

BAE Systems PLC

BAE Waterlooville

Sustainability Statement

Project Ref: 26365

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1 Introduction

1.1 Sustainability Statement

1.1.1 This Sustainability Statement has been prepared in respect of an outline planning application by BAE Systems PLC for a commercial and industrial development at their Waterlooville site in Hampshire.

1.1.2 The purpose of this document is to set out the how sustainability has been and will be incorporated into the proposed development from its inception through to its implementation and operation. The scope of sustainability and the approach to its incorporation into the development is outlined, based on a review of relevant policy and other drivers.

1.2 The Site

1.2.1 The BAE Systems Technology Park is located within the Brambles Farm Industrial Estate on the western edge of Waterlooville. The whole complex covers 5.6 hectares (ha); however, the planning application boundary only encompasses approximately 4.4 ha.

1.2.2 The existing site consists of the following buildings:

- Main Building: a large office building of B1(c) use with Gross External Floor (GEA) of 19,498sqm. At present the building is significantly underutilised with partial occupation.
- E-Block: a large industrial unit of B1c use with GEA of 6,726sqm. At present the building is significantly underutilised with partial occupation. E-Block is to be retained as part of the proposed development.
- Beam Plot: a small industrial unit with GEA of 927sqm. Its current use is B1(c).
- Restaurant: the restaurant is an ancillary use to the main building.
- Site Parking: the site provides a total of 861 car parking spaces.

1.2.3 The nature of the site and its location gives rise to several features/facets that are inherently sustainable and support the development of the site, including:

- The site is currently developed but is underutilised, providing the potential for redevelopment to increase employment at the site.
- The site is located close to residential areas which could benefit from increased employment opportunities.
- The site is located within Flood Zone 1 and is not at a significant risk of flooding.
- The site does not support significant ecological resources that could be affected by development or within 1km of any significant ecological sites.

1.3 The Proposed Development

1.3.1 BAE Systems is seeking outline planning permission to redevelop the site with the following mix of uses:

- Buildings for Class B uses in the western part of the site (around 8,500m² of floor area).
- A 60-bedroom hotel at the east of the site.
- A restaurant in the south-east of the site.
- A restaurant with drive-through facility in the north-east of the development.
- A car showroom and forecourt to the east of the access from Elettra Avenue from the north.
- Associated access and parking provisions.

1.3.2 It is estimated that the development of the site will provide at least 265 new permanent jobs, along with temporary construction employment.

1.3.3 The layout of the proposed development is provided in [Appendix A](#).

1.4 Approach to Sustainability

1.4.1 Sustainability has been considered from the outset of the project. This has been based on the opportunities and constraints of the site and the proposed development, the policy context (summarised in [Chapter 2](#)) and the aspirations of BAE Systems, while being mindful of the outline nature of the planning application and that site occupiers have not yet been confirmed.

1.4.2 This process has identified the key 'topics' with regards to sustainability. These topics have been developed to ensure that the sustainability policies relevant to the proposed development are achieved, while effort is focused on those aspects of sustainability most relevant to the proposed development.

1.4.3 This document explains the proposed development has responded to each of these sustainability topics to enhance the sustainability of the proposed development.

1.4.4 Some of the sustainability measures outlined are delivered through the proposed design; some will come through detailed design of buildings and spaces; some will need formal arrangements for future governance/management and others will need a 'champion' to take forward once development is underway and complete. Nevertheless, all are practical and realistic ways to secure a sustainable development.

1.4.5 In line with local policy requirements (see [Chapter 2](#)) it is anticipated that buildings within the proposed development will achieve a 'very good' rating under BREEAM. At this outline stage it is not possible to undertake a substantive pre-assessment under BREEAM as there is insufficient design information. It is therefore proposed that such assessments be

provided to discharge a relevant planning condition. This Sustainability Statement does however identify the types of measures that will be utilised in order to achieve credits under BREEAM.

2 Policy Context

2.1 National Policy

Government's Sustainable Development Agenda

2.1.1 The UK has four priority areas for sustainable development, these are:

- Sustainable consumption and production;
- Climate change and energy;
- Natural resource protection and environmental enhancement; and
- Sustainable communities.

2.1.2 The UK Sustainable Development Strategy (2005) is the over-arching policy which sets out key national objectives (building on the 1999 Securing the Future strategy), to improve the quality of life and create sustainable communities. A strategic framework has been developed as a means of achieving those objectives. Covering a period up to 2020 it includes the key sustainable development priorities for action both in the UK and internationally.

2.1.3 In addition, the Government has a legally binding commitment to reduce carbon emissions by 80% by 2050 relative to 1990, with interim targets (or carbon budgets) up to this point. The most relevant of these in relation to the proposed development is the second carbon budget (2013-2017) which is designed to deliver a 29% reduction in emissions relative to 1990.

The Kyoto Protocol

2.1.4 The Kyoto Protocol is an amendment to the United Nations Framework Convention on Climate Change. It sets targets for reductions in carbon emissions for several industrialised nations. It was negotiated in 1997 and came into force in 2005. The Kyoto Protocol is a legally binding agreement, which requires the UK to reduce greenhouse gas emissions by 12.5% below 1990 levels by 2008-2012.

Energy Act 2008

2.1.5 The Energy Act implements the legislative aspects of the 2007 Energy White Paper: *"meeting the energy challenge"*. It provides the basis of regulatory change to meet the needs for energy generation, energy infrastructure, and promotion of low carbon technologies. Notable provisions within the Act allow for banding of the Renewable Obligation, the introduction of a feed-in-tariff for low carbon electricity generation, introduction of a Renewables Heat Incentive, changes to the licensing requirements for offshore energy developments and offshore carbon storage, and licensing requirements relating to the cost of processing waste at new nuclear sites.

The 2008 Climate Change Act

- 2.1.6** This provides the legislative framework that underpins the carbon reduction targets described above.

The European Directive on the Energy Performance of Buildings (EPBD)

- 2.1.7** This requires that the 'technical, environmental and economic feasibility of alternative energy supply systems should be considered' for all new buildings with a useful floor area greater than 1000 m². Article 5 of the EPBD is addressed in England and Wales by revisions to Part L of the Building Regulations, which address the conservation of fuel and power. These came into effect in 2006 and contain limits for overall carbon emissions associated with energy use. Proposed changes are due to come into effect in 2013, whereby the regulations will require a further reduction in overall carbon emissions.

National Planning Policy Framework

- 2.1.8** The National Planning Policy Framework (NPPF) was published in March 2012 and came into force immediately. The NPPF sets out the Government's planning policies for England and how these are expected to be applied. The NPPF revokes the previous series of Planning Policy Statements and Guidance Notes.
- 2.1.9** The NPPF constitutes guidance for local planning authorities and decision-takers both in drawing up their plans and as a material consideration in determining planning applications.
- 2.1.10** The NPPF introduces the 'presumption in favour of sustainable development' in planning decisions. The NPPF explains that *the "policies in paragraphs 18-219, taken as a whole, constitutes the Government's view of what sustainable development means in practice for the planning system."* In addition the NPPF states that there are three dimensions to sustainable development: an economic role, a social role and an environmental role. Reference is also made to the Brundtland Commission definition which defines sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 2.1.11** The NPPF is intended to encourage development, in particular development which will provide economic, social and environmental benefits, and such developments should proceed without delay.

2.2 Local Policy

South East

- 2.2.1** The Coalition Government has made very clear its intention to revoke the Regional Spatial Strategies and this will occur once the necessary environmental and sustainability assessments have been completed. As a result the RSS has little weight in the planning system.

Havant Borough Council

- 2.2.2** Havant Borough Council's Core Strategy was adopted in March 2011 and is the most significant document in the Local Development Framework. The Core Strategy sets the overall framework for development in the borough.
- 2.2.3** The Core Strategy identifies the Vision for the borough in 2026 (the end of the plan period), including *"In 2026 Havant Borough will be a cleaner, safer and more prosperous place. It will be a place where people of all ages and circumstances will want to live, visit or work. It will be a sought after location, well known as the home of windsurfing and for its superb Solent coastline. It will be widely recognised for its sustainable, innovative and high quality design developments and the stewardship of its natural and built environment..."*
- 2.2.4** The Core Strategy contains a range of policies to guide development in the borough. Of most significance to sustainability are the following:
- CS2 Employment – which provides for 162,000 square metres of new employment floorspace and prioritises the use of previously developed land.
 - CS3 Skills and Employability – which seeks to promote access to employment and raise the skills of employees.
 - CS6 Regeneration of the Borough – which seeks social, economic and physical regeneration of the borough, including in Waterlooville.
 - CS14 Efficient Use of Resources – which is the most significant policy with regards to sustainability. Major non-residential developments should achieve a 'very good' rating under BREEAM, while developments are also required to maximise resource efficiency, on-site renewable energy generation and give particular consideration to water efficiency measures.
 - CS16 High Quality Design – which sets out the high design standards for development in the borough.
 - Policy CS17 Concentration and Distribution of Development within the Urban Areas – which prioritises the redevelopment of previous developed land and development with urban areas (including Waterlooville).
 - CS20 Transport and Access Strategy – which ensures development does not increase congestion and promotes accessibility and non-car movements. This is further supported by DM11 Planning for More Sustainable Travel.

Havant Borough Council Design Guide Supplementary Planning Document (December 2011)

- 2.2.5** This Supplementary Planning Document sets out seven key principles of good design, including adaptability and sustainability. This is explained as *"New places should be designed so they can adapt over time to changing circumstances, like ageing residents and*

climate change and are built sustainably through construction techniques and the inclusion of energy and water efficiency measures."

- 2.2.6** While the document is primarily concerned with residential development, reference is made to Core Strategy policy CS14's requirement for new developments to achieve a very good rating under BREEAM.
- 2.2.7** The SPG also states that *"The Council also actively seek to achieve the Government development targets on previously developed land and to bring vacant and underused land and buildings back into beneficial use, prioritising urban areas through the Core Strategy."*

3 Sustainability Themes

3.1 Introduction

3.1.1 The sustainability themes that have been adopted to drive the sustainability of the proposed development are:

- Energy & Climate Change;
- Economic Development;
- Drainage & Water Use;
- Waste & Materials; and
- Sustainable Transport.

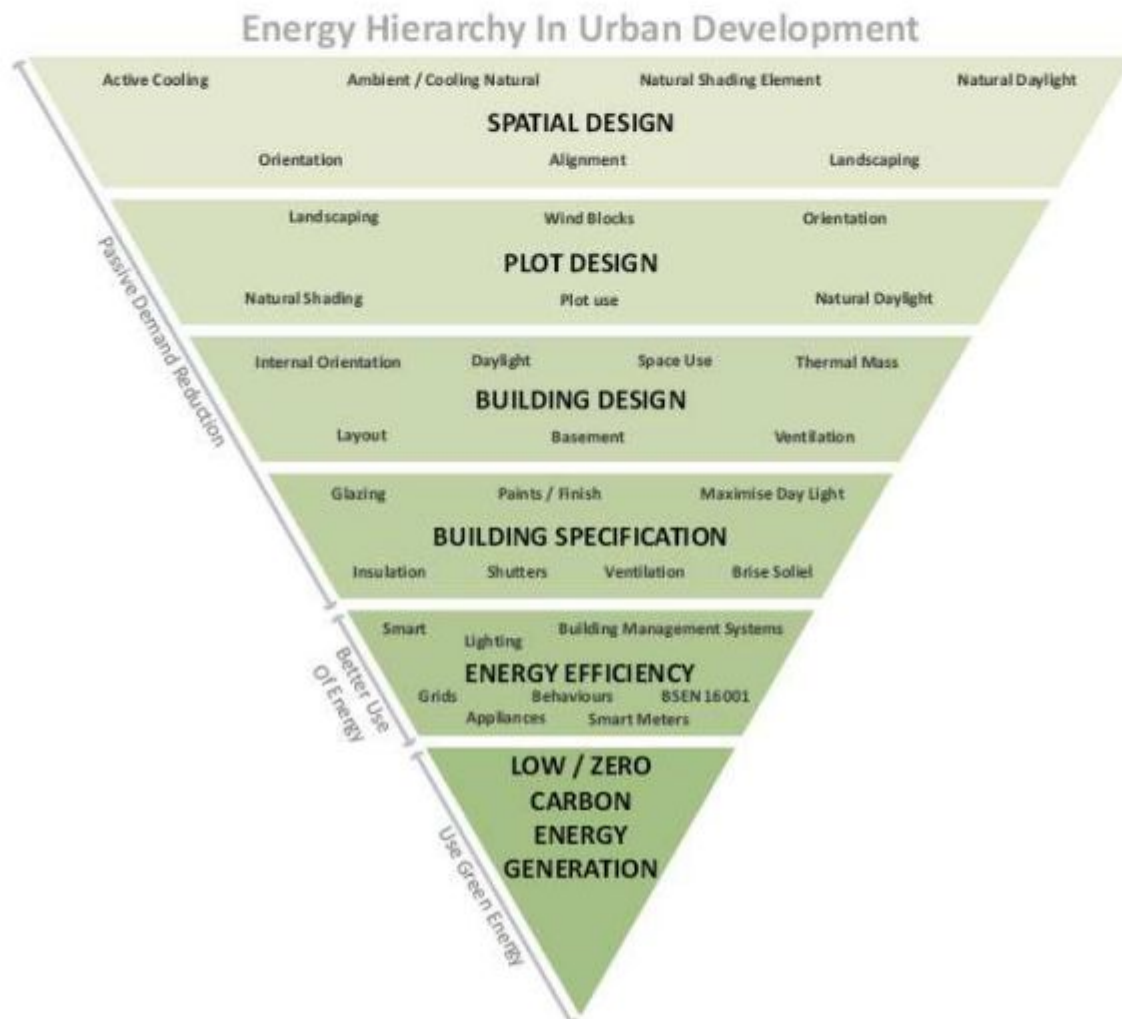
3.1.2 This chapter outlines how each of these themes has been considered for the proposed development.

3.2 Energy and Climate Change

3.2.1 Minimising climate change, through controlling carbon dioxide emissions, is a key part of sustainability that needs to be considered throughout the design and implementation of the proposed development. As many of the key design decisions that will affect the energy performance of the proposed development can only be made once end users' requirements are known and detailed design is underway the following provides a framework through which the sustainability of the development can be enhanced.

3.2.2 In following the energy hierarchy a series of design principles have been developed for the proposed development to consider within the design process. These principles are related to the energy aspects associated with the top end of the hierarchy e.g. passive demand reduction as outlined in **Figure 3.1** below.

Figure 3.1: Energy Hierarchy



- 3.2.3** To meet the first principle of the hierarchy (i.e. reducing demand) it will be important to consider passive design principles through spatial planning, green infrastructure provision and development context including the impacts of climate change on a building.
- 3.2.4** Each building should be designed to maximise the use of south facing aspects to enable natural heating. In addition a high standard of wall and loft insulation should be provided to ensure that heat loss is minimised. The development will meet the increasingly challenging energy requirements of the Building Regulations.
- 3.2.5** The design emphasis on reducing energy use will include both passive and active energy saving approaches. The passive measures are design features from architectural and building fabric selection that inherently reduce the building energy requirement. The active measures are design features that will increase the efficiency of the energy used, hence reducing the building energy requirements.

3.2.6 The following passive design measures can be incorporated into the design of the buildings to reduce energy requirements:

- Reducing the air permeability and thermal bridging coefficient of the building envelope;
- Optimising the U-Values of the external fabric to enable a reduction in energy loss, e.g. through providing additional insulation;
- Incorporating thermal mass to support “free cooling” during summer months;
- Enlarging window areas to maximise the use of natural daylight; and
- Providing passive shading to avoid overheating.

3.2.7 The following active design measures could also be considered for incorporation into the mechanical and electrical elements of the buildings:

- Highly efficient boilers;
- Controls to optimise and compensate for heating variations;
- Zonal control of heating to supply different parts of a building via a building management system;
- Time and thermostat control of hot water;
- Variable speed drives fitted to those pumps and fans that will benefit from speed control;
- High efficiency lighting; and
- Installation of smart meters and sub-metering.

3.2.8 The above list of measures is not exhaustive and will need to be considered in more detail as design of the development progresses through detailed design. As part of this consideration will be given to utilising micro-scale renewable energy technologies to further reduce carbon dioxide emissions.

3.2.9 In addition to energy used within buildings, emissions from transport are a significant source of carbon dioxide emissions. **Section 3.6** sets out sustainable modes of transport are being encouraged to reduce private car use and hence emissions.

3.3 Economic Development

3.3.1 The National Planning Policy Framework (NPPF) recognises that economic development is one of the three key aspects of sustainability, along with environmental and social considerations. The NPPF, and indeed much of the Coalition Government policy, is strongly focused on delivering economic development.

3.3.2 The primary focus of the scheme is economic development and bringing an under-utilised employment site back into full usage and doing so in the context of current and anticipated market conditions. As a result the development is expected to deliver 265 permanent jobs (as well as temporary construction employment), although this could increase or decrease dependent on the future site occupiers. The flexibility within the outline application is important as it allows the site to be developed in response to future market conditions, maximising the development opportunities and economic benefits of the scheme.

3.3.3 The potential for delivering further economic development will be maximised as the scheme progresses. This will include maximising and accelerating the uptake of buildings within the development, consideration as to how uses of the scheme can be tied to local employment needs, training opportunities and supply chain requirements, and the use of local construction personnel.

3.4 Drainage and Water Use

3.4.1 The site is located within flood zone 1 and is not a significant risk of fluvial flooding, although there has been limited flooding of site car parks due to the limited capacity of local culverts. The proposed development will reduce this localised flood risk through the provision of a swale. The swale will maintain the capacity of local culverts as well as being over-sized to provide further capacity.

3.4.2 The preferred method for disposal of surface water is by means of infiltration before discharge to a watercourse or a sewer is considered. However, the site lies on the London Clay formation which has very low permeability. Therefore, infiltration techniques are not appropriate.

3.4.3 The existing impermeable surfaces coverage at the site is approximately 80% with some peripheral areas of soft landscaping. The proposed layout includes similar peripheral landscaping and the impermeable coverage will remain around 80%. Thus, the volume of runoff leaving the site during a rainfall event will not be increased by the development.

3.4.4 The proposed solution will be to discharge to the public sewer network in Silverthorne Way via the existing connections from the site drainage network. It is proposed to restrict runoff rates to the existing 30-year rates for all events above the 30-year return period up to the 100-year +20% return period. This will require attenuation storage with outfall controls and it is proposed to provide this in the form of lined permeable paving cells within parking areas. Runoff from roofs and road areas will be directed into the sub-base of the permeable paving. The parking areas will be designed to accommodate shallow above-ground storage in the more extreme events.

3.4.5 The above measures should reduce local flood risk and enhance the sustainability of site drainage.

3.4.6 It is also proposed that as each building progresses to detailed design that consideration be given to how the sustainability of surface water drainage and potable water use can be enhanced. This could be through the use of low water usage fittings (WCs, urinals, taps,

etc.), rainwater harvesting, metering or sub-metering, leak detection systems and other measures that will be considered as appropriate.

3.5 Waste and Materials

- 3.5.1** The proposed development will entail the demolition of the existing buildings on the site. Prior to demolition consideration will be given as to how demolition materials can be re-used or recycled on the site or in the local area. This will include the direct re-use of materials (timber, doors, etc.) and the crushing of demolition materials to provide future construction materials.
- 3.5.2** The site is relatively flat and will not require significant earth movements to enable the development. The design has sought to avoid cut being generated by the development and this will be continued through detailed design.
- 3.5.3** A Framework Site Waste Management Plan has been prepared and submitted with the planning application. This sets the framework for waste management during the construction of the proposed development which will then be refined as the scheme details, principal contractor, sub-contractors and construction processes are clarified to provide a cohesive and sustainable approach to waste management at the site.
- 3.5.4** At this outline planning stage it is not feasible to identify building materials as this will depend on the requirements of each operator of the site. However, the sustainability and local availability of materials will be an important consideration in design and procurement decisions. BAE Systems is committed to achieving a very good rating under BREEAM, which will require particular consideration to be given to the sustainability of key building materials.

3.6 Sustainable Transport

- 3.6.1** The site is situated within 1km of Waterlooville town centre, offering a broad range of facilities and services for future employees and visitors to the site. An extensive network of existing pedestrian and cycle routes connect the town centre to the site via a 10-20 minute walk or 5 minute cycle journey. Local bus stops are located within 400m walking distance of the site on the B2150 Hambledon Road and Milton Road and provide links to the town centre and surrounding areas including Havant, where the nearest train station is situated. Portsmouth can also be accessed directly via services serving the local bus stops with a 50-60 minute journey time.
- 3.6.2** Local committed development sites, including the proposed Sainsbury's superstore and the Newlands major development area, will deliver a number of localised transport measures that will further enhance the accessibility of the site. These are understood to include improvements to bus service frequencies and additional pedestrian crossings.
- 3.6.3** A site wide Framework Travel Plan, and included with the Transport Assessment submitted with the planning application, has been prepared and will be implemented by the developer. The aim of the Travel Plan is to maximise the sustainable travel opportunities for future employees, visitors and customers of the site. A package of Travel Plan measures has been

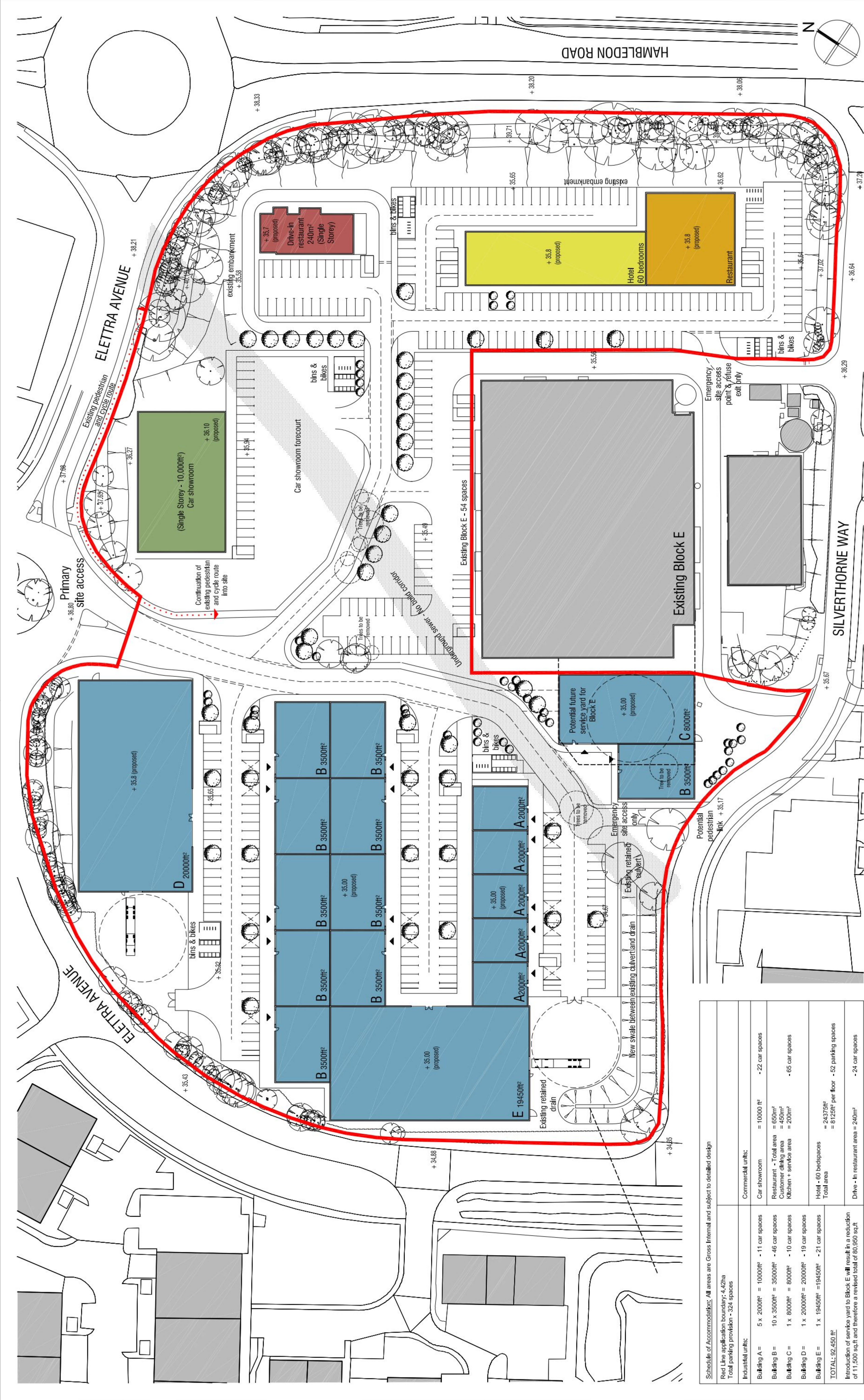
identified including the appointment of a site Travel Plan Co-ordinator and the distribution of Travel Information Packs to encourage the adoption of sustainable modes of transport.

- 3.6.4** The site is readily accessible by sustainable modes of transport; levels of accessibility will be further improved by committed local development proposals and the implementation of a Framework Travel Plan will encourage the adoption of sustainable modes of transport.

4 Summary and Conclusions

- 4.1.1** This Sustainability Statement has been prepared in respect of an outline planning application by BAE Systems PLC for a commercial and industrial development at their Waterlooville site in Hampshire.
- 4.1.2** The purpose of this document is to set out the how sustainability has been and will be incorporated into the proposed development from its inception through to its implementation and operation. The scope of sustainability and the approach to its incorporation into the development is outlined, based on a review of relevant policy and other drivers. It is proposed that the development will achieve a 'Very Good' rating under BREEAM, which could be secured through a suitable planning condition.
- 4.1.3** This process has identified the key 'themes' with regards to sustainability. These themes have been developed to ensure that the sustainability policies relevant to the proposed development are achieved, while effort is focused on those aspects of sustainability most relevant to the proposed development.
- 4.1.4** This Sustainability Statement sets out the measures that have been taken during the design of the proposed development to enhance the sustainability of the scheme based around these themes. These measures, and further design and management measures, will be developed as the scheme progresses through to detailed design and implementation to ensure that the development does constitute sustainable development in accordance with policy directives.

Appendix A: Site Layout



Schedule of Accommodation: All areas are Gross Internal and subject to detailed design			
Red Line application boundary: 4.42ha Total parking provision - 324 spaces			
Industrial units:	Commercial units:		
Building A = 5 x 2000ft ² = 10000ft ²	Car showroom	= 10000 ft ²	- 22 car spaces
Building B = 10 x 3500ft ² = 35000ft ²	Restaurant - Total area	= 6500m ²	
Building C = 1 x 8000ft ² = 8000ft ²	Customer dining area	= 450m ²	- 65 car spaces
Building D = 1 x 2000ft ² = 2000ft ²	Kitchen + service area	= 200m ²	
Building E = 1 x 19450ft ² = 19450ft ²	Hotel - 60 bedspaces	= 24375ft ²	
TOTAL: 92,450 ft ²	Total area	= 8125ft ² per floor	- 52 parking spaces
Introduction of service yard to Block E will result in a reduction of 11,500 sq.ft and therefore a revised total of 80,950 sq.ft			
	Drive - In restaurant area	= 240m ²	- 24 car spaces