

## Appendix N Framework Travel Plan



now part of



## Fort Halstead Framework Travel Plan

On behalf of **Merseyside Pension Fund**



Project Ref: 41290/5502 | Rev: 2 | Date: September 2019

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## Document Control Sheet

**Project Name:** Fort Halstead  
**Project Ref:** 41290  
**Report Title:** Framework Travel Plan  
**Doc Ref:** 002  
**Date:** September 2019

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Revision	Date	Description	Prepared	Reviewed	Approved
1	11/09/19	CBRE Comments	MMN	JL	GC
2	17/09/19	Legal Review Comments	MMN	JL	GC

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# 1 Introduction

## 1.1 Background

- 1.1.1 Peter Brett Associates LLP, now part of Stantec (PBA) has been commissioned by Merseyside Pension Fund (MPF) to provide transport planning and highways advice in support of a Hybrid Planning Application (HPA) for the redevelopment of Fort Halstead, with a total site area of circa 130 hectares (ha), in the District of Sevenoaks.
- 1.1.2 This report presents the Framework Travel Plan for the proposed mixed use development, including retained employment, new employment, residential and community supporting uses. This provides an outline Travel Plan for the overall site which will be used to guide individual land use specific Travel Plans as the development comes forward.
- 1.1.3 A full Transport Assessment has been prepared for this proposed development, which includes a Sustainable Transport Strategy that has been agreed with Kent County Council (KCC). This transport strategy is intended to improve linkages to Fort Halstead by non-car modes, to encourage sustainable patterns of travel and to minimise impacts on Star Hill Road.
- 1.1.4 This Framework Travel Plan forms the first element of this transport strategy and aims to guide the form and nature of development at the site. As the development is built out, individual workplaces (and other uses where appropriate) will need to develop separate, detailed Travel Plans which accord with this overall Framework. In accordance with guidance, this Framework will be subject to regular review in order to ensure that it is current in terms of policy and local transport and land use conditions
- 1.1.5 This Framework Travel Plan is consistent with KCC Guidance for the preparation of Travel Plans as set out in Kent County Council Guidance on Transport Assessments and Travel Plans (2008).

## 1.2 Site Location

- 1.2.1 Fort Halstead is located to the north-west of Sevenoaks town centre, west of the M25 and overlooking the North Downs.
- 1.2.2 There are two access points to the site. The main one (Polhill access) is through Crow Drive onto the A224 London Road / Polhill (via Otford Lane) at the north eastern corner of the site. There is a secondary access (Star Hill access) at the western end of the site onto Star Hill Road.
- 1.2.3 The site is currently well connected to the local and strategic highway network and located within five kilometres of two mainline railway stations: Knockholt and Dunton Green. Further details on the accessibility to the site are provided in Chapter 3 of this document.

## 1.3 Existing Land Use

- 1.3.1 Fort Halstead currently accommodates around 750 employees associated with Dstl, the Government's Defence, Science and Technology Laboratory and 'QinetiQ', a private sector defence research organisation.
- 1.3.2 In 2011, Dstl announced it would be vacating Fort Halstead and since then, has been undergoing phased relocation to Portsdown West and Porton Down. QinetiQ has remained on site and the development proposals within this application have allowed for retention and potential future expansion of the QinetiQ research facility.

- 1.3.3 Next to the site, but outside the application boundary, there is also a small residential development of 72 homes, which is not in the ownership of MPF.

## 1.4 Development Proposals

- 1.4.1 Further to Dstl's planned relocation, proposals for the site's future were secured as part of an outline planning permission ('OPP') granted in December 2015, for employment space, 450 residential units, a hotel and community uses. Since then, MPF has acquired the site and alongside the emerging Sevenoaks District Local Plan as well as changes to the National Planning Policy Framework, is seeking to optimise the site's future development and provide a deliverable and viable development.
- 1.4.2 Following extensive consultations with the local community and with Sevenoaks District Council (SDC), an initial development plan for the site has been established and an indicative masterplan has been drawn up (Appendix A).
- 1.4.3 This plan allows for QinetiQ to remain on site in a secure enclave. It also provides sufficient serviced land and accommodation to allow a substantial level of employment to be maintained (and enhanced) on site (around 1,400 jobs) and also allows for a residential development of 750 homes, a primary school and other community uses including a village centre with shops / cafés, early years facilities and some B1a, b and c space, and a historic interpretation centre within the existing scheduled monument. There will be an element of D1, D2, A1 and A3 use classes associated with the Village Centre.
- 1.4.4 Further details of the redevelopment proposals can be found in chapter 4 of this document and in chapter 4 of the Transport Assessment (TA).

## 1.5 Requirement of a Travel Plan

- 1.5.1 The proposed residential and commercial developments exceed KCC's thresholds over which a Travel Plan is required. Furthermore, it has been agreed with KCC in scoping discussions that an overall travel plan is needed to guide the development in order to encourage sustainable travel patterns.
- 1.5.2 Since the planning application is in Outline based upon Parameters, final development details are not yet available. Therefore, this document constitutes a Framework Travel Plan (FTP) which covers all proposed land uses. Full travel plans will also be prepared for individual workplaces and other developments as plots come forward, and they will use this FTP as a guide.

## 1.6 Context and Scope

- 1.6.1 This FTP has been written in accordance with scoping discussions and KCC's Guidance on Transport Assessments and Travel Plans (2008).
- 1.6.2 This FTP and the later Full Travel Plan(s) to be developed aim to address the travel behaviour of employees, residents and other visitors to, from and within the site.
- 1.6.3 Travel Plans are considered to be 'living documents'. As such, not only will the Travel Plan(s) be actively promoted with residents and the visitors, but they will be reviewed and revised over time.
- 1.6.4 As development proposals are finalised, full Travel Plans will be developed in line with KCC's Guidance on Transport Assessments and Travel Plans for any part of the development which exceeds KCC's thresholds. Further detail on KCC guidance and the thresholds for Travel Plans is given in Chapter 2 of this report.



- 1.6.5 Deliveries and servicing for the proposed development will be addressed in the Delivery and Servicing Plan (DSP), which will be submitted for approval prior to occupation of the first construction phase of the new development.

## **1.7 Structure**

1.7.1 The remainder of this document is structured as follows:

- Chapter 2 briefly summarises the existing national, regional and local planning policy that informs the writing of this FTP;
- Chapter 3 outlines site accessibility and the existing travel conditions at Fort Halstead;
- Chapter 4 presents the development proposals;
- Chapter 5 outlines objectives and targets;
- Chapter 6 discusses the delivery of the FTP objectives;
- Chapter 7 provides the Travel Plan measures and action plan; and
- Chapter 8 summarises plans and timescales for Travel Plan monitoring and review.

## 2 Policy Review

### 2.1 Introduction

2.1.1 This section presents a brief outline of the relevant Travel Planning policy in relation to the proposed Fort Halstead development, which is embodied within the following documents:

- National Planning Policy Framework (2019)
- Kent County Council Guidance on Transport Assessments and Travel Plans (2008)
- Sevenoaks District Council – Local Development Framework: Core Strategy (2011)
- Sevenoaks District Council – Allocations and Development Management Plan (2015)
- Sevenoaks District Council – Submission Draft Local Plan (2018)

#### 2.1.2 National Planning Policy Framework (NPPF) (2019)

2.1.3 The NPPF aims to enable local people and their councils to produce their own distinctive local and neighbourhood plans, which should be interpreted and applied in order to meet the needs and priorities of their communities.

2.1.4 Section 9: Promoting Sustainable Transport, of the NPPF, paragraph 102 states that;

2.1.5 “transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- the potential impacts of development on transport networks can be addressed;
- opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
- opportunities to promote walking, cycling and public transport use are identified and pursued;
- the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for mitigation and for net gains in environmental quality; and
- patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.”

2.1.6 With regards to sites that may be allocated for development in plans, or specific applications for development, paragraph 108 states that;

“...it should be ensured that:

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- safe and suitable access to the site can be achieved for all users; and

- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”

2.1.7 Paragraph 111 states that:

“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”

## 2.2 Kent County Council Guidance on Transport Assessments and Travel Plans (2008)

2.2.1 KCC’s Guidance on Transport Assessments and Travel Plans defines the latter as ‘a strategy for managing multi-modal access to a site or development focusing on promoting access by sustainable modes’. It further stresses the importance of Travel Plans stating that ‘the presentation of a high quality Travel Plan may be an important factor in determining the acceptability of planning applications, for any development with significant transport implications’.

2.2.2 This guidance establishes that the decision of whether a Travel Plan is required or not will rest with the relevant Planning Authority.

2.2.3 For developers submitting a planning application for a site, the guidance states that it will be required to include a Travel Plan alongside the application:

- ‘where the acceptability of the proposed development on highway grounds depends on the assumption that a significant proportion of the trips to be generated by the proposal will be made by non-car means;
- where there are particular transport, accessibility or environmental issues in connection with the proposed site’; or
- in any case where the development exceeds the thresholds set out in the document, which include:
  - A1 Food Retail – 1000 m2 GFA
  - A1 Non-food Retail – 1000 m2 GFA
  - B1 (a) Offices – 25,000 m2 GFA
  - B1 (b&c) Research and Development/Light Industry – 5,000 m2 GFA
  - C3 Housing – Individually assessed for any proposal over 100 units
  - D1 Primary and Secondary Schools – Individually assessed
  - D1 All other non-residential institutions – 2,500m2 GFA
  - D2 Assembly and leisure – 1,000m2 GFA

2.2.4 According to the guidance, a Travel Plan document should include:

- *‘a clear statement of targets and objectives – these should be discussed with KCC’s Travel Plan Officer and agreed with the Planning Authority at an early stage in the production of the Travel Plan’;*

- *'an assessment of existing transport infrastructure and facilities serving the site';*
- *'an assessment of the travel needs which will be generated by the site' and, 'in the case of an extension to an existing site, a travel survey of existing employees/customers will also be needed';*
- *'a programme of measures which will improve accessibility, promote sustainable travel options and reduce traffic impact. These should include the appointment of an individual to act as Travel Plan Coordinator, who must have the full support of the site management and who will be responsible for the implementation of the Travel Plan'; and*
- *'a programme for implementation of the Travel Plan, giving details of; the dates by which the various measures will be put in place; of who will be responsible for the various actions and; of how funding will be provided'.*

2.2.5 Furthermore, the guidance states that Travel Plans must have regular monitoring surveys, review progress against targets, and have the targets and measures updated to reflect and/or build upon progress achieved.

2.2.6 For developments where a travel plan is required, a financial contribution will be sought to cover monitoring and support of each development related Travel Plan by the Planning Authority. This will be reduced by 50% if the application is in respect of an extension to an existing site for which an effective Travel Plan is already in place.

2.2.7 An initial monitoring survey will be required after occupation of the site. The frequency of monitoring surveys thereafter will depend on whether initial monitoring shows that targets are being achieved. Once targets are achieved, monitoring surveys will be required only every three years.

2.2.8 Sevenoaks District Council – Local Development Framework: Core Strategy (2011) The relevant policy for transport in SDC's adopted Core Strategy is included within SP 2: Transport, which stipulates:

*'The Council will support and promote measures to reduce reliance on travel by car both in providing for new development and in supporting measures promoted through the Transport Strategy. Specifically it will:*

- *support improvements to enhance the safety and convenience of public and community transport;*
- *seek improved facilities for cyclists and pedestrians; and*
- *require the inclusion of Travel Plans and other appropriate measures in new developments that generate significant traffic volumes'.*

## **2.3 Sevenoaks District Council – Allocations and Development Management Plan (2015)**

2.3.1 In relation to Travel Plans, the Allocations and Development Management Plan (ADMP), within policy EMP3 concerning the redevelopment of Fort Halstead, sets out what would be expected of redevelopment proposals for the site, which includes 'Be sustainable in respect of the location, uses and quantum of development and be accompanied by a Travel Plan incorporating binding measures to reduce dependency of future occupants on car use'.

## **2.4 Sevenoaks District Council – Submission Draft Local Plan (2018)**

- 2.4.1 Appendix 2 of the Draft Local Plan sets out Design Guidance for large sites coming forward and requires that larger developments are accompanied by a Travel Plan.

## **2.5 Summary**

- 2.5.1 By providing a Travel Plan, the proposed Fort Halstead development will be aligned with local and national policy. This will promote sustainable travel opportunities and encourage a mode shift away from single occupancy car journeys.
- 2.5.2 In line with KCC's policy, this FTP gives the Local Authority the opportunity to agree the targets and objectives before development proposals are finalised and full Travel Plans are developed.
- 2.5.3 This FTP is provided in accordance with the SDC's ADMP, which states that redevelopment proposals for Fort Halstead should be accompanied by a Travel Plan which incorporates measures to reduce dependency on car use of future occupants. Based upon the Guidance Full Travel Plans will be required for the residential and commercial elements of the development. Although the A1, A3, D1 and D2 uses fall below the relevant threshold it is intended that these uses will also provide a Travel Plan for its employees.

## 3 Site

### 3.1 Introduction

3.1.1 This section presents the Fort Halstead site in its Baseline Condition, including a review of existing transport networks.

3.1.2 Fort Halstead is located to the north west of Sevenoaks town centre, at the top of a chalk escarpment. The nearest towns offering a comprehensive range of facilities and services are Sevenoaks, approximately 8 km to the south west, and Orpington, about 9 km to the north. There are also a number of established villages close to the site which provide various facilities:

- Knockholt Pound: shops, a convenience store, a pub, community facilities, and a place of worship. There is also a primary school nearby Knockholt.
- Halstead: primary school, local shop/post office, pub, places of worship;
- Otford: local shops, public houses/restaurants, primary school, medical facilities, and a Sainsbury's superstore plus small retail park; and
- Dunton Green/Riverhead: local shops, including a Tesco superstore, nursery and primary schools.
- In addition, Polhill Garden centre, which is located just 2 km to the north of the site, offers a wide range of retail facilities.

3.1.3 The site is well connected by road, including easy access to the National Motorway Network via the M25, junction 4. Existing access by public transport is relatively poor.

3.1.4 The site location is presented in Figure 3-1.

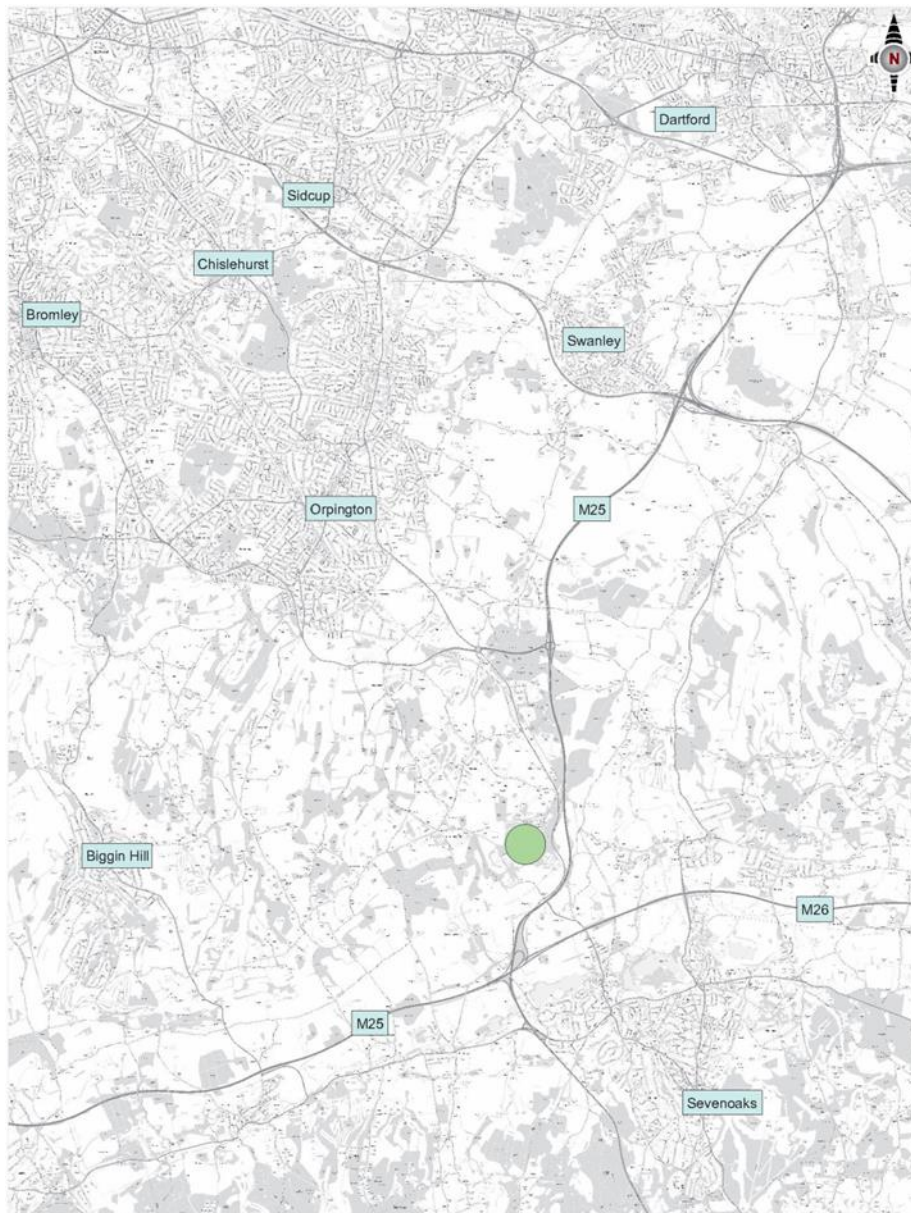


Figure 3-1: Strategic site location

## 3.2 Existing Site Use

- 3.2.1 The existing site uses comprised some 97,600 m<sup>2</sup> of defence-related research space (for which there is a Certificate of Lawfulness of Existing Use and Development), which currently provides around 750 jobs on site, across Dstl and QinetiQ. These uses already generate a substantial transport demand on the local transport network. Historically, there were as many as 4,000 employees on site, and in more recent years, c.2,000. This number has been diminishing as Dstl completes its phased relocation.
- 3.2.2 Next to the site, but outside the application boundary, there are 72 homes, which also add some traffic onto the main site access via Crow Drive.



### 3.3 Highway Access

- 3.3.1 The site has two established points of highway access. The main access is from the A224 London Road / Polhill via Otford Lane and Crow Drive, but there is also a secondary access from Star Hill Road, currently used solely during weekday peak periods. Since the defence uses are still present on site, site accesses remains strictly controlled and there is no unrestricted movement between these two access points. Although employees of QinetiQ are able to use either access point to enter/leave the site, visitors are restricted to use the Polhill access. A visitor car park is provided outside of the security barrier of the access point via the A224.
- 3.3.2 The highway network has the following characteristics:
- The A224 is a single carriageway road which, to the north, provides access to the M25 (junction 4), Orpington (via Badgers Mount), Bromley (via Old London Road), and the A21. To the south, it provides the main access route into Sevenoaks. Within the vicinity of the site, the A224 is subject to a 50 mph speed limit. Although the road is provided with lighting columns, the street lighting along the A224 corridor has recently been switched off as part of an energy saving experiment. Nonetheless, the lighting remains switched on at the main junctions, including the site access junction. The road has limited footway provision: to the north of the site there is a footway on the east side of the carriageway only; and to the south along Polhill there are no footways.
  - Star Hill Road provides a convenient means of access to the local villages of Knockholt Pound and Pratt's Bottom and an alternative route towards Dunton Green and Sevenoaks. It is a relatively narrow rural lane with no footway or street lighting and subject to the national speed limit of 60 mph. It is part of the route of the 402 bus.
  - Otford lane is a narrow rural lane with no lighting or footways and also subject to the national speed limit. It links the site and the village of Halstead.
  - Crow Drive is a private road which provides access into the site from the A224. It has a speed limit of 30 mph. Whilst it generally has one single lane in each direction, at the junction with Otford Lane, for approximately 100 m, the northbound carriageway has two lanes, one for each turning movement onto the A224. The road has a footway on its south side. On the north side there is also a footway and also a short length of cycleway. The last section of the road as it approaches Otford Lane has no footway provision.
- 3.3.3 The submitted Transport Assessment did not identify any highway capacity issues that are likely to arise as a result of the proposed development during either the morning or evening weekday peak periods.

### 3.4 Public Transport Access

- 3.4.1 The site is currently poorly connected by public transport.
- 3.4.2 The nearest railway stations are Dunton Green to the south (approximately a 5 km drive from the site) and Knockholt to the north (approximately a 4 km drive from the site). Both stations are on the Sevenoaks to London Charing Cross/Cannon Street line and are served by slow stopping services providing direct connections to London Bridge, Lewisham, Bromley and Orpington to the north as well as to Sevenoaks. The line also provides easy access to Tonbridge, Tunbridge Wells, Hastings, Paddock Wood, Ashford and the Kent Coast through interchange at Sevenoaks.
- 3.4.3 There are a number of other stations within a 10 km driving distance of the site which will potentially be attractive to people living or working on the site. These are:



- Otford (6 km)
- Shoreham (7 km)
- Sevenoaks (7 km)
- Chelsfield (7 km)
- Bat and Ball (8 km)
- Orpington (9 km)

3.4.4 Within the existing villages surrounding Fort Halstead, the majority of those commuting by rail to central London by train drive to one of the local stations. The choice of station varies depending on personal preferences reflecting a variety of factors, including the ultimate destination within central London, ticket price, parking availability and price, and speed/frequency of service. Figure 3-2 shows the main railway stations around the site.

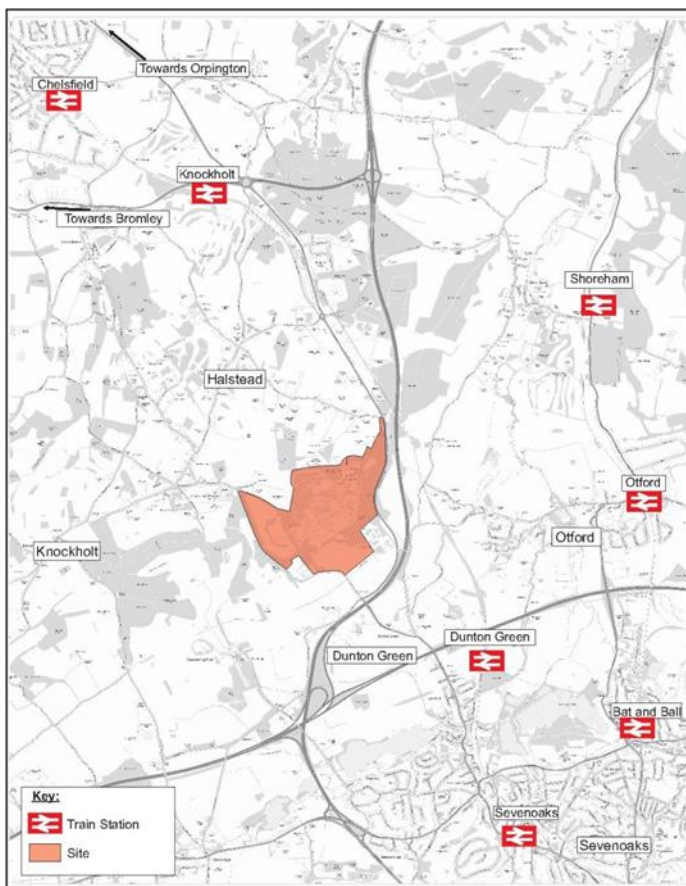


Figure 3-2: Railway stations in vicinity of Fort Halstead

- 3.4.5 The existing site occupiers currently runs a private peak period shuttle bus between the site and Knockholt and Orpington Stations, which is operated by Go Coach. There are three buses during the morning peak and three during the evening peak.
- 3.4.6 The 402 bus service operates between Bromley and Tunbridge Wells via Sevenoaks. Since the OPA was approved, the 402 bus service has been withdrawn and the 431 bus service introduced which operates between Orpington to Sevenoaks via Star Hill Road and Knockholt Rail Station. It provides 3 - 4 services daily, Monday to Friday.

- 3.4.7 The R5/R10 service is a circular bus service providing access to Orpington Station, with the nearest stop to site being at Knockholt Pound.
- 3.4.8 Finally, the 452 route runs between Dunton Green and Otford via Sevenoaks with the closest stop to the site being located in Dunton Green.
- 3.4.9 A map of the services in the vicinity of the site is provided in Figure 3-3.

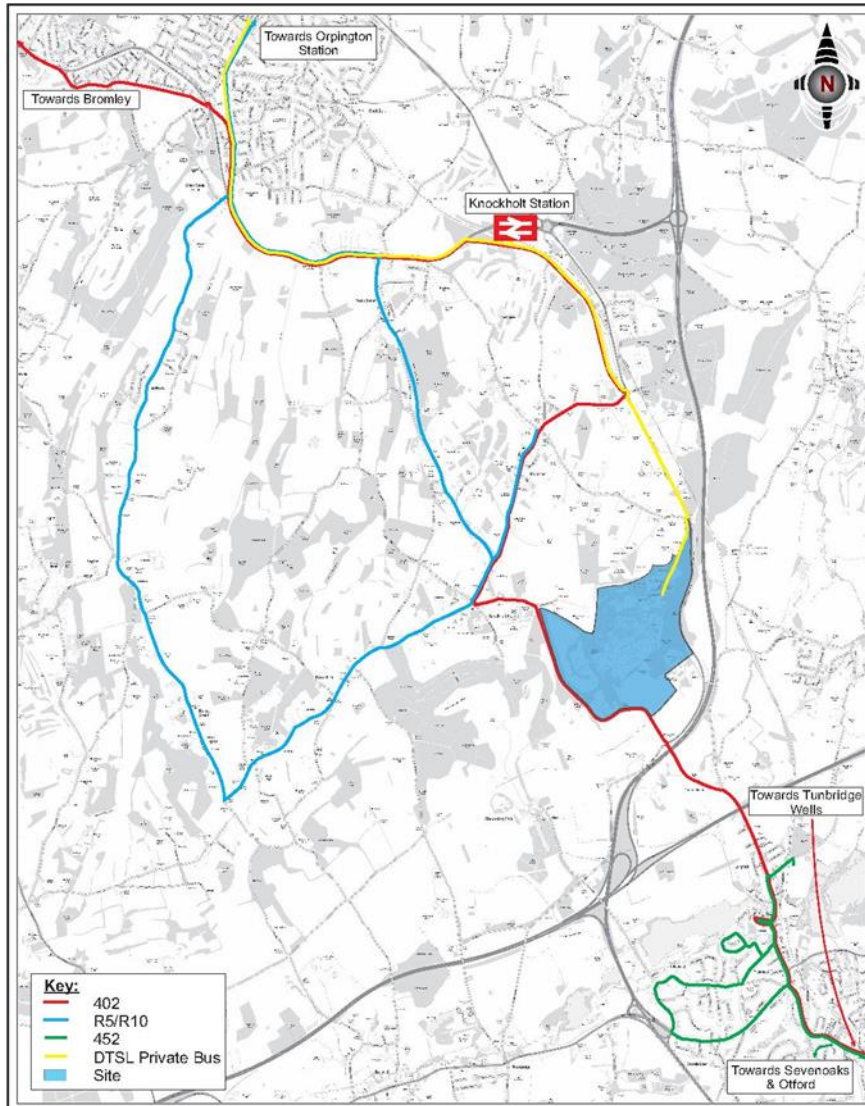


Figure 3-3: Bus routes in the vicinity of Fort Halstead

### 3.5 Pedestrian and Cycle Access

- 3.5.1 Existing pedestrian and cycle links to the site are relatively poor. There are a number of footpath links and rights of way in the vicinity of the site, providing a good network of leisure routes, but they are generally unsurfaced and unlit and hence not suitable as commuter/school access routes. Figure 3-4 identifies the existing pedestrian routes by type.
- 3.5.2 The pedestrian site access routes are as follows:

- Access to Knockholt Pound is via Star Hill Road. This is a relatively narrow country lane with no dedicated footways or lighting. There are however, existing footpath links on the east side of Star Hill Road, between the road and the site boundary. There is also a footpath along the northern boundary of the site linking this to Star Hill Road at its junction with Birchwood Avenue. Both footpaths are unlit and unsurfaced and therefore as currently laid out suitable as leisure routes only;
- Access to Halstead is via Otford Lane. This is also a narrow and unlit country lane. Otford Lane is either accessed from Crow Drive or there is also a public footpath that runs alongside the ancient woodland and which connects to Otford Lane to the west of Crow Lane. This is not a particularly direct footpath link and is again only considered suitable as a leisure route;
- The A224 London Road, to the north of Otford Lane, provides a footway on its east side and this provides a safe pedestrian access to the existing restaurant facilities that are located along that road and to the Polhill Garden Centre further north.
- There are various other footpath and bridleway links to the site as shown on the plan in Figure 3-4: Pedestrian and cycle routes in the vicinity of Fort Halstead all of which can be considered as providing a good range of leisure opportunities rather than connections for day to day use to local facilities. These include existing bridleways accessed from the junction of A224 Polhill / Otford Lane.

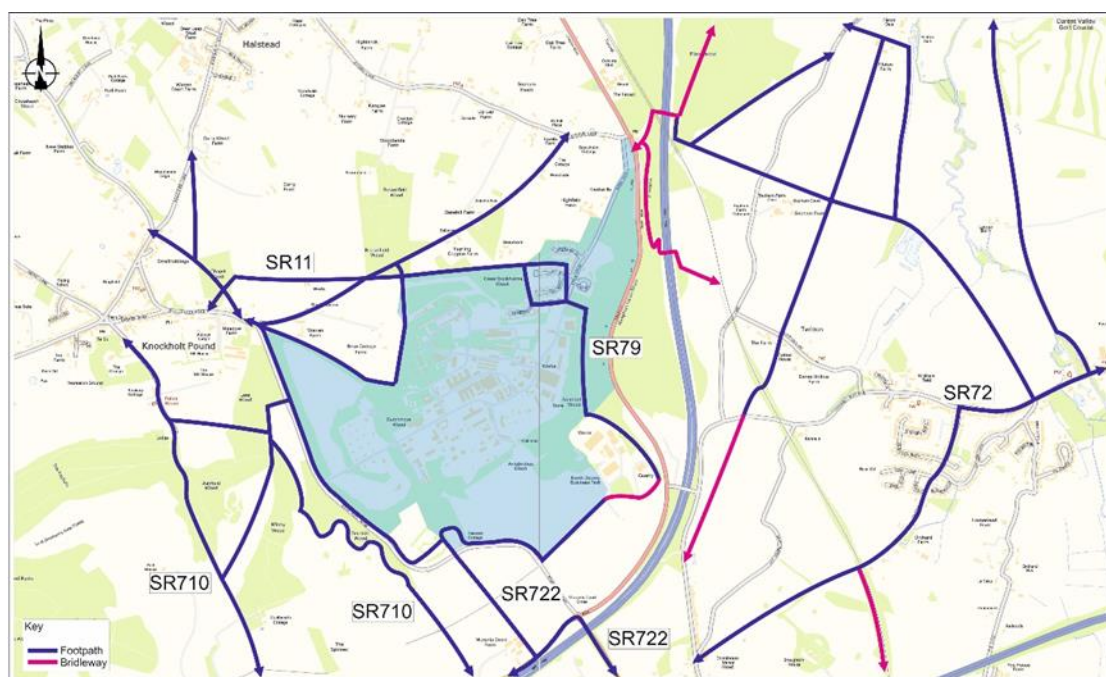


Figure 3-4: Pedestrian and cycle routes in the vicinity of Fort Halstead

- 3.5.3 There are also relatively limited cycle facilities. Since the site is located on top of a chalk escarpment, there is a steep hill to negotiate in order to access the site from Sevenoaks. However, the cycle route to Knockholt station is relatively flat and there are advisory cycle lanes on Old London Road, one of the few existing cycle facilities within the district.
- 3.5.4 Within the site, Crow Drive has a footway on either side and there is a short cycle lane on alongside the visitor car park. Currently, there is also a zebra crossing on Crow Drive, close to the junction with Fort Road, which provides access between the two existing small residential communities on either side of Crow Drive.

### 3.6 Mode Share

3.6.1 Most people travel to and from the site by car due to poor public transport connectivity and also the nature of operations at Dstl and QinetiQ. It is understood that most staff do not live in the local area due to the specialist secure nature of the work and require travel between the Dstl sites across the south. Based upon traffic surveys and review of bus patronage data, the following mode share has been identified from the 2011 Census for people travelling to and from the Fort Halstead site and working at either DSTL or QinetiQ at the time:

Table 3-1: Existing commuting mode share

Mode	Existing share
Car (driver)	80%
Car (passenger)	13%
Public transport	7%
Walking and cycling	0%

3.6.2 Mode shares for journey to work have also been derived from the 2011 National Census, which provide complementary information about the travel patterns in the area. This analysis has been performed at the middle layer super output area (MSOA) level, which is the smallest survey area provided by the 2011 Census.

3.6.3 Although Fort Halstead lies across two MSOAs (Sevenoaks 008 and Sevenoaks 011). However, Sevenoaks 008 has been chosen as it appears to be more representative of the site, including the villages of Halstead and Knockholt. It also presents the worst-case scenario as it presents higher levels of car reliance.

3.6.4 The 2011 Census results for residents and workers in Sevenoaks 008 are shown in Table 3-2.

Table 3-2: 2011 Census mode share for MSOA Sevenoaks 008

Mode	Living in Sevenoaks 008	Working in Sevenoaks 008
Train	27%	3%
Bus, minibus or coach	1%	3%
Motorcycle, scooter or moped	1%	1%
Driving a car or van	59%	78%
Passenger in a car or van	4%	6%
Bicycle	1%	2%
On foot	6%	7%
<b>Total</b>	<b>100%</b>	<b>100%</b>

3.6.5 These results reflect the rural nature of the area and the high reliance on car for commuter journeys. Although there is a high train share for residents in the area, no train stations are accessible on foot from Fort Halstead, so these journeys would need a connecting trip by some other mode.

### 3.7 Summary

3.7.1 The existing site is currently fairly reliant on car trips. Access by public transport relies on bus services provided between the main towns/stations and the site, whilst pedestrian access is

virtually inexistent for commuter trips to the site and cycle access is restricted to very local trips or connections with railway services at the stations.



## 4 Development Proposals and Travel Needs

### 4.1 Introduction

4.1.1 This section presents a summary of the proposed development for the Fort Halstead site and of the travel needs that are likely to be generated once complete and operational. Further details can be found in the TA. An indicative masterplan of the proposed development is provided in Appendix A.

### 4.2 Development Schedule

4.2.1 The currently proposed mix of uses, floorspace and employment is summarised in Table 4-1. The application allows for the following elements:

- Retention of the existing QinetiQ facilities and jobs within the existing buildings in the 'X' enclave.
- Provision of 750 new residential dwellings across a range of unit types and sizes. The development will include affordable housing;
- New employment area for the provision of a business park with a mix of B1a, b, c and B2 uses;
- A one form entry primary school; and Provision of a heritage centre within the Fort, community space, and a village centre with small-scale offices uses, a shop, café, health centre and early years provision, under planning use classes D1, D2, A1 and A3.

The commercial floorspace set out above is expected to support approximately 1,438 total jobs onsite.

Table 4-1: Indicative business floorspace

Land use	Gross external area (GEA) (m <sup>2</sup> )
B1a/B1b	14,230
B1c	7,413
Retained QinetiQ	6,016
Total	27,659

4.2.2 The development is expected to be delivered in phases until 2031, when it is expected that it will be complete and fully operational.

### 4.3 Highways Access

4.3.1 The layout of the development as shown in the Access and Movement Parameter Plan and the indicative masterplan is in accordance with current best practice including Manual for Streets and Kent Design Guide. It seeks to promote pedestrian and cycle movement over motorised vehicles and ensure safe and secure movement for all.

- 4.3.2 The Polhill access will continue to form the main access to the site but the Star Hill Road access will be retained as a secondary vehicular access, to help integrate the development with the surrounding villages, and also in the interest of good masterplanning and in response to the requirement by KCC that the development be served by two accesses. It will also be important for use by buses, pedestrians and cyclists.
- 4.3.3 The masterplan further responds to concerns raised by residents in the area about potential negative impacts on safety and the environment around the villages of Knockholt Pound and Pratt's Bottom due to the retention of the Star Hill access. This is reflected in a number of ways:
- Locating the new commercial development away from the Star Hill access point and orientated more towards the Polhill access point;
  - Designing the internal highway network such that the route to the Star Hill access point is more convoluted and hence journey times to the Star Hill access point would be slower and less desirable;
  - Whilst retaining much of the Crow Drive/ Crow Road alignment, part of the route will be pedestrianised removing the direct vehicular through route;
  - The stretch of road from the Star Hill access to the centre of the site would be re-designed to include multiple deviations from the current geometry which would result in traffic calming and longer journey times to the Star Hill access.
- 4.3.4 Furthermore, the design of the roads within the residential area will be compatible with the requirements for designation as a 20 mph zone.
- 4.3.5 The development will include at its heart a small village centre which includes a convenience store, heritage centre relating to the historic uses of the site situated at the Fort, small community facility and early years provision, and potentially health care facilities.
- 4.3.6 The indicative masterplan seeks to prioritise the movement of pedestrians and cycles both by controlling traffic speeds and providing more direct routes for these modes for internal movements within the site. In addition, the masterplan seeks to create an attractive environment that will encourage people to walk and cycle.
- 4.3.7 The Access and Movement Parameter Plan identifies a number of important pedestrian/cycle routes. These include a new east – west cycle route across the site linking the A224 Polhill and Star Hill Road, as well as a route from the centre of the site to the north west corner which will provide a convenient access route between the site and Knockholt Pound.
- 4.3.8 It also identifies access roads that would be designed to allow for bus movement through the site and two bus nodes, one at the village centre and one close to the Star Hill entrance which is specifically included to allow the existing 431 bus service to enter the site based upon discussions with the main bus provider, Go-Coach.

## 4.4 Parking

- 4.4.1 Car, cycle, motorcycle, disabled and heavy goods vehicle parking, along with facilities for the parking and charging of electric vehicles, will be provided based on current KCC standards and in agreement with KCC officers.
- 4.4.2 The relevant parking standards are set out in the following documents:
- Kent Design Guide Review: Interim Guidance Note 3 on Residential Parking, 2008

- Kent and Medway Structure Plan 2006: Mapping out the future – Supplementary Planning Guidance SPG4: Kent Vehicle Parking Standards, 2006

At this stage the masterplan is indicative only and so the detailed layout of the various phases of the development including the layout of parking will be agreed at the appropriate time.

- 4.4.3 Prior to first occupation of the development, a car park management strategy will be developed setting out how the car parking will be managed to achieve these objectives. This could accompany the future reserved matters submissions.

## 4.5 Public Transport Access

- 4.5.1 It is recognised that a key element of this Travel Plan will be the enhanced public transport connections to the site. A number of alternative options have been investigated and discussions held with KCC's public transport team and Go Coach who are the operators of the existing 431 bus service the existing shuttle bus link to Fort Halstead. A full review of the options considered is presented in the TA.

- 4.5.2 The TA proposes the following provision:

- A minor diversion of the 431 bus service into the site via Star Hill Road
- The provision of a community bus

- 4.5.3 The diversion of the 431 into the site has been agreed with both KCC's public transport team and Go Coach. The bus service would route through the internal site via the primary road.

- 4.5.4 In relation to the community bus service, the proposed service consists of two minibuses operating on Monday to Friday, providing timetabled links to local railway stations for commuters and a demand responsive flexible service in the inter-peak period. On Saturdays, one minibus would provide a demand responsive service.

- 4.5.5 Prior to the delivery of a primary school on the site (which will be led by KCC), the service would provide links to local primary schools. Once the school is open, these journeys would no longer be required and the hours of operation of the flexible demand responsive service could be extended.

- 4.5.6 Initially, during the early stages of build-out, when demand is low the service could be provided by a single minibus.

- 4.5.7 The proposed indicative timetables are included in Appendix B.

## 4.6 Pedestrian and Cycle Access

- 4.6.1 For trips within the site walking and cycling will be the main modes. The Masterplan therefore places a high priority on ensuring that pedestrians and cycles can move easily and safely between the various development plots. All routes will be designed to ensure that they are safe from both a practical point of view and that they will also be perceived as such.

- 4.6.2 The Access and Movement Parameter Plan included within Appendix F of the TA highlights the key pedestrian and cycle routes through the site. This includes a cycle route through the site to link the two site access points as well as a further cycle route towards Knockholt linking the centre of the site to Birchwood.



- 4.7 It will also be important for the developer to work closely with KCC in order to improve external connections, where possible.
- 4.8 Following discussions with KCC as part of the OPP, it was agreed that the proposed development would upgrade the existing bridleway between Polhill and Twitton. It was also agreed with KCC that cycle access to the north would be improved through the provision of on-street cycle lanes on London Road to link Otford Lane with the existing advisory cycle lanes on Old London Road which provide access towards the Knockholt Station. The improvement scheme has been shown in Appendix I of the TA.

#### 4.9 Travel demand

- 4.9.1 The new uses of the proposed development will generate a wide range of trips both internal and external to the site. Their number, time of the day, mode, and purpose will vary depending on the use. The TA has identified a worst case trip generation during the weekday morning and evening weekday peak hours, which is summarised in Table 4-2. Consideration has also been given to the wider range of residential trips including shopping and leisure trips which will mainly occur outside of the main peak hours.
- 4.9.2 The measures outlined later in this Travel Plan will address all types of trips although formal monitoring will focus on the journey to work of people working at Fort Halstead.

Table 4-2: Development peak hour trip generation

Use	AM peak (08:00 to 09:00)		PM peak (17:00 to 18:00)	
	In	Out	In	Out
<b>Residential Use (750 units)</b>				
Person trip rate per unit	0.191	0.827	0.637	0.297
Person trip Generation	143	620	478	223
Car Driver Share	59%	51%	66%	64%
Total Vehicle Trips	85	315	316	143
<b>Commercial development (1,438 jobs)</b>				
Vehicle trip rate per job	0.295	0.030	0.019	0.230
Vehicle (driver) trips	424	43	28	331
<b>Total Vehicle Trips</b>				
Total Vehicle Trips	509	359	344	474
Uplift From OPP	29	216	174	40

## 5 Objectives and Targets

### 5.1 Introduction

- 5.1.1 This section sets out the overarching Objectives and Targets of the FTP for Fort Halstead redevelopment.
- 5.1.2 The objectives are supported by a set of quantified SMART (Specific, Measurable, Achievable, Realistic and Timed) targets so that progress towards achieving them can be measured.

### 5.2 Objectives

- 5.2.1 The objective of this FTP is:
- “To encourage residents, employees and visitors to travel to the Fort Halstead site using sustainable modes”
  - To support the realisation of this overarching objective, several sub-objectives have been set out:
    - Ensure the site is accessible to all and responds to the needs of vulnerable groups (e.g. those with mobility problems);
    - Increase awareness of the Travel Plan and its constituent measures;
    - Encourage greater use of sustainable transport modes, particularly car-sharing and use of public transport where possible;
    - Encourage the most efficient use of cars and other vehicles;
    - Reduce the need to travel overall and / or in peak times;
    - Promote smarter living practices that reduce the need to travel overall or in the peak periods;
    - Influence the travel behaviour of visitors; and
    - Improve the health of residents and employees and minimise the development impacts on the environment.
- 5.2.2 Details on how the Travel Plan will deliver these objectives are provided in chapter 6.

### 5.3 Targets

- 5.3.1 The KCC document Guidance for Transport Assessments and Travel Plans states that Travel Plans must have regular monitoring surveys. Progress should be reviewed against targets, and the targets and measures be updated to reflect and build upon progress achieved.
- 5.3.2 The guidance suggests that an initial monitoring survey will be required after occupation of the site, frequency of monitoring surveys thereafter will depend on whether initial monitoring shows that targets are being achieved. Once targets are achieved, monitoring surveys will be required only every three years. This allows the targets to be regularly reviewed and the progress monitored regularly if the targets are not being met avoids unnecessary work if targets are being met.

5.3.3 Employment will be focussed on two main areas:

- The existing/retained and new QinetiQ office that will accommodate their existing workforce and allows for their future expansion requirements;
- The proposed business park which will comprise a mix of B1a, B1b, B1c and B2 uses; and

5.3.4 There will also be some additional employment within the various A1/A3 and D1/D2 community uses that are proposed within the village centre and retained buildings within the Fort. The level of this employment will fall outside of the thresholds for providing a Travel Plan and therefore it is not proposed to undertake the monitoring surveys for these uses.

5.3.5 For the commercial development, mode share targets have been developed based upon the existing mode share identified in the TA, which was presented in Table 3-1. However, a new baseline will be developed after the occupation of the first part of the new commercial development, which corresponds to the new expanded QinetiQ facilities. Baseline surveys will be undertaken and these will provide new information to revise the indicative targets presented in Table 5-1, if necessary.

Table 5-1: Proposed mode share targets for employees at the Fort Halstead site

Mode	Existing	Baseline (after 25% occupation of new commercial development)	5 year target
Car (driver)	80%	76%	70%
Car (passenger)	13%	14%	15%
Public transport	7%	7%	10%
Walking and cycling	0%	3%	5%

5.3.6 It is proposed that separate baseline surveys will be undertaken for QinetiQ and the business park. It is further proposed that the baseline surveys for the Business Park are undertaken when that element is 30% occupied.

## 5.4 Summary

5.4.1 This section has presented the objectives for the Fort Halstead Travel Plan and the proposed mode share targets for the commercial development which reflect the predicted mode share as set out in the Transport Assessment Report. It is considered that these targets are ambitious but realistic bearing in mind the accessibility of the site.

## 6 Delivering Travel Plan Objectives

### 6.1 Introduction

6.1.1 This section explains how this Travel Plan will be taken forward to successfully achieve its Objectives and Targets.

### 6.2 Management

6.2.1 The success of the Travel Plan is dependent upon effective management combined with clearly defined roles. The site management company will manage this FTP and will have responsibility for implementation and further development of this Travel Plan. As land uses become occupied, the further Travel Plans which are developed will be handed over with the site. It is likely that the Residential Travel Plan will be managed by the site management company, with the Travel Plans for the other land uses being taken over by the individual management companies when identified. Figure 6-1: Travel Plans structure presents a schematic diagram of the family of Travel Plans for the proposed development.

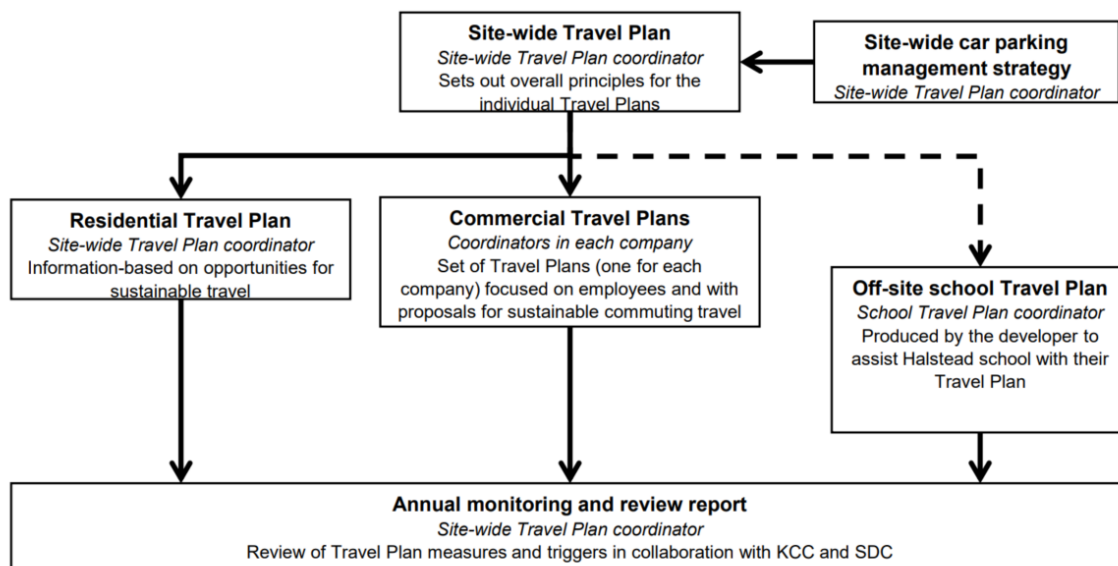


Figure 6-1: Travel Plans structure

6.2.2 The Travel Plan Coordinator at this stage is proposed to be the site management company until a permanent Travel Plan Coordinator (TPC) is appointed. The appointed TPC will then be responsible for the management and further development of this Travel Plan.

6.2.3 A Steering Group will be established with quarterly meetings with users of the site and other relevant parties. This is to ensure that the Travel Plan is taken forward and to provide an effective communication/discussion channel for the residents and occupiers.

### 6.3 Securing and Funding

6.3.1 It is envisaged that this FTP will be secured through a Section 106 agreement. This will secure funding for the future monitoring and development of this Travel Plan.

6.3.2 A set of sustainable transport measures will be implemented as part of the development proposals, demonstrating the commitment from the developer to encourage sustainable travel. It is anticipated that these measures are likely to include the following:

- Provision of a new community bus service providing access between the site and local stations and destinations. This will be secured on a by the Developer as part of the S106;
- New infrastructure on the site to facilitate the diversion of the 431 bus service into the site;
- A network of secure pedestrian and cycle routes within the site to encourage walking and cycling as the main modes for movement around the site;
- Improved cycle route between the site and Knockholt Station;
- Enhanced pedestrian crossing facilities over London Road; and
- Provision of secure cycle parking within the site, including visitor parking, for all site uses.

6.3.3 These measures will encourage sustainable transport modes and improved accessibility for users of the site.

## 6.4 Awareness

6.4.1 The success of this Plan is dependent on the development and implementation of an effective marketing strategy which will be produced by the developer. Once the TPC has been appointed, they will take over the development and implementation of the marketing strategy.

6.4.2 To increase awareness of the Travel Plan Objectives, residents will be given a Travel Welcome Pack on arrival in their new property. This will give information on the sustainable ways to travel around the area and the local services and facilities. It is anticipated that a Fort Halstead community Website will be developed and that this will include a Travel Plan page with details of all Travel Plan initiatives, travel information and links to other websites. A key element of the Travel Plan will be to encourage residents to take up local jobs and so the website should also include details of local job opportunities.

6.4.3 Employees will also be given information on the travel options available to them; this will include information on any shuttle buses. It is essential that employees working at the site are involved in the implementation and evolution of the travel plan. The travel surveys and pre-survey marketing will contribute to raising awareness at the outset. The Steering Group will also provide a communication channel for employees to discuss site-wide issues. It will also allow them to have an input into the ongoing development of the travel plan. The developer and the TPC will work together to develop a marketing strategy. This will include:

- The provision of local transport information on organisations' websites / intranets;
- The provision of travel plan information on organisations' websites / intranets with links to Real Time travel information; and
- An annual review of all marketing information will be undertaken and material updated as appropriate.

6.4.4 The Action Plan in chapter 7 details the specific measures that are to be pursued in relation to encouraging more sustainable travel patterns such as greater use of cycling, walking, and public transport. The emphasis is placed on providing a good level of accessibility to the employment uses on the site by all modes and, in doing so, ensuring that those using the site have a range of travel options available to them.

## **6.5 Encouraging Sustainable Travel**

- 6.5.1 Public transport proposals will allow residents and employees to travel sustainably. This would ensure that there is reduced reliance on the private car for travelling to and from work.
- 6.5.2 Cycle facilities will be provided on site, including showers in the offices. There is also potential to provide enhanced secure cycle storage at Knockholt station.
- 6.5.3 Employment opportunities on site will be advertised to residents before they move onto site. This would mean that they could walk or cycle to work and would not need to leave the site. The internal pedestrian and cycle networks are of high quality to encourage those making internal trips to do so sustainably.
- 6.5.4 Home working could be promoted to employees of the site to reduce the need for people to travel into the site for the day.
- 6.5.5 The potential for establishing a car club on the site will be explored with operators. This could potentially be used by both residents and by employers on the site and would be used as a means for reducing car ownership and thereby reduce reliance on the private car. A dedicated car sharing website will also be promoted to allow both employees and residents.

## **6.6 Summary**

- 6.6.1 This section has summarised the proposed methods for delivering the FTP. These measures will be further detailed in the site specific Travel Plans when more information is available.

## 7 Measures and Action Plan

### 7.1 Introduction

- 7.1.1 This section details the measures that the developer intends to implement at Fort Halstead and the likely measures that they will encourage to implement in order to promote sustainable transport modes and reduce car use.
- 7.1.2 An Action Plan is provided in Table 7-1: Fort Halstead Development Action Plan. The main aim of the Action Plan is to identify individual initiatives that can assist the residents and employees to reduce private vehicle journeys. Table 7-1 sets out the benefits the various measures and the timescales for their implementation. They are grouped by measures that will meet the Travel Plan sub-objectives. Measures relating to servicing and deliveries are included within the separate Delivery and Servicing Plan.

Table 7-1: Fort Halstead Development Action Plan

Initiative	Description	Measures	Benefits	Timescale for Implementation	Responsibility
<b>Managing the on-going development and delivery of the Travel Plan with future residents</b>					
Adoption of the Travel Plan	Sign in from the developer will be vital to ensure that the FTP is an active, living document	Encourage local residents and employees to adopt the FTP	The involvement of the developer will ensure future commitment to the development of the FTP	On occupation	The Site Management Company / Developer
Travel Plan Coordinator	A Travel Plan Coordinator will be responsible for managing the on-going development, delivery and promotion of the Travel Plan	Appoint a site-wide TPC, individual TPC's will come forward with each Travel Plan	This will ensure that the Travel Plan is taken forward and results are delivered	Prior to occupation	The Site Management Company / Developer
Establish Steering Group	The Steering Group should include residents and employer representatives and allow them to discuss issues with KCC, SDC and the developer	Establish and work alongside the Steering Group	This will ensure that the Travel Plan is taken forward and results are delivered	On occupation	The Site Management Company / Developer
TPC to attend Steering Group	Meetings with the Steering Group will enable the discussion of site-wide issues and the exchange of TP progress and information between all site occupiers	Work with the TPC and Steering Group to meet on a quarterly basis	This will ensure that key site-wide issues are addressed and TP progress and information is exchanged	On occupation	The Site Management Company / Developer



Initiative	Description	Measures	Benefits	Timescale for Implementation	Responsibility
<b>Increasing awareness of the Travel Plan and its constituent measures</b>					
Travel Information Packs	Provide Travel Plan Information Packs to each residential unit and provide travel information to employees	Provide information on sustainable ways to travel around the area and the local services and facilities available on the site	Residents and employees will be provided with a high level of information to inform their travel choices	On occupation	The Site Management Company / Developer
Feedback to site users	Promote the Travel Plan and achievements made	Feedback to site users on progress against Travel Plan targets	This feedback will keep the site's users involved and aware of the Travel Plan.	Annually after the development is occupied	TPC
Provision of travel information to prospective residents and employees	Provide travel information in the marketing suite and / or show homes and also to potential employees	Provide information on all modes in the marketing suite and / or show homes and have trained sales / marketing staff to give information on the options available. Information on sustainable travel options could be provided in public spaces.	Residents and employees will be provided with a high level of information to inform their travel choices before agreeing to occupy the units	Prior to occupation and ongoing	The Site Management Company / Developer
<b>Encouraging greater use of sustainable transport modes, rather than the single occupancy car journeys</b>					
Cycle facilities	The development will provide secure cycle parking and information on cycle facilities.	Provide secure cycle parking, an information leaflet on cycle facilities available should be given to site users.	Provision of cycle facilities will encourage residents and employees to use bicycles as a mode of travel	Prior to occupation and ongoing	The Site Management Company / Developer

Initiative	Description	Measures	Benefits	Timescale for Implementation	Responsibility
Pedestrian facilities	Creating pedestrian links and spaces in the development and linking these to the wider area.	Develop good pedestrian networks within the site and create links with the wider local area and public transport facilities	Improved pedestrian links will encourage visitors and employees to walk within the site	Prior to occupation and ongoing	The Site Management Company / Developer
Car club	Develop a car sharing scheme for both employees and residents	Encourage a more sustainable use of cars for users that need them	Reduce number of vehicles going into and out of the site; reduce number of car parking spaces on site	Investigate feasibility prior to occupation and implement if practical	Developer to discuss with car club providers
Public transport	Improving the availability of public transport to site users	Provision of new bus stop for the 431 service and a new community bus.	This will give residents and employees a viable alternative to the car	New bus stop to be provided prior to first occupation. For the new community bus, an appropriate trigger in relation to the level of occupation will be agreed with KCC to ensure that funds are used effectively.	The Site Management Company / Developer
Car sharing database	A car sharing database will allow for a reduction in single occupancy car journeys.	A database will be set up for employees and residents to allow them to find options for car sharing.	This is an attractive alternative to single occupancy car journeys and will allow people to reduce their travel costs without too much work	Prior to occupation and ongoing	The Site Management Company / Developer

Initiative	Description	Measures	Benefits	Timescale for Implementation	Responsibility
Discounts on local services and facilities	Provide discounts on the use of sustainable transport modes	Promote discounts on the use of public transport, bicycles, cycle equipment and car clubs	Encourage travel by sustainable modes and reduce travel by car	The developer will research and put these options forward to the TPC as the site becomes operational. If signed up to then these will then become the responsibility of the TPC	
<b>Encouraging the best use of cars and other vehicles</b>					
Site access	Regulate vehicle access to the site	Promote Polhill access as the main access into and out of the site for all land uses	A direct vehicular access route is provided to link the development with the A224 Polhill as part of a strategy to discourage the use of Star Hill Road except for local trips. This aims to minimise the impacts of the development on the tranquillity of the Kent Downs AONB	During construction and on occupation	The Site Management Company / Developer
Parking	Manage car parking spaces efficiently to encourage sustainable travel patterns	Prioritisation of non-residential car parking availability for those who travel more sustainably (car sharers, electric vehicle drivers).	This will provide advantages for the most sustainable uses of cars and encourage people to use other modes	To be implemented as the redevelopment comes forward	The Site Management Company / Developer
Effective Management of commercial Parking	Ensure that the other parts of the development are not impacted by discriminate parking associated with the commercial uses	Monitor parking behaviour and introduce parking management measures, potentially including yellow lines, should that be required	Reduce indiscriminate parking, assist achievement of mode share targets and maintain a high quality of urban realm	To be implemented as the redevelopment comes forward	The Site Management Company / Developer

Initiative	Description	Measures	Benefits	Timescale for Implementation	Responsibility
Disabled Parking	Provide designated parking spaces	Ensure disabled parking spaces are reserved for disabled users	Enable disabled users can access the development	On completion	The Site Management Company / Developer
<b>Reducing the need to travel</b>					
Tele-working	Occasional working from home will be promoted to residents and employees	Employees and residents will be made aware of the benefits of working from home to reduce vehicle trips to and from the site.	This could reduce vehicle trips to and from the site	On occupation	TPC
Living and working on site	Opportunities for living and working on site will be promoted	Employment opportunities on site will be advertised to new residents and current employees will also be made aware of the proposed housing on site.	This could reduce vehicle trips to and from the site through internalisation of trips that would be primarily on foot or by bicycle	On occupation	TPC
Internet connectivity	All leading supermarkets offer delivery service for groceries. This can reduce the need to travel by car to local supermarkets.	Allow for internet connections to be made available in each residential unit and promote the merits of online grocery shopping.	Residents can order shopping online and reduce the need to travel by car to their local supermarket.	On occupation	TPC

## 8 Timescales for Monitoring and Review

### 8.1 Outline

- 8.1.1 The FTP will be the responsibility of the developer who will identify a TPC. This TPC and the developer will discuss funding to manage the future development of the Travel Plans, including the on-going monitoring and review.
- 8.1.2 The Travel Plans will be regularly monitored and reviewed to ensure that they reflect the changing requirements of the site, is up-to-date with travel planning options available and remains challenging.
- 8.1.3 Table 8-1 below gives the plans and timescales for the monitoring and review of the Travel Plan.

Table 8-1: Plans and timescales for Travel Plan Monitoring and Review

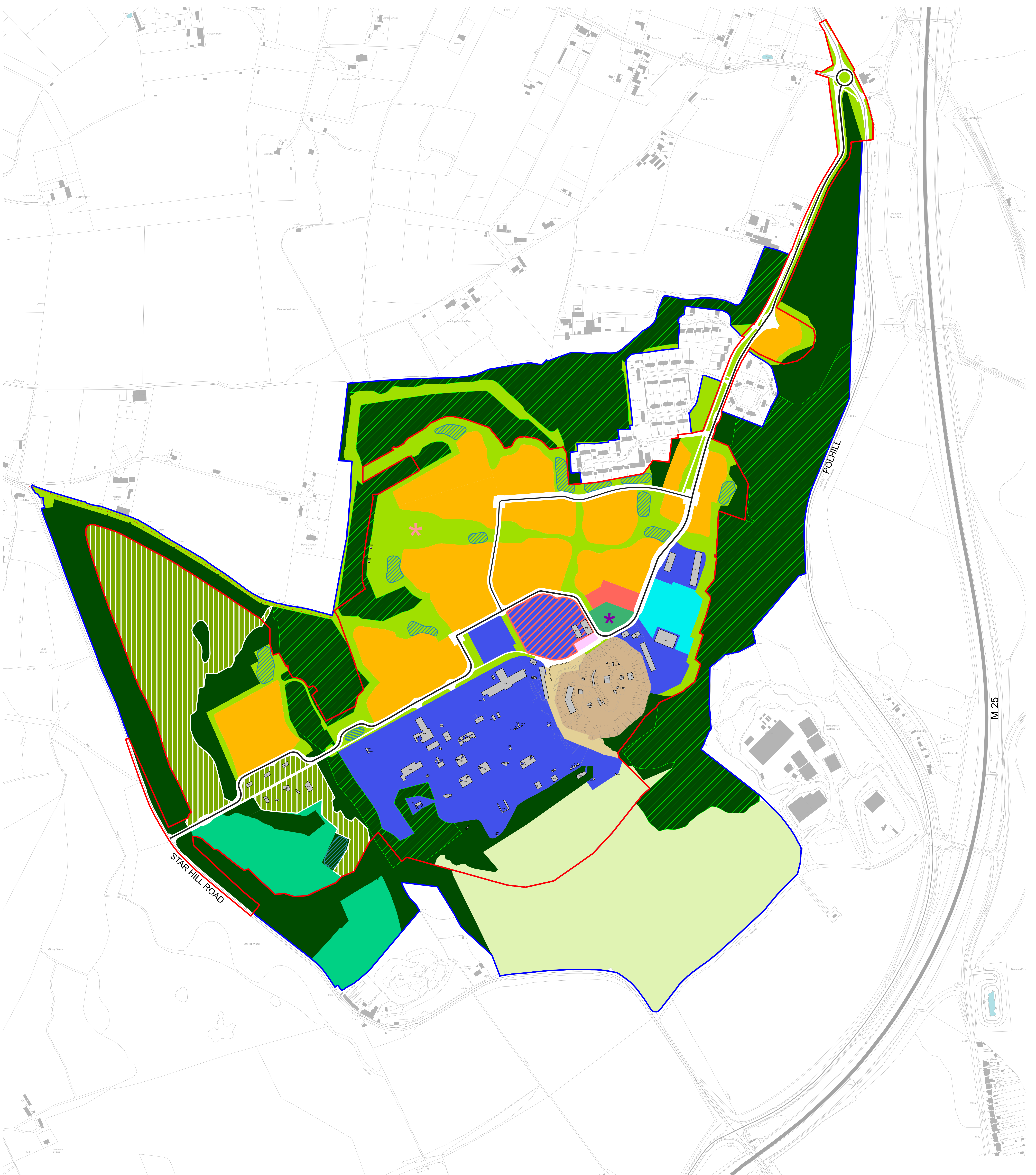
Action	Timescale
Baseline travel survey of QinetiQ employees	To be undertaken within six months of consolidation of QinetiQ in the X enclave, following commencement of the development.
Update of Travel Plans following baseline surveys	Following baseline travel surveys
Future travel surveys	3 <sup>rd</sup> and 5 <sup>th</sup> year
Steering Group Meetings	Quarterly following occupation
Feedback to the management company, users of the Fort Halstead site	Quarterly (following Steering Group meetings)
Undertake a comprehensive strategic review of all aspects of the Travel Plan (including the Objectives, Targets, the Action Plan and the monitoring programme)	Following baseline surveys (6 months), 3 <sup>rd</sup> and 5 <sup>th</sup> year

- 8.1.4 It is recognised that the site will be developed and occupied over quite a long period. It is envisaged that both the residential and commercial elements will be built out and occupied by 2031. However, these timescales could be extended depending upon market conditions. It is therefore likely that the period for undertaking travel surveys will need to be reviewed. Separate surveys are likely to be required to reflect the build out of the business park. At this stage the following programme is suggested:
- Initial survey of business park once 30% occupied;
  - Second survey after three years or when 75% occupied (whichever sooner)
  - Third survey after five years or when 100% occupied (whichever sooner)

# Appendix A Indicative masterplan



Notes:  
 Do not scale from this drawing.  
 All contractors must visit the site and be responsible for taking and checking Dimensions.  
 All construction information should be taken from figured dimensions only. Any discrepancies between drawings, specifications and site conditions must be brought to the attention of the supervising officer.  
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KEY

- Application boundary
- Applicant's land ownership boundary
- Existing buildings for retention
- Proposed vehicular routes
- Scheduled monument (The Fort)
- Residential
- Mixed Use
- Employment
- Employment / Mixed Use
- Primary school
- Village Square
- Hardstanding
- Village Green
- Public Open Space (incl. woodland buffer, SuDS, Children's play area)
- Community Recreation Area
- Existing Woodland
- Ecologically Enhanced Grassland / Mitigation Zone
- Existing Chalk Grassland
- Indicative Neighbourhood Equipped Area for Play (NEAP)
- Indicative Local Equipped Area for Play (LEAP)
- Indicative location for SuDS ponds

Notes:  
 All land uses can deviate +/-3m within the application boundary, subject to on-site constraints.

\*The shapes and sizes of the ponds as shown on the plan are indicative only.

P1	23.08.19	Submitted for Planning	DZL	ECC
Rev	Date	Description	Drawn	CHKD
Drawing Status				
FOR PLANNING				

Client  
 Merseyside Pension Fund

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Project  
 Fort Halstead

Drawing Title  
**Land Use and Green Infrastructure Plan**

Scale @ A0 1:2500 Job Ref. 005561  
 Drawing No. 005561\_PP01 Revision P1



# Appendix B Shuttle Bus Timetable



<b>Fort Halstead Shuttle Bus: Initial Timetable</b>					
<b>Monday to Friday</b>					
<i>Bus Number</i>	<b>1</b>	<b>1</b>	<b>1</b>		
FORT HALSTEAD	05:53	06:47	07:44		
KNOCKHOLT STATION arrive	06:02	06:56	07:53		
KNOCKHOLT STATION depart	06:10	07:04	07:45		
LONDON London Bridge	06:38	07:37	08:18		
LONDON Cannon Street	06:43	07:44	08:26		
<i>Bus Number</i>	<b>1</b>	<b>1</b>	<b>1</b>		
FORT HALSTEAD	05:16	06:16	07:04		
ORPINGTON STATION arrive	05:32	↘	06:32	↘	07:20
ORPINGTON STATION depart	05:40	05:54	06:39	06:40	07:28
LONDON London Bridge	-	06:09	06:54	-	-
LONDON Charing Cross	-	06:18	07:05	-	-
LONDON Victoria	06:18	-	-	07:20	08:20
LONDON Blackfriars	06:28	-	-	-	08:08
LONDON St Pancras	06:44	-	-	-	08:19
<i>Bus Number</i>	<b>1</b>				
FORT HALSTEAD	08:02				
HALSTEAD PRIMARY SCHOOL	08:10	for 0820 start			
<i>Bus Number</i>	<b>1</b>				
FORT HALSTEAD	08:37				
St KATHERINES PRIMARY SCHOOL	08:45	for 0855 start			
0900 - 1500: On demand					
<i>Bus Number</i>	<b>1</b>				
St KATHERINES PRIMARY SCHOOL	15:25	for 1520 finish			
FORT HALSTEAD	15:33				
<i>Bus Number</i>	<b>1</b>				
HALSTEAD PRIMARY SCHOOL	15:40	for 1535 finish			
FORT HALSTEAD	15:48				
<i>Bus Number</i>	<b>1</b>	<b>1</b>	<b>1</b>		
LONDON St Pancras	16:40	17:14	18:48		
LONDON Blackfriars	16:52	17:25	19:00		
LONDON Victoria	16:59	17:30	19:10		
LONDON Charing Cross		17:26	19:06		
LONDON London Bridge		17:35	19:14		
ORPINGTON STATION arrive	17:41	18:07	18:10	19:43	19:48
ORPINGTON STATION depart	17:47	↘	18:16	↘	19:54
FORT HALSTEAD	18:03	18:32	20:10		
<i>Bus Number</i>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
LONDON Cannon Street	-	-	18:02	18:23	-
LONDON London Bridge	16:14	16:40	18:06	18:27	18:38
KNOCKHOLT STATION arrive	16:48	17:13	18:40	19:04	19:18
KNOCKHOLT STATION depart	16:54	17:19	18:46	19:10	19:28
FORT HALSTEAD	17:03	17:28	18:55	19:19	19:37



<b>Fort Halstead Shuttle Bus: Prior to Primary School Opening on Site</b>										
<b>Monday to Friday</b>										
<i>Bus Number</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>					
FORT HALSTEAD	05:53	06:27	06:47	07:08	07:44					
KNOCKHOLT STATION arrive	06:02	06:36	06:56	07:17	07:53					
KNOCKHOLT STATION depart	06:10	06:44	07:04	07:25	07:45					
LONDON London Bridge	06:38	07:18	07:37	07:59	08:18					
LONDON Cannon Street	06:43	07:26	07:44	08:06	08:26					
<i>Bus Number</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>					
FORT HALSTEAD	05:16	05:46	06:16	07:04	07:25					
ORPINGTON STATION arrive	05:32	↘	06:02	↘	06:32	↘	07:20	07:41	↘	
ORPINGTON STATION depart	05:40	05:54	06:09	06:10	06:39	06:40	07:28	07:47	07:57	
LONDON London Bridge	-	06:09	06:24	-	06:54	-	-	-	-	
LONDON Charing Cross	-	06:18	06:33	-	07:05	-	-	-	08:30	
LONDON Victoria	06:18	-	-	06:47	-	07:20	08:20	-	-	
LONDON Blackfriars	06:28	-	-	-	-	-	08:08	08:29	-	
LONDON St Pancras	06:44	-	-	-	-	-	08:19	08:39	-	
<i>Bus Number</i>	<i>2</i>	<i>1</i>								
FORT HALSTEAD	08:00	08:02								
HALSTEAD PRIMARY SCHOOL	08:08	08:10 for 0820 start								
<i>Bus Number</i>	<i>1</i>									
FORT HALSTEAD	08:37									
St KATHERINES PRIMARY SCHOOL	08:45 for 0855 start									
0900 - 1500: On demand										
<i>Bus Number</i>	<i>1</i>									
St KATHERINES PRIMARY SCHOOL	15:25 for 1520 finish									
FORT HALSTEAD	15:33									
<i>Bus Number</i>	<i>1</i>	<i>2</i>								
HALSTEAD PRIMARY SCHOOL	15:40	15:42 for 1535 finish								
FORT HALSTEAD	15:48	15:50								
<i>Bus Number</i>		<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	
LONDON St Pancras	16:04	16:40	17:14	17:44	18:04	18:48				
LONDON Blackfriars	16:16	16:52	17:25	17:56	18:16	19:00				
LONDON Victoria	16:25	16:59	17:30	18:00	18:30	19:10				
LONDON Charing Cross		16:32	17:26		18:41	19:06				
LONDON London Bridge		16:40	17:35		18:50	19:14				
ORPINGTON STATION arrive	17:05	17:06	17:41	18:07	18:10	18:41	19:06	19:12	19:43	19:48
ORPINGTON STATION depart	↘	17:11	17:47	↘	18:16	18:47	↘	19:18	↘	19:54
FORT HALSTEAD		17:27	18:03		18:32	19:03		19:34		20:10
<i>Bus Number</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	
LONDON Cannon Street	-	-	16:56	17:19	17:41	18:02	18:23	-	-	
LONDON London Bridge	16:14	16:40	17:00	17:23	17:45	18:06	18:27	18:38	19:14	
KNOCKHOLT STATION arrive	16:48	17:13	17:34	17:56	18:18	18:40	19:04	19:18	19:50	
KNOCKHOLT STATION depart	16:54	17:19	17:40	18:02	18:24	18:46	19:10	19:28	19:56	
FORT HALSTEAD	17:03	17:28	17:49	18:11	18:33	18:55	19:19	19:37	20:05	

<b>Fort Halstead Shuttle Bus: Final</b>										
<b>Monday to Friday</b>										
<i>Bus Number</i>		<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>				
FORT HALSTEAD		05:53	06:27	06:47	07:08	07:28				
KNOCKHOLT STATION arrive		06:02	06:36	06:56	07:17	07:37				
KNOCKHOLT STATION depart		06:10	06:44	07:04	07:25	07:45				
LONDON London Bridge		06:38	07:18	07:37	07:59	08:18				
LONDON Cannon Street		06:43	07:26	07:44	08:06	08:26				
<i>Bus Number</i>		<i>1</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>2</i>				
FORT HALSTEAD		05:16	05:46	06:16	07:04	07:25				
ORPINGTON STATION arrive		05:32	↘	06:02	↘	06:32	↘	07:20	07:41	↘
ORPINGTON STATION depart		05:40	05:54	06:09	06:10	06:39	06:40	07:28	07:47	07:57
LONDON London Bridge		-	06:09	06:24	-	06:54	-	-	-	-
LONDON Charing Cross		-	06:18	06:33	-	07:05	-	-	-	08:30
LONDON Victoria		06:18	-	-	06:47	-	07:20	08:20	-	-
LONDON Blackfriars		06:28	-	-	-	-	-	08:08	08:29	-
LONDON St Pancras		06:44	-	-	-	-	-	08:19	08:39	-
0800 - 1600: On demand										
<i>Bus Number</i>		<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>
LONDON St Pancras		16:04	16:40	17:14	17:44	18:04	18:48			
LONDON Blackfriars		16:16	16:52	17:25	17:56	18:16	19:00			
LONDON Victoria		16:25	16:59	17:30	18:00	18:30	19:10			
LONDON Charing Cross		16:32	17:26	18:41	19:06					
LONDON London Bridge		16:40	17:35	18:50	19:14					
ORPINGTON STATION arrive		17:05	17:06	17:41	18:07	18:10	18:41	19:06	19:12	19:43
ORPINGTON STATION depart		↘	17:11	17:47	↘	18:16	18:47	↘	19:18	↘
FORT HALSTEAD		17:27	18:03	18:32	19:03	19:34	20:10			
<i>Bus Number</i>		<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
LONDON Cannon Street		-	-	16:56	17:19	17:41	18:02	18:23	-	-
LONDON London Bridge		16:14	16:40	17:00	17:23	17:45	18:06	18:27	18:38	19:14
KNOCKHOLT STATION arrive		16:48	17:13	17:34	17:56	18:18	18:40	19:04	19:18	19:50
KNOCKHOLT STATION depart		16:54	17:19	17:40	18:02	18:24	18:46	19:10	19:28	19:56
FORT HALSTEAD		17:03	17:28	17:49	18:11	18:33	18:55	19:19	19:37	20:05