

4 ALTERNATIVES & DESIGN EVOLUTION

4.1 INTRODUCTION

The EIA Regulations 2017 (Schedule 4, Paragraph 2), state that an ES is required to provide:

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

This chapter of the ES details the main alternatives considered by the Applicant prior to the finalisation of the proposed development and shows the process of avoiding impacts through the iterative and collaborative design of the development ('mitigation by design' also described within this ES as 'Design Interventions').

In this chapter, potential alternatives have been broadly grouped into the following categories:

- Alternative sites;
- Alternative land uses;
- Alternative processes; and
- Alternative development layouts.

The relationship between the groups of alternatives listed above and those listed as examples in the EIA Regulations is illustrated in Table 4.1 below.

Table 4.1

Relationship between Potential Alternatives Considered in this Chapter and Examples in the EIA Regulations

PROPOSED ALTERNATIVE TYPE	RELEVANT EXAMPLE ALTERNATIVE TYPES FROM EIA REGULATIONS
Alternative sites	Location
Alternative land uses	Development design
Alternative processes	Development design, technology
Alternative development layouts	Development design, size and scale

Alternative sites have not been considered by the Applicant, on the basis that the proposals are specific to the application site, and the land uses proposed are supported by local planning policy, fulfil an identified need and are responding to the precedent of the existing Outline Planning Permission (Ref: SE/15/00628/OUT), as described subsequently. Alternative processes, which are typically more relevant to industrial uses, have also not been considered. Given that alternative sites and processes have not been considered, this chapter focuses primarily on the design evolution of the proposed development, including the alternative layouts considered during this process.

4.2 ALTERNATIVE DEVELOPMENT LAYOUTS

Consented Scheme

The application site has a consent for

'Outline planning permission for the demolition of buildings and development of a mixed-use development comprising a business area (Use Classes B1 and B2 with ancillary energetic material testing) of up to 27,000 sq m GEA, 450 residential units, a hotel of up to 80 beds, a village centre (Use Classes A1-A3, B1a, D1 and D2), use of the Fort Area and bunkers as an historic interpretation centre (Use Class D1) with ancillary workshop space, and works associated with the development including roads, landscaping, security fencing, formal and informal open space, pedestrian, cyclist and public transport infrastructure, utilities infrastructure, sustainable urban drainage system, cycle and car parking (with all matters reserved); and detailed approval for two access points at Otford Lane/Crow Drive (primary) and Star Hill (secondary).' (Ref: SE/15/00628/OUT).

A s106 obligation was entered into that included providing: 20% affordable housing; a community bus, funded to operate for five years; a sitewide, estate management strategy (relating to the entire ownership, not just the permission 'red line' boundary); and a satellite GP surgery.

On determination, the proposal was found to be appropriate Green Belt development. While the application proposal had two access points (one to the north east and the other onto Star Hill in the south west), at Committee and in response to local objections, only a secondary access onto Star Hill was to be provided (for emergency vehicles).

In respect of Fort Halstead, several buildings have been vacated due to the ongoing consolidation and relocation of DSTL, however, the application site has not yet been fully vacated and therefore, construction of the 2015 OPP has yet to commence.

The extant outline planning permission remains a deliverable option for the application site. However, emerging changes in local planning policy, have resulted in the Applicant revisiting their proposals for the site. One of the key changes in the surrounding context that arose during this period was the emerging Sevenoaks District Council New Local Plan which allocates the site for mixed-use employment and residential development for 300 residential units in addition to the 450 units consented. This has provided the opportunity to increase the residential density on the application site. The Applicant recognised that these additional residential units could provide an opportunity to deliver a development that would be more appealing to a wider audience and bring about a number of benefits for the community. In addition, during discussions with Kent County Council (KCC) regarding the uplift in the residential unit numbers and future schools' capacity in the local area, KCC requested that a one form entry (1FE) school should be included within the proposed development. For these reasons, the decision was made to redesign the proposals.

Subsequent Iterations of the Scheme

The emerging Sevenoaks New Local Plan (Dec 2018 submission version) allocates the site for 300 (plus 450 with planning permission) and identifies the site as previously developed land and, therefore, proposes to release the site from the Green Belt. Since the previous consented scheme, the average residential density of the proposed development has been increased to 38 dwellings per hectare (dph). The current proposal is for 750 residential units as allocated within the emerging SDC Local Plan.

The 1FE primary school will be located at the centre of the main employment area. This primary school will serve the new residents, reducing the need to travel outside of the development via car for the school run and will be accessible via the green routes provided throughout the Site. The land for the primary school has been safeguarded within the proposed development.

Currently the provision of the school is not a requirement on-site and the village of Halstead (2 miles to the north) has an undersubscribed school with talks underway with its Head Teacher and with KCC to support the proposed development during the initial phases. The proposed 1FE is anticipated to be delivered in the latter phases of the development. However, as this is potentially a decade away, there is a possibility that the proposed development will go forward and that the school may not be required. This is described in more detail in Table 4.2. Both scenarios, with and without school, are assessed within this ES.

In contrast to the consented scheme, the historic alignment of the main vehicular route along Crow Drive is to be retained as much as possible within the proposed development. Appropriate traffic calming measures for the straight sections of the road are also proposed.

The masterplan design principles and concept has been developed as a response to the site analysis work summarised in the constraints and opportunities plans, and feedback from the community engagement process. The masterplan concept identifies four principles which encapsulates the key strategic and physical aspects of the site and come together as an integrated plan.

Following a series of public consultation events, a collaborative design development process with SDC, KCC and other key stakeholders was undertaken.

In January 2019, a new scheme for the application site was presented to SDC and over the intervening period a series of iterations of the design have been developed. Design Panel Reviews were held in February and July 2019 to address some of the concerns which emerged from the consultation process.

The main iterations of the design developed during this period are described in Table 4.2 below. Illustrative views from the Westway showing the building form iterations are provided in Figures 4.1-4.3.

ALTERNATIVES & DESIGN EVOLUTION

Table 4.2
Masterplan Evolution since 2015

ITERATION	CHANGES TO SCHEME FROM PREVIOUS ITERATION
2015 Masterplan	<ul style="list-style-type: none"> 450 homes Average density: 34dph Retention of existing high quality trees with a single eastwest green swathe. A mixed-use village centre around retained buildings Q1, Q12, Q13 & Q14. A hotel overlooking a large central green, with Crow Drive realigned around the green. Star Hill access proposed for emergency access only. QinetiQ retained on site and consolidated to the south of Crow Drive with a new purpose-built building. Employment area to the east of the site, retaining A1, A3, A10, A11, A13 and A14. Average building height of 2 storeys for the majority of the residential parcels with 2.5 along the main vehicular routes. 3 storeys were proposed for the village centre and employment area.
PUBLIC EXHIBITION & DESIGN REVIEW PANEL (DRP) (JAN/FEB 2019)	<ul style="list-style-type: none"> 700 homes Average density: 38 Dph In response to SDC's requirement to provide additional housing numbers on existing allocated sites, the masterplan looked into accommodating an additional 250 homes. Following a more detailed tree survey, the green spaces were rationalised in the extant masterplan and gained an additional 4.5 Ha of developable area for residential use. Inclusion of the 'M' series bunker area and helipad for residential use. Relocation of some of the employment use to the Village Centre, making the village centre more viable and vibrant. More B1a (office) & B1b (research & product development), less B1c (light industrial) uses in the new Innovation Hub. Village Green has been reduced and relocated to allow for better configuration of Village Core, stronger North-South connection and additional mixed-use area. A mixed-use centre around the retained Q1, Q13 & Q14. Maintain the existing road infrastructure and downgrade a section of Crow Drive to a bus/pedestrian/cycle only route. Star Hill entrance opened as a secondary access to the site.
FOLLOWING THE DESIGN REVIEW PANEL (FEB 2019)	<ul style="list-style-type: none"> 750 homes Average density: 43.6 Dph <p>The following design comments were raised by the DRP panelists:</p> <ul style="list-style-type: none"> The proposed residential density was not deemed high enough to support the viability of a bus route.

ITERATION	CHANGES TO SCHEME FROM PREVIOUS ITERATION
HYBRID PLANNING SUBMISSION (SEPT 2019)	<ul style="list-style-type: none"> 750 homes Average density: 43.6 Dph Following conversations with SDC, there was new requirement to accommodate a 1 form-entry primary school at Fort Halstead. A new primary school with a separate drop-off area is proposed within the Innovation Hub area and opposite the village centre and green. Retention of building A10 within the employment area. Following feedback from KCC Highways regarding the straight nature of Crow Drive near Star Hill, it was advised that Crow Drive was diverted around the existing bunkers to slow down potential traffic from Star Hill access. Detailed traffic calming measures were developed with KCC Highways along the full length of Crow Drive and the proposed secondary street.



Figure 4.1
Illustrative masterplan (2015)
Image: JTP



Figure 4.2
Village Centre (2015)
Image: JTP

ALTERNATIVES & DESIGN EVOLUTION



Figure 4.3
Illustrative masterplan (Jan/Feb 2019)
Image: JTP



Figure 4.5
Illustrative masterplan (Feb 2019)
Image: JTP



Figure 4.7
Illustrative masterplan (Sept 2019 (proposed development))
Image: JTP



Figure 4.4
Village Centre (Jan/Feb 2018)
Image: JTP

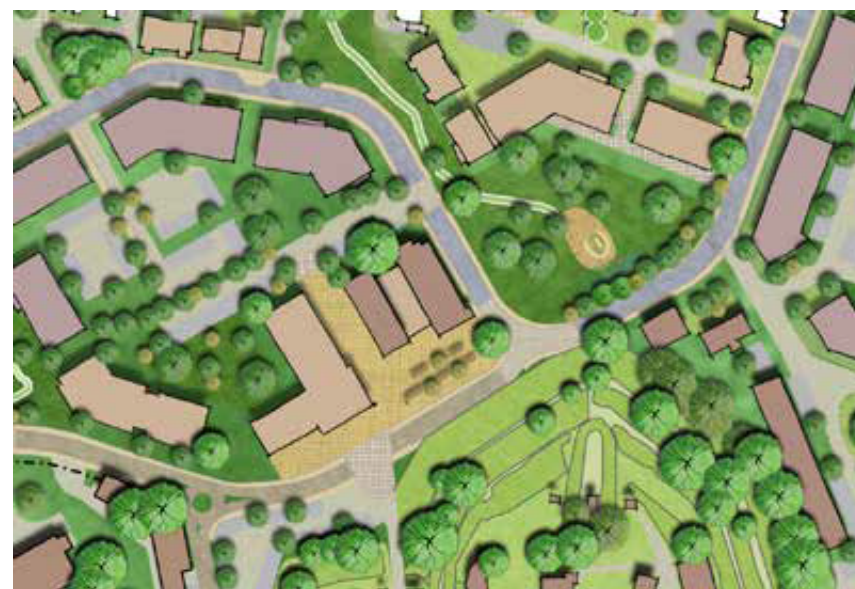


Figure 4.6
Village Centre (Feb 2019)
Image: JTP



Figure 4.8
Village Centre (Sept 2019)
Image: JTP

ALTERNATIVES & DESIGN EVOLUTION

As described in Table 4.2, the current proposals have been subject to a series of design iterations. A variety of factors have influenced these design changes. While many of these factors are associated with the function of the masterplan, the environmental effects of the proposed development have also had an influence. For example, each iteration of the scheme has been tested to determine impacts on the heritage environment of the application site and the main driver for retaining some of the identified buildings on site is to reduce impacts on the historic environment by retaining and restoring listed buildings associated with the Fort.

Other design and environmental aspects and constraints that have influenced the proposed development include:

- Retain existing woodlands and provide buffers;
- Maintain open character of visually and ecologically sensitive areas to the south and west;
- Retain key groups of existing trees and create weaving east-west and north-south green links;
- Retain the Fort, listed buildings and maintain QinetiQ on site;
- Refurbish and re-use the listed and existing buildings in the village centre through detailed planning;
- Connecting the retained buildings around the site with an interpretation/heritage trail;
- Consolidate QinetiQ to the south of the site contained by woodland and a secure boundary;
- Inviting new businesses with employment areas to the east and near the village centre to create a new frontage to QinetiQ area;
- The mixed-use village centre focused around the retained buildings at the heart of the development;
- Create a sense of arrival with two gateway hamlets at both ends of Crow Drive/Road.
- Utilise the existing road infrastructure, to reflect the history of the site and its former use;
- Downgrade a section of Crow Drive to a safe bus/pedestrian/ cycle only route; and
- Create a network of circular slow movement routes in and around the site.

Further information on the scale and massing of the proposals is contained in the Design and Access Statement submitted alongside the planning application.