. As such, the proposed development will not result in any adverse physical impacts on the significance of any designated heritage assets, or non-designated heritage assets of commensurate value.
- 6.2. This assessment has identified some partially excavated and potential remains of prehistoric to post-medieval date, which are/would be of some evidential and historical value. Depending on the method of construction (particularly regarding the depth of any foundation trenches), the proposed development would likely lead to the truncation and/or total removal of these assets. Local planning policy EN10 (Historic Environment and Heritage Assets) states:

‘Any harm to the significance of a designated or non-designated heritage asset, or their loss, must be justified. Proposals will be weighed against the public benefits of the proposal, whether it has been demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset [...]’.

- 6.3. In line with local planning policy EN10, archaeological works would be required in order to mitigate the loss of the evidential and historic (illustrative) values manifested within the physical remains of the known and potential archaeological resource within the Site. Suitable mitigation might include a programme of strip, map and record investigation within the footprint of the proposed collections management facility.

The setting of heritage assets

- 6.4. Heritage assessment has identified that there would be no non-physical impact upon the significance of any designated heritage assets as a result of the proposed development. In all instances where the proposed development would result in a perceivable change to the existing setting of designated heritage assets, the key contributing values to their significances, including any contribution made by setting, would be preserved.
- 6.5. Whilst some non-designated heritage assets relating to Wroughton Airfield have been identified it has been concluded, taking into account then nature of these

structures, their function and location and the changing road of the former airfield, that there is no potential harm to the significance of these.

- 6.6. The proposed development would thus be consistent with local planning policy EN10 and the provisions of the Planning (Listed Buildings and Conservation Areas) Act (1990) and the NPPF (2012).

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Cartographic sources

1796	Wroughton enclosure map
1846	Tithe map of Elecombe, Westlecot, Salthorp and Overtown
1886	First Edition Ordnance Survey map: 1:2,500 series
1900	Second Edition Ordnance Survey map: 1:2,500 series
1923	Third Edition Ordnance Survey map: 1:2,500 series
1982-1988	Ordnance Survey map: 1:10,000 series (Online)

APPENDIX 1: HERITAGE STATUTE POLICY & GUIDANCE

Heritage Statute: Listed buildings

Listed buildings are buildings of ‘special architectural or historic interest’ and are subject to the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990 (‘the Act’). Under Section 7 of the Act ‘no person shall execute or cause to be executed any works for the demolition of a listed building or for its alteration or extension in any manner which would affect its character as a building of special architectural or historic interest, unless the works are authorised.’ Such works are authorised under Listed Building Consent. Under Section 66 of the Act ‘In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any feature of special architectural or historic interest which it possesses’.

Heritage Statute: scheduled monuments

Scheduled monuments are subject to the provisions of the Ancient Monuments and Archaeological Areas Act 1979. The Act sets out the controls of works affecting scheduled monuments and other related matters. Contrary to the requirements of the Planning Act 1990 regarding Listed buildings, the 1979 Act does not include provision for the ‘setting’ of scheduled monuments.

National heritage policy: the National Planning Policy Framework

Heritage assets and heritage significance

Heritage assets comprise ‘a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest’ (the NPPF (2012), Annex 2). Designated heritage assets include scheduled monuments and Listed buildings. The NPPF (2012), Annex 2, states that the significance of a heritage asset may be archaeological, architectural, artistic or historic. Historic England’s ‘Conservation Principles’ looks at significance as a series of ‘values’ which include ‘evidential’, ‘historical’, ‘aesthetic’ and ‘communal’.

The setting of heritage assets

The ‘setting’ of a heritage asset comprises ‘the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be

neutral.’ Thus it is important to note that ‘setting’ is not a heritage asset: it may contribute to the value of a heritage asset.

Guidance on assessing the effects of change upon the setting and significance of heritage assets is provided in ‘Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets’, which has been utilised for the present assessment (see below).

Levels of information to support planning applications

Paragraph 128 of the National Planning Policy Framework (‘the NPPF (2012)’) identifies that ‘In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance.’

Designated heritage assets

Paragraph 126 of the NPPF (2012) notes that local planning authorities ‘should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance.’ Paragraph 132 notes that ‘when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation. The more important the asset, the greater the weight should be.’ It goes on to note that ‘substantial harm to or loss of a grade II listed building...should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments.....should be wholly exceptional.’

Paragraph 134 clarifies that ‘Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.’

Development Plan

The Swindon Borough Local Plan 2026 is the principal planning policy document for Swindon Borough. Those policies which are relevant to heritage and the proposed development are reproduced below.

Policy EN10: Historic Environment and Heritage Assets

- a. Swindon Borough’s historic environment shall be sustained and enhanced. This includes all heritage assets including historic buildings, conservation areas, historic parks and gardens, landscape and archaeology.

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- b. Proposals for development affecting heritage assets shall conserve and, where appropriate, enhance their significance and setting. Any harm to the significance of a designated or non-designated heritage asset, or their loss, must be justified. Proposals will be weighed against the public benefits of the proposal, whether it has been demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.
 - c. Any alterations, extensions or changes of use to a listed building, or development in the vicinity of a listed building, shall not be permitted where there will be an adverse impact on those elements which contribute to their special architectural or historic significance, including their setting.
 - d. Scheduled monuments and other nationally important archaeological sites and their settings will be preserved in situ, and where not justifiable or feasible, provision to be made for excavation and recording. Development proposals affecting archaeological remains of less than national importance will be conserved in a manner appropriate to their significance. An appropriate assessment and evaluation should be submitted as part of any planning application in areas of known or potential archaeological interest.
 - e. Development within or which would affect the setting of the Borough's Conservation Areas will conserve those elements which contribute to their special character or appearance.
 - f. Features which form an integral part of a Park or Garden's historic interest and significance will be conserved and development will not detract from the enjoyment, layout, design, character, appearance or setting of them, including key views into and out from, or prejudice future restoration.
 - g. Any development proposal that would affect a locally important or non-designated heritage asset, including its setting, will be expected to conserve its significance, and any harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

Policy EN5: Landscape Character and Historic Landscape [Only relevant sections are reproduced]

a. Proposals for development will only be permitted when:

- the intrinsic character, diversity and local distinctiveness of landscape within Swindon Borough are protected, conserved and enhanced;
- the design of the development and materials used are sympathetic to the surrounding landscape;
- unacceptable impacts upon the landscape are avoided; and,
- where other negative impacts are considered unavoidable, they are satisfactorily mitigated.

b. In meeting the requirements of EN5a, applicants for development should demonstrate how they have taken into account Landscape Character Assessments and assessed the potential impact of the proposal upon the following attributes of the landscape:

- views, visual amenity and the landscape setting; valuable historic and heritage areas and assets; [and]
- environmental amenity such as tranquillity & noise, pollution and light pollution [...]

Good Practice Advice 1-3

Historic England has issued three Good Practice Advice notes ('GPA1-3') which support the NPPF. The GPAs note that they do not constitute a statement of Government policy, nor do they seek to prescribe a single methodology: their purpose is to assist local authorities, planners, heritage consultants, and other stakeholders in the implementation of policy set out in the NPPF. This report has been produced in the context of this advice, particularly 'GPA2 – Managing Significance in Decision-Taking in the Historic Environment' and 'GPA3 – The Setting of Heritage Assets'.

GPA2 - Managing Significance in Decision-Taking in the Historic Environment

GPA2 sets out the requirement for assessing 'heritage significance' as part of the application process. Paragraph 8 notes 'understanding the nature of the significance is important to understanding the need for and best means of conservation.' This includes assessing the extent and level of significance, including the contribution made by its 'setting' (see GPA3 below). GPA2 notes that 'a desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment

within a specified area, and the impact of the proposed development on the significance of the historic environment, or will identify the need for further evaluation to do so' (Page 3).

GPA3 – The Setting of Heritage Assets

Step 1 requires heritage assets which may be affected by development to be identified. Historic England notes that for the purposes of Step 1 this will comprise heritage assets where 'the development is capable of affecting the contribution of a heritage asset's setting to its significance or the appreciation of its significance'.

Step 2 of the settings process requires 'assessing whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s)', with regard to its physical surrounds; relationship with other heritage assets; the way it is appreciated; and its associations and patterns of use. Step 3 requires 'assessing the effect of the proposed development on the significance of the asset(s)', with regard to the location and siting of the development; its form and appearance; additional effects; and its permanence.

Step 4 of GPA3 provides commentary on 'maximising enhancement and minimising harm'. It notes (Paragraph 26) that 'Maximum advantage can be secured if any effects on the significance of a heritage asset arising from development liable to affect its setting are considered from the project's inception.' It goes on to note (Paragraph 28) that 'good design may reduce or remove the harm, or provide enhancement'.

Heritage significance

Discussion of heritage significance within this assessment report makes reference to several key documents. With regard to Listed buildings and Conservation Areas it primarily discusses 'architectural and historic interest', which comprises the special interest for which they are designated.

The NPPF provides a definition of 'significance' for heritage policy (Annex 2). This states that heritage significance comprises 'The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic'.

Regarding 'levels' of significance the NPPF (2012) provides a distinction between: designated heritage assets of the highest significance; designated heritage assets not of the highest significance; and non-designated heritage assets.

Historic England's 'Conservation Principles' expresses 'heritage significance' as comprising a combination of one or more of: evidential value; historical value; aesthetic value; and communal value.

Effects upon heritage assets

Heritage benefit

The NPPF clarifies that change in the setting of heritage assets may lead to heritage benefit. Paragraph 137 of the NPPF (2012) notes that 'Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably'.

GPA3 notes that 'good design may reduce or remove the harm, or provide enhancement' (Paragraph 28). Historic England's 'Conservation Principles' states that 'Change to a significant place is inevitable, if only as a result of the passage of time, but can be neutral or beneficial in its effects on heritage values. It is only harmful if (and to the extent that) significance is reduced' (Paragraph 84).

Specific heritage benefits may be presented through activities such as repair or restoration, as set out in Conservation Principles.

Heritage harm to designated heritage assets

The NPPF (2012) does not define what constitutes 'substantial harm'. The High Court of Justice does provide a definition of this level of harm, as set out by Mr Justice Jay in *Bedford Borough Council v SoS for CLG and Nuon UK Ltd*. Paragraph 25 clarifies that, with regard to 'substantial harm': 'Plainly in the context of physical harm, this would apply in the case of demolition or destruction, being a case of total loss. It would also apply to a case of serious damage to the structure of the building. In the context of non-physical or indirect harm, the yardstick was effectively the same. One was looking for an impact which would have such a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced'.

Effects upon non-designated heritage assets

The NPPF (2012) paragraph 135 guides that 'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage

assets, a balanced judgment will be required having regard to the scale of any harm or loss and the significance of the heritage asset’.

APPENDIX 2: DATA CAPTURE GAZETTEER

CA Ref. No.	Orig. Ref. HE, HER, HEA	Description	Period
D1	1023432	Milestone, grade II listed.	Post-medieval / Modern
D2	1355914	Milestone, grade II listed.	Post-medieval / Modern
D3	1023451 MWI67702	Upper Salthrop Farmhouse, grade II listed.	Post-medieval / Modern
D4	1185632	Elecombe Hall, grade II listed.	Modern
D5	1185613 1023437	Ivery House, grade II listed; and Ornamental Garden Table About 30 Yards East of Ivery House. Grade II listed.	Post-medieval and Medieval
D6	1023436 1299591	Wall to Churchyard and Street, East and South of Wroughton House, grade II listed; and Tomb of Thomas Washbourne.	Post-medieval and Modern
D7	1014557	Barbury Castle: a Hillfort and Bowl Barrow.	Prehistoric
D8	1012165	Three Bowl Barrows: Part of a Barrow Cemetery West of Barbury Castle.	Prehistoric
D9	1010468	Saucer Barrow: Part of a Barrow Cemetery West of Barbury Castle.	Prehistoric
D10	1016356	Two Bowl Barrows 680m North of Upper Herdswick Farm, Barbury Down.	Prehistoric
N/A	EWI6374 1445747	Evaluation trenching undertaken at the National Museum of Science and Industry (Wroughton Airfield) in 2006 by Oxford Archaeology.	N/A
N/A	EWI3508	The Avebury Project – The medieval and post-medieval assessment.	N/A
1	1494570	Evaluation trenching undertaken at Wroughton Science Museum (Wroughton Airfield) by Oxford Archaeology in 2005.	N/A
2a	MWI5214	Early Iron Age settlement.	Prehistoric
2b	MWI72696	Large, Iron Age / Romano-British possible linear features.	Prehistoric / Romano-British
3	MWI16460	Findspot – Romano-British pottery, bone, baked clay and other 'debris'.	Romano-British
4	MWI16576 MWI15283 MWI16591	Series of undated earthworks; probably medieval, including a probable sunken trackway.	Medieval?
5	MWI64468	Possible medieval settlement earthworks.	Medieval
6	MWI15303	Undated linear features – possible medieval strip lynchets visible as cropmarks.	Medieval?
7	MWI16569	Possible medieval Holloway.	Medieval

CA Ref. No.	Orig. Ref. HE, HER, HEA	Description	Period
8	MWI15256	The site of a Post Medieval 'Pest House' building.	Post-medieval
9a - c	MWI67703 MWI67799 MWI67802	<ul style="list-style-type: none"> • Red Barn partially extant 19th-century farmstead; • Demolished 19th-century outbarn; • Demolished 19th-century outfarm; and • Site of rectory farm demolished 19th-century farmstead. 	Modern
10	N/A	Geophysical survey (magnetometer) undertaken in 2013 at Wroughton Airfield by Archaeological Services WYAS.	N/A
N/A	1432155 1416416 1416417 1416439 1414566 1524420 MWI5257 MWI44963	Wroughton Airfield. Includes records for three pill boxes, a Royal Observer Corps monitoring post, a control tower.	Modern
10	MWI15285	Undated earthwork enclosure.	Undated
N/A	MWI15204 MWI16434	Find spots of Bronze Age implements, including two Bronze Age worked flints; Iron Age Brooch; Bronze Age arrow head.	Prehistoric
N/A	888040 888041 888043 MWI5223 MWI16457 MWI6459 MWI6498	Find spots of Roman coins.	Romano-British
N/A	MWI16516 MWI15252 MWI16532 MWI16543	<p>Early medieval and medieval find spots</p> <ul style="list-style-type: none"> • Four Saxon pottery fragments; • Medieval pottery fragments; • Two fragments of medieval scratchware pottery; and • A quantity of medieval pottery fragments and animal bone. 	Early-Medieval and medieval
N/A	MWI15255	Find spots of two post-medieval coins.	Post-medieval

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