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Highways and Transportation

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Date: 17 November 2020

Application - SE/19/05000/HYB

Location - DSTL Fort Halstead Crow Drive Halstead Sevenoaks KENT TN14 7BU

Proposal - Hybrid application comprising, in outline: development of business space (use classes B1a/b/c) of up to 27,659 sq m GEA; works within the X enclave relating to energetic testing operations, including fencing, access, car parking; development of up to 750 residential dwellings; development of a mixed use village centre (use classes A1/A3/A4/A5/B1a/D1/D2); primary school; change of use of Fort Area and bunkers to Historic Interpretation Centre (use class D1) with workshop space and; associated landscaping, works and infrastructure. In detail: demolition of existing buildings; change of use and works including extension and associated alterations to buildings Q13 and Q14 including landscaping and public realm, and primary and secondary accesses to the site.

Thank you for your consultation in relation to the above planning application.

Planning permission (15/00628/OUT) was granted in 2015 for 27,000 sqm B1/B2 employment floorspace, 450 dwellings and a hotel.

The most recent amendments to planning permission 19/05000/HYB see a reduction in the overall number of dwellings from an additional 300 to 185 (above the permitted 450 dwellings).

Transport Assessment

Questions have previously been raised regarding the Certificate of Lawfulness of Existing Use or Development (CLEUD), where clarification was sought regarding its validity. It is understood that the permission runs with the land, and until the use subsequently changes lawfully. The intensity of the existing use can change, and can stop for a period of time and be restarted as long as the use has not been abandoned. While a Certificate is not a planning permission, and providing that the use is materially the same, the intensity and nature of the use can change during its lifetime. The principle of a valid CLEUD means that the site could lawfully generate additional traffic to that currently experienced.

The CLEUD is the fall back position for the site, and certifies that the existing use is lawful. In terms of the traffic movements, the CLEUD is considered to generate more vehicle trips than the approved and proposed developments.

The CLEUD for the site is for 82,168 sqm of employment space (66, 150 sqm B1 Use Class and 8,650 sqm B8 Use Class and the remainder as ancillary).

Outside of the site boundary are 72 dwellings, which utilise Crow Drive. The traffic generated from those dwellings has been subtracted from the traffic surveys to provide an assessment of the application site.

The modification of security arrangements, including the removal of the gate at Star Hill, are understood to take place in the next two years. It is understood that in theory all traffic can use the Star Hill access point in two years. If the development is permitted, traffic calming will be provided along Star Hill and measures provided to reduce the use of the access.

Location Amenities

Para 2.4.6 outlines that it is anticipated that a higher proportion of secondary school children will attend schools in Sevenoaks due to the recently established Trinity and Weald of Kent Grammar Schools, located at the site of the former Wilderness School in Sevenoaks. A planning application has been approved for a Grammar School annex at the site. The schools can be accessed via service S34 from Polhill, which terminates at Knole Academy. Service S12 also provides access to Trinity School / Weald of Kent. It is assumed that the majority of secondary educated children would travel to Sevenoaks via public transport.

Service R5/R10 is a circular route providing access to Orpington, whereby the closest bus stop is Knockholt Pound. There are a number of School bus services (S12, S31, S32, S33, S34, T3 and TW6) that pass the Star Hill Road access. A bus turning facility (roundabout) and stop within the site off Star Hill Road is proposed to enable existing school services to drop off and pick up school children travelling to secondary schools. A S106 Contribution towards school transport provision is likely to be required to ensure sufficient capacity is available on buses as the site is phased to full capacity.

Impact on Otford

The impacts of the development have been considered based on the full 635 units. In the AM peak there are 68 two way trips, and 63 two way trips in the PM peak. The impact of the additional 185 units, compared to the permitted 450 units, sees 14 two way trips in the AM and 13 two way trips in the PM peak. This equates to approximately 1 vehicle every 4 minutes in both peak periods and therefore not considered as a significant increase.

Site Accesses

Currently it is evident that access to the A224 / Crow Drive and Star Hill Road is currently only used in AM and PM peaks only. The existing barriers at Star Hill Road are expected to be removed in 2022, whereby public access would be unrestricted through the site. The Star Hill Road access requires visibility improvements, possible street lighting, and localised safety improvements. The following improvements are proposed:

- Improved visibility splays of 2.4 x 90 metres in both directions, which is in line with the approved outline application;
- New warning signs on the northern and southern approaches to the junction;
- The addition of anti-skid surfacing on Star Hill Road to assist vehicle stopping performance;
- Tapers on the junction corner radii to help large vehicles to turn without overrunning the centreline of the major carriageway;
- An enlarged splitter island to separate inbound and outbound movements by large vehicles to remove the potential for conflicts; and

- Trimming back of foliage and raising of tree crowns to improve visibility splays in each direction.
- Best endeavours to reduce the speed limit on Star Hill Road to 40mph through a Traffic Regulation Order;
- Safety enhancements on Star Hill Road on the bend to the south east of the site access;
- Direction signing of the development site to and from A224 / Crow Drive.

Additionally improvements are required to the roundabout junction at A224/Crow Drive which was included as part of the approved permission (LPA reference 15/00628/OUT). The works should be provided prior to occupation.

All improvements will be subject to a Section 278 Agreement. All improvements are to be completed prior to first occupation.

Pedestrian & Cycle Network

Pedestrian and cycle routes to and from the site have previously been raised as a concern. Access to Knockholt Pound is via Star Hill Road, whereby there is no dedicated footway or lighting. I consider that this needs addressing to ensure a safe route. Access to Halstead is via Otford Lane, along an unlit country lane. A cycle link is proposed to link the two accesses (Polhill and Star Hill Road). A walking / cycle way is proposed to run alongside PRoW SR172, linking with Birchwood Lane enabling access towards Knockholt Pound. This has been discussed with KCC Public Rights of Way Team.

The following improvements are proposed:

- Existing bridleway between Polehill & Twitton – Lighting improvements at this location are proposed through a S106 contributions.
- London Road linking Otford Lane – provides links to existing on street cycle route at Old London Road, providing access to Knockholt Station – A Technical Note has been submitted to understand the feasibility of providing a 3.5 metres wide (two way) cycle way along the western edge of the carriageway. Several constraints have deemed such a cycle way unsuitable. Alternative measures include ‘Orca’ lane separate devices, but guidance suggests that these are only suitable on low speed roads. The TN suggests that the majority of accidents involving cyclists took place off peak, suggests sports cyclists as opposed to commuters. To make this an attractive cycle route, alternative measures to improve safety need to be investigated.
- Provision of cycle hubs (including e-bikes) and car clubs.

Public Transport Network

The applicant acknowledges that the site is currently poorly connected to public transport services and facilities. As previously noted, new and enhanced facilities and services are required in order that the site can be accessed by all modes of transport. The majority of people commuting to central London are likely to drive to one of the local stations due to the lack of adequate public transport and long walking distances.

Knockholt station is within TfL fare zones, which means the costs of tickets are significantly cheaper. Parking at Knockholt station is £3.50 per day with supplementary on street parking available. The 2015 parking has been updated in February 2020 to observe parking availability at Knockholt station, along London Road and Old London Road. The survey indicates that during peak hours, the majority of parking at the station and along London Road are occupied. This indicates that these cars are commuters, whereby sustainable options for services to the train station are required.

Additional cycle parking by way of a cycle hub has recently been provided at Knockholt railway station by South Eastern. The capacity of the hub will need to be checked to ensure that there is adequate capacity for the additional cycle parking.

The existing DSTL bus provides a free of charge shuttle bus service that is utilised by 60 staff per day. The proposed site shuttle bus to Knockholt station is proposed to be priced at £4.00 per day. This exceeds the current parking at the station. Therefore, discussions are required with Sevenoaks District Council regarding parking charges and whether these may be increased to make the bus service a more attractive option.

Bus service 3 (formerly 431) runs between Orpington and Sevenoaks, via Star Hill Road and Knockholt station, providing 3-4 services during the day Monday – Friday. This is not sufficient a service for the proposed development. Therefore, a Demand Responsive Transport (DRT) is proposed with two minibuses running between the station, schools and local facilities. The service is expected to reach viability at the end of the 10 year build period. In order to achieve maximum viability, it accepted that all bus contributions should focus on the DRT service. Consideration should be given to the provision of a weekend service. The existing service number 3 will be able to marginally divert into the site at Star Hill Road, turning to exit at the proposed roundabout. Exact details will be required as to the funding and contributions required over the 10 year period.

Details of the drop off points at the station will be required. The infrastructure at the station will need to be considered as to the ability for services to turn / drop passengers off safely.

It is proposed that the various school bus services will be able to pull into the site at the Star Hill Road access, where a stop and roundabout facility will enable buses to enter the site. Confirmation that this is acceptable to the bus providers is required. Details of the bus services are to be submitted, timing (prior to occupation) and triggers will be outlined in the S106.

Local Highway Network

Baseline traffic flows have been utilised from 2018, which appears reasonable given that the original application was submitted in 2019. When older data has been utilised, this has been scaled up with growth traffic factors derived from TEMPRO.

Personal Injury Collisions

Star Hill Road / Morants Court Roundabout – the applicant deems that while accidents have involved cyclists, this is not to be a main cycle route for the proposal. As such no improvements are proposed.

Star Hill Road / Birchwood Road / Old London Road – two of the recorded accidents appear to be speed related. Safety improvements are proposed along Star Hill Road, which will be subject to a S278 Agreement.

Polhill Road / Otford Road – the applicant outlines that all accidents appear to be associated with loss of control or drivers not paying attention. If this has taken place on a number of occasions, measures may be required.

Main Road / Harrow Road / Chevening Lane – no accidents occurred at the junction within the record period.

Shacklands roundabout – The TA outlines that the local highway network in the vicinity of the site is used by amateur cycle groups, which appears as a factor in the high number of crashes. Despite the cyclists involved appearing not to be commuters, I maintain that additional measures should be considered following the development to ensure cyclist safety in the future. This could be in the form of signage and consider this an important safety feature and should be subject to an appropriate Condition.

Development Proposals

The proposal seeks a development of up to 635 dwellings (an additional 185 to the permitted 450), 27,773 sqm of B1a/b/c floorspace, mixed use village centre, and change of use of the Fort to provide a Historic Interpretation Centre (Use Class D1) . Land is safeguarded for the development of a one form entry primary school. The previously submitted application included a school, but now that the number of dwellings has been reduced this is below the threshold for a primary school. In terms of vehicle movements and trips, this is one of the key factors that needs to be considered whereby more trips will be made to take primary age children to school. Without a dedicated school bus, I am uncertain of the patronage of a community bus for school children.

The primary access is via Crow Drive and A224 Polhill to the north of the site, with a secondary access from Star Hill Road. As the main route is a bus route, the road is designed at 6.75 metres in width. This is acceptable and a point we have negotiated for some time.

For development of this scale, two access points are required. It is important to note that the highway authority would recommend refusal if only one access were proposed. Two points of access has safety implications and provides highway resilience if an incident were to take place at main access. A package of Section 278 improvements are proposed at Star Hill Road that were not included in the previous outline application.

In line with the above, to minimise the use of the Star Hill Road access, measures have been taken including :

- Locating the commercial development orientated towards Polhill access,
- The design of the route to Star Hill Road is more convoluted making it less desirable,
- Part of Crow Drive is to be pedestrianised , removing a direct through route,

I also suggest that white lining /hatching improvements are provided at Morants Court cottages on Star Hill Road.

The internal highway network has been designed for a 20mph zone, which includes a number of traffic calming features. During extensive discussions, the concept of the features have been agreed in principle, with details to be agreed at the design stage. The 'square about' features have now been modified to a 'square' junction, where we have other successful examples of such a feature.

Parking Provision

Parking provision and layout is to be agreed at detailed design stage. Comments have been previously provided regarding indicative parking layouts, which can be discussed as the application progresses.

Highway Mitigation

Star Hill Road

- Visibility splays are proposed 2.4 metres x 90 metres in both directions. Vegetation is to be cut back in both directions to improve visibility. If the Traffic Regulation Order (TRO) be sought to change the speed limit to 40mph. This would be subject to best endeavours, as a third party application is subject to a public consultation exercise.
- Warning signs on the approach to the junction in both directions,
- Antiskid surface to assist vehicle stopping,
- Tapers on the junction radii will ensure larger vehicles do not overrun the centre of the major carriageway,

- An enlarged splitter island is proposed to separate inbound and outbound movements by large vehicles.
- I suggest white lining /hatching improvements are provided at Morants Court cottages on Star Hill Road.

Otford Lane / A224 Junction

A roundabout is proposed which is considered acceptable subject to detailed design.

Star Hill Road / Rushmore Hill

Periodic monitoring of traffic flows is proposed, which is accepted.

Old London Road / Knockholt Station

A TRO to prevent parking would be subject to best endeavours, as a third party application is subject to a public consultation exercise. This is to provide a safer cycle route to the station, as currently cars block the route by parking on the advisory cycle lane.

Trip Generation & Distribution

The worst case scenario 'without' school has been assessed, which is accepted as there is uncertainty about the deliverability of the primary school.

The modal split has been applied, however only car / van mode of travel to work has been used to account for the impact on the highway network. According to census data, other modes of transport will have a negligible impact on the number of trips. The exception is train travel for commuters, which would take place outside the morning and evening peak hours.

A 1.25 minutes time penalty has been added to the routing for the Star Hill Road access due to the proposed road alignment and traffic calming features.

Para 5.6.8 outlines that the Polhill access would be utilised more due to the roundabout, as opposed to a propriety T junction at Star Hill. This is explained as more desirable as a roundabout is typically faster to join as all approaching traffic is travelling slowly. The time penalty sees a decrease from 269 to 135 two way trip in the AM peak and 257 to 126 two way trips in the PM peak.

Table 5-15 and 5-16 have been produced to illustrate the difference between CLEUD traffic and the proposed worst case development on key links and junctions. The general trend suggests that the AM peak sees a reduction in vehicle trips comparing the proposed development and the CLEUD. In the PM peak there is a small increase in trips. As the CLEUD is valid and current use, I acknowledge that the site has the potential to generate a comparable number of vehicle trips. The CLEUD would generate a greater number of trips at Star Hill Road, compared to the proposed development. This is bearing in mind that the security measures are to be removed by 2022, and the route being devoid of traffic calming features. Trip generation assessment outlines two way traffic flows at Star Hill forecast at 135 trips during the AM peak (decrease from 145) and 252 during the PM peak (increase from 175), as compared to the 2015 Outlines Planning Permission (OPP).

Below indicates the net difference in AM and PM peak trips between the CLEUD traffic and the proposed development at Star Hill Road Junction.

AM Peak			PM peak		
CLEUD	Development	N e t Difference	CLEUD	Development	N e t Difference
306	135	171	236	252	-16

Highway Impact Assessment

Highway impact assessments have been undertaken for 2035 future forecast year, in line the Sevenoaks Local Plan period. West Kent Cold Store development and the consented OPP for 450 dwellings are included as net development flows.

Table 6-1 outlines the percentage impact during the AM and PM peaks at 2035 baseline and with the proposed development.

Of note, Star Hill Road (south of access) sees an increase of 15.3% in the AM peak and 14.1% in the PM peak. It is evident that this is the greatest percentage increase. However, with a low baseline traffic flow, the increase sees an additional 2 / 3 vehicle movements per minute in the peak hours. As such this would not give rise to an adverse impact to capacity.

Junctions expected to operate within capacity in 2035 with development include

- Shacklands Roundabout
- A224 Polhill/Otford Lane
- A224 Polhill/A224 Otford Lane/Crow Drive/A224 London road – agreed roundabout scheme
- Morants Court Road Roundabout
- Star Hill Road/site access

Hewitts roundabout – the junction is expected to operate over capacity however the 2035 with development scenario is no worse than the 2035 future base scenario.

A224 Polhill/Pilgrims Way west link road – The junction is expected to operate over capacity in the AM peak however the 2035 with development scenario is no worse than the 2035 future base scenario.

M25 Junction 4 – The results show that capacity queues and delays will be worse in the 2035 with development scenario when compared to the 2035 base scenario. As this is a motorway junction advice should be sought from Highways England.

M25/A25/A21 Junction – Para 6.4.42 is showing the following error at various points **Error! Reference source not found.** Therefore, I am not able to clarify what is being represented in the text and clarification is required. The Westerham Road arm of the junction is expected to be over capacity in the future year and the addition of the development traffic worsens the situation. Mitigation measures should be considered.

Construction Impacts

A Construction Management Plan should be secured by way of a Condition, which I accepted. As previously noted, this should encompass each phase of demolition and construction, and be submitted and approved prior to any works commencing. This should include details such as routing of vehicles, employee parking, delivery vehicle unloading and turning, wheel washing, and any requirements for traffic management.

No construction traffic should be permitted to use the Star Hill Road access.

Sustainable Transport Strategy

Knockholt Pound linking the centre of the site to Birchwood Lane – a walk/cycleway that sits alongside PRow SR172

Stopping cars parking across the cycle route on Old London Road – Double yellow lines may be implemented along sections of Old London Road to ensure the cycle route is kept clear from parked cars. This matter would be dealt with through a TRO process following grant of planning permission.

Off road cycle route between Polhill & Knockholt Station – A separate feasibility study has been undertaken outlining that the cycle way between the site and Knockholt station is constrained. The applicant has agreed to provide an advisory cycle lane on the A224 to link Otford Lane and the existing advisory cycle lane. The route along Old London Road is via an advisory cycle lane. Additional signage is suggested to provide awareness of cyclists. An advisory cycle lane is by way of signage as opposed to a segregated cycle lane

Cycle facilities – provision of cycle parking facilities on site and a cycle hire scheme in association with Enterprise, a sustainable transport initiatives provider. Increased cycle parking should also be provided at Knockholt station, subject to the requirements of Southeastern due to recent cycle hub upgrades.

Bus Services – diversion of Service 3 (formerly 431) into the site, and a Demand Responsive Transport (DRT) service. The DRT service is proposed to consist of two minibuses operating Monday to Friday, linking to local stations for commuters and providing a demand responsive flexible service during the off peak period. Further details will be provided at detailed design which should be outlined by way of a suitable Condition.

Para 8.3.6 outlines that the DRT service will provide links to local primary schools. While it may not be unreasonable for primary age children to take a bus to school, I fail to see how parents would allow young children to travel on a bus that is not dedicated to children alone. The paragraph further notes that the buses used for school children would only be available for passengers related to the school. This appears to warrant a need for a number of additional bus services aside from the stand alone DRT service which as I understand would operate during peak (school drop off) hours). I acknowledge that the station commuter service may be prior to the peak. Further details and clarification is required.

Unless the number of residential units is increased, KCC Education may not warrant a primary school necessary on the site. An overall Bus Management Plan should be considered as a Condition prior to the commencement of any service to outline how the demand will be monitored and any changes agreed.

Funding of the bus service, and the appropriate level of occupation trigger requires agreement and securing by S106.

Travel Plan

A comprehensive Travel Plan is required to reduce dependency on the private car, and must include objectives and modal split targets, a programme of implementation and provision for monitoring, review and improvement. The primary school element needs to be removed from the Travel Plan as this is not secured.

Measures include:

Realistic alternatives to the private car, including new DRT serviced, and diversion of service 3 into the site.

Parking Management Strategy and cycle parking.

Appointment of a Travel Plan Coordinator

Monitoring fees of £2,844 (£1,422 for 5,000sqm+ B1 b and c + £1,422 400 or more homes)

Further consideration should be given to providing robust measures including car clubs, electric bike hire and cycle parking at Knockholt station.

In line with the above, subject to the inclusion of the issues raised relating to Conditions and the completion of a Section 106 Agreement, the Highway Authority raised no objection to this application on highway grounds.

INFORMATIVE: It is the responsibility of the applicant to ensure , before the development hereby approved is commenced, that all necessary highway approvals and consents where required are obtained and that the limits of highway boundary are clearly established in order to avoid any enforcement action being taken by the Highway Authority.

Across the county there are pieces of land next to private homes and gardens that do not look like roads or pavements but are actually part of the road. This is called 'highway land'. Some of this land is owned by The Kent County Council (KCC) whilst some are owned by third party owners. Irrespective of the ownership, this land may have 'highway rights' over the topsoil. Information about how to clarify the highway boundary can be found at <https://www.kent.gov.uk/roads-and-travel/what-we-look-after/highway-land/highway-boundary-enquiries>

The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under such legislation and common law. It is therefore important for the applicant to contact KCC Highways and Transportation to progress this aspect of the works prior to commencement on site.

Yours faithfully

Laura McKenzie
Development Planner