Response for deadline 6 – matters arising from ISH3

Planning Inspectorate ref: EN020026 [redacted]

Executive Summary

The ground at the proposed Minster Convertor station needs stabilising.
The method used is unclear but both risk pollution unless properly mitigated.
The method used is unclear but, whatever method, HGVs will use K-BM02.
Using the hydrovac method will require the disposal of 40,000m^3 of Sulphate rich material.
Using the hydrovac method will require over 2,500 HGV movements.
Using the Controlled Modulus Column (CMC) method will displace laterally over 14,500m^3 of Sulphate rich material.
Using the Controlled Modulus Column (CMC) method will require over 14,500m^3 of concrete.
Using the Controlled Modulus Column (CMC) method will require over 3,500 HGV movements.
To raising the base by 2m will require 250,000m^3 of "fill" (aggregate).
To deliver the 250,000m^3 of aggregate will require at least 47,500 HGV movements.
There will be more than 50,000 HGV movements at K-BM02 for the "Enabling Works".
The Enabling Works are scheduled to begin Q4 2026 but, despite the huge number of HGV movements required at K-BM02 for this stage, the Applicant suggests the peak for K-BM02 will be in 2028.
The Applicant has failed to show the cumulative effects of the proposed Kulizumboo Interconnector.
The HGV information for K-RJ1 in APP-181 is different from The HGV information for K-RJ1 in APP-266.
The route selected for HGVs to get to and from K-BM07 seems illogical.
There are several issues concerning sound modelling and contours that need to be addressed by the Applicant for deadline 6.
The issue of wheel-washing and associated lighting needs to be addressed because of the negative effect on the Dauberton bat colony at the Hoverport.
The use of a bridge over the Apron will reduce the risk of pollution and the area of the Hoverport required to be Compulsorily Acquired from Thanet District Council.
Reducing the area of the Hoverport lost will increase the area available to the public.
All the issues raised highlight once again how poor the application is.

1) **3.1 Pollution risk and possible flood risk**

Unfortunately, the Applicant is very vague about the method that will be used to stabilise the ground at the site of the Minster Marshes Convertor Station.

a) One possible method put forward by the Applicant in AS-093 is the excavation and removal of at least 400mm of "soft ground".

APP-171 page 102 shows:

"*At the proposed converter site, the Tidal Flat Deposits have very high Sulphate levels (2000mg/l) and the Thanet Formation even higher (2200mg/l)*".

AS-093 at 4.3.6 gives the area of the site as approximately 9ha which equates to 90,000m^2. Even ignoring the volume of water added:

Just the removal of soft ground without the added water = 90,000 x 0.4 = 36,000m^3

In AS-093 4.6.18 the Applicant gives a figure of 40,000m^3.

Since this material is Sulphate rich it will need to be disposed of safely. Is this outlined anywhere within the documentation?

b) The use of Controlled Modulus Columns (CMC)

APP-171 makes clear that the ground beneath the proposed site for the convertor station requires stabilising and, on page 106, it suggests the use of Controlled Modulus Columns (CMC). This method involves using a displacement auger (between 250 and 500mm in diameter to displace "soil" laterally up to depths of 50m. The resulting space is filled with concrete to produce columns. This is a recognised practice for stabilising ground with similar characteristics to those found on Minster Marshes.

For example, this method was used at the nearby Discovery Park site in Sandwich to stabilise the ground for a fast-food restaurant. The project was carried out by Keller who stated on their website (Keller.co.uk) that the CMC (they referred to it as rigid inclusions) method was required because:

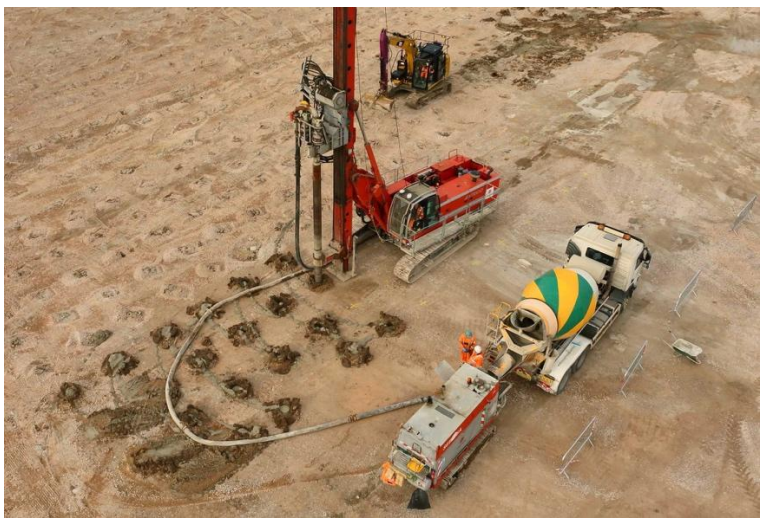
"*The main challenge was to provide a solution through the very low strength strata of the Tidal Flat Deposits while avoiding the formation of a pathway for contamination to the aquifer below*".

The CMC method was used in the Plocks Farm Manufacturing Factory by Menard (Menard.co.uk) to stabilise the ground and enable a 2m raising (the same as planned at Minster) of the site to avoid flooding risk. Menard explain:

"*The site is underlain by intermixed loose to very loose silty sands and clayey sands of alluvium origin, to depths of up to 9.0m. Below these weak soils are firm to stiff clays which overlie mudstone at approximately 15m below existing ground levels*".
These ground conditions are comparable with those identified in APP-171 for the Minster Marshes Convertor.

To achieve stability at Plocks Farm:

"*Menard installed 320mm diameter controlled modulus columns (CMC's) on a 2.0m x 2.0m grid to provide support to the upfill and also the slab dead and live loads. The upfill specified was granular, allowing the majority of the structural loads to be transferred more efficiently between the CMCs and the soil, thus allowing the adoption of a ground bearing floor slab*".



The average depth of the columns was 8m which is in line with bore hole data found in APP-171.

The Minster Marshes convertor site is 90,000m^2. For ease of calculation this equates to a square of dimensions 300m x 300m. Using the CMC method to stabilise the ground with a 2m x 2m grid would require approximately 22,500 (150 x 150) columns. Assuming the depth is 8m:

The volume of each column = Π x r^2 x depth = 0.6463m^3
Total volume of all columns = volume of each column x number of columns
= 0.6463 x 22,500 = 14,542m^3

This is the volume that will be displaced laterally and, since the Tidal Flats are saturated with Sulphate rich water and water does not compress easily, there is a risk of polluting the drainage ditches and the River Stour. It may also pose a flood risk.

2) **4.1 Junction Capacity Modelling**

a) **Use of the Hydrovac to remove at least 400mm over an area of 90,000m^2**

In APP-090 the Applicant refers to the use of a 44t Hydrovac. These units use high-pressure water (often thousands of PSI) to break up soil and a powerful vacuum system to extract it into the tank. A typical 44t hydrovac (Tardis.co.uk) has a capacity of 30,000 litres which is 30m^3. To remove the 36,000m^3 of Sulphate rich material would involve:

40,000 / 30 = 1,333 x 44t HGV arrivals and departures which gives:

2,666 HGV movements at K-BM02

It should be noted that in APP-90 Table 1.1 the Applicant only lists 1 hydrovac on site 100% of the time to inform its construction noise assessment.

b) **Concrete mixer movements for CMC**

Using the CMC method described above to stabilise the ground beneath the proposed convertor station involves filling the spaces left by the auger with concrete. In the case of the Minster Marshes this will need to be concrete that is capable of dealing with high Sulphate levels of 2000mg/l.

In APP-90, the Applicant lists the use of 32t 8m^3 concrete mixers for its noise assessment for construction. To deliver 14,542m^3 of concrete using 8m^3 concrete mixers would require:

14,542 / 8 = 1,818 concrete mixers which gives:

3,636 HGV movements at K-BM02.

It should be noted that in APP-90 Table 1.1 the Applicant only lists 2 on site (90% working, 10% idling) to inform its construction noise assessment.

These concrete mixers will almost certainly have come from / go to the Brett site on Ramsgate Harbour.

c) HGV movements for aggregate

This issue was raised at ISH3 but both the Applicant and KCC seemed to be dismissive of the thought that there might be thousands of HGV movements to deliver aggregate to the site. I know that the Ex A have asked the Applicant to respond to AP-10 from ISH3 but I thought it helpful to give some context.

i) Raising the base by 2m

In AS-093 4.6.18 the Applicant gives a figure of 250,000m^3 of "fill" and in APP-320 it lists the use of an 8-wheeled tipper lorry with a 20t capacity for its noise assessment.

Unfortunately, the Applicant does not give details of the type of aggregate to be used but Mainland Aggregates (Mainlandaggregates.co.uk) refer to MOT type 1 sub-base as being suitable because it "*is the most widely used approved sub-base in the construction industry*". They give the weight as between 1.9 and 2.2t/m^3. Using the lowest figure gives a weight of (250,000 x 1.9) = 475,000t.

Number of HGV tipper lorry = 475,000 / 20 = 23,750 arrivals and 23,750 departures.

47,500 HGV movements at K-BM02.

It should be noted that in APP-90 Table 1.1 the Applicant only lists 4 x 8-wheeled tipper lorry on site 25% of the time to inform its construction noise assessment.

d) Total movements

Either: Hydrovac (2,666) + aggregate for 2m rise (47,500) = 50,166 movements

Total HGV movements at the new A256 junction = 50,166.

Or: Concrete mixers (3,636) + aggregate for 2m rise (47,500) = 51,136 movements

Total HGV movements at K-BM02 = 51,136.

It is clear that there will be in excess of 50,000 HGV movements using K-BM3. Have these movements been included in the Junction Capacity Modelling?

e) Access peaks for junctions

In AS-093 Table 4.10 the Applicant indicates that "Enabling Works" for the Minster Convertor Station will begin in Q4 of 2026. The details are given in 4.6.12 – 4.6.18 but include the building of haul roads, Bellmouths (including K-BM3) and ground improvements. These Enabling Works will require, amongst other things aggregate and concrete as described above with the resulting HGV movements.

APP-067 Table 7.28 shows a peak daily construction movement for 2026 and includes HGVs of 39 arrivals and 39 departures from / to the A256 which is the main access route to the Minster Converter Station. With at least 50,000 movements and a maximum of 78 HGV movements a day at K-MB3 that **will take approximately 22 months at least just to stabilise the base and construct a 2m platform.**

It is difficult to understand why the Applicant does not identify 2026 into 2027 as being a potential peak approaching the number of HGV movements predicted in 2028 (200) for K-BM02?

3) 4.1 Junction Capacity Modelling and 8.1 Intra-project cumulative effects

In APP-320 Table 3.4 the Applicant lists the Planned Generation for the SC2 group and it includes the Kulizumboo Interconnector with a 2027 completion date. According to the LTMR website (ltmr.uk) the Kulizumboo Interconnector is:

"*….. a major 70MWp solar energy project across 250 acres of land next to Richborough Energy Park in Sandwich, Kent*".

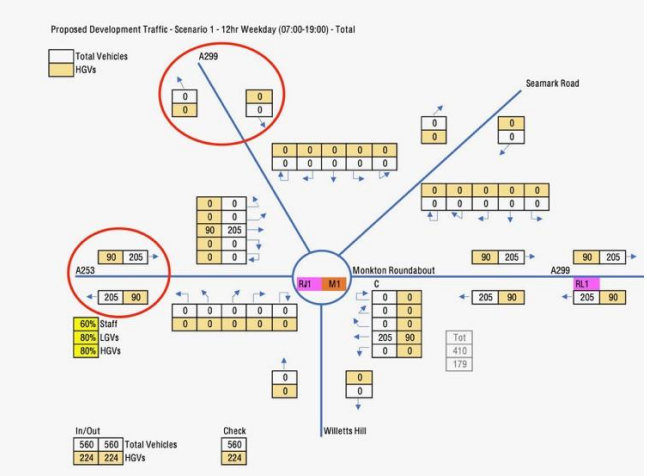
I am surprised that the Applicant has not raised this as potentially having an intra-project cumulative effect because:

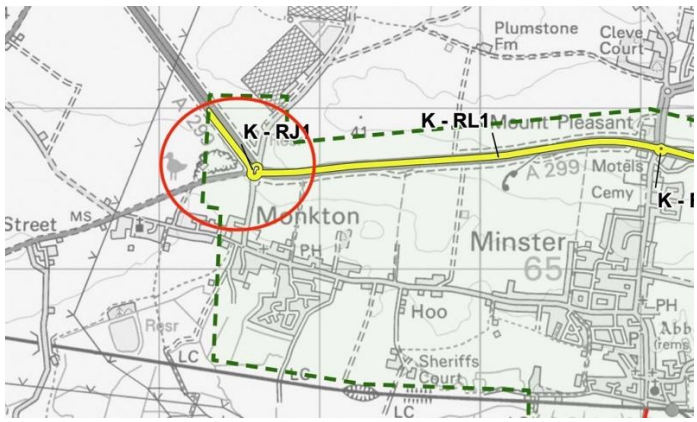
- It has completion date within the window for construction of the Sea Link.
- The site chosen is in proximity to the Sea Link Convertor Station.
- The high likelihood that the Kulizumboo Interconnector would need to make landfall at Pegwell Bay.

Has the intra-project cumulative effect of this project been assessed by the Applicant?

4) 4.1 Junction Capacity Modelling inconsistencies

a) In APP-181 Traffic Flow diagrams 12hr weekday (07.00-19.00) on the next page shows 90 HGVs (and 205 other vehicles) using the A253 whereas in APP-266 HGV routing map it shows HGVs using the A299 not the A253.

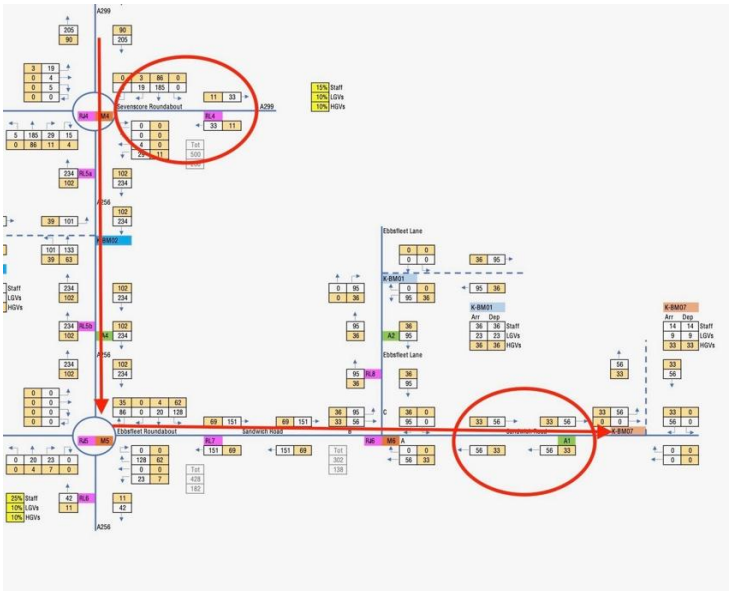


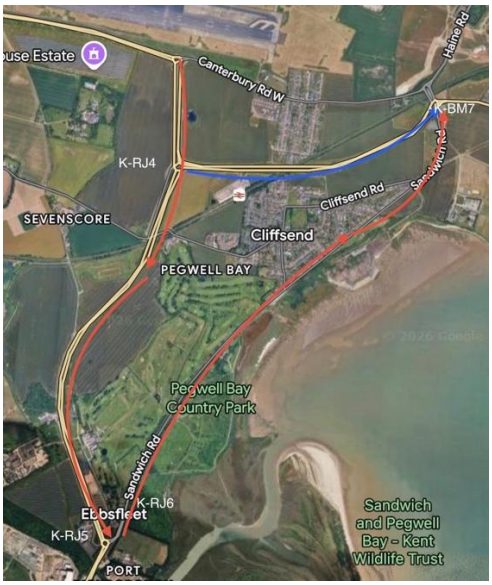


Is this a simple transcribing error or does the Applicant need to redo the Junction Modelling Capacity for K-RJ1?

b) In APP-181 Traffic Flow diagrams 12hr weekday (07.00-19.00) it shows 33 HGVs continuing South at junction K-RJ4 onto the A256, left at K-RJ5 onto the Sandwich Rd, straight on at K-RJ6 until reaching K-BM07 (shown by the red arrow on both). The 33 HGVs then reverse that route from the compound at K-BM07 back to the A299.

In APP-181 Traffic Flow diagrams 12hr weekday (07.00-19.00) it shows 11 HGVs turning left at K-RJ4 (circled top left).





It is not clear to me why the 33 HGVs don't do the same onto the dual carriageway (as shown by the blue arrow on the right-hand map) and turn right at the next roundabout to reach K-BM07? This is a much shorter route, on better roads and avoids passing receptors on the Sandwich Road.

The Applicant does not make clear where the 11 HGV vehicles, identified earlier, are going to and from but the assumption is that it is to and from Bretts on Ramsgate Port.

It is also not clear where the Applicant is sourcing the 250,000m3 of aggregate but referring to APP-181 and APP-266, the majority of HGVs carrying aggregate must be coming from the west via either the A253 (APP-181) or the A299 (APP-266). Logically, the HGVs will be using the A299 but clarification would be useful.

5) **10.1 Construction noise effects**

a) **In response to Action Point AP68 from ISH2, the Applicant (REP4-086) states:**

"*A setting of soft ground is used for this project because most of the ground between sources and receptors is natural rather than man-made and considered acoustically soft. Adding a small area of hard ground would create inaccuracy in the results, and, given its likely negligible influence on the overall results, it is not considered proportionate to model in this way.*"

The result of this astonishing admission is that the sound contours for the entire Hoverport site are meaningless.

The Applicant has to respond to this point in EV9-018 Action Ppoint 56 and I look forward to reading their response.

b) **Surface or R-waves**

Concrete is a very good conductor of sound vibrations close to the surface reaching speeds of up to 2500m/s with little attenuation. The Applicant does not appear to have modelled the effect of these surface waves.

This is of particular importance because it has been acknowledged by the Applicant that the Hoverport site is home to rare invertebrates and these live close to or in cracks just below the surface.

It should be noted that grass snakes, slowworms and lizards have been spotted and photographed at a location approximately 10m from the proposed access route. In addition, on the 18th March, a pair of Long Tailed Tits were observed and filmed building their nest in vegetation ON the access route.

The Applicant has to respond to this point in EV9-018 Action Point 57 and I look forward to reading their response.

c) Sound contours for receptors on the Sandwich Road

The Applicant has confirmed that no construction vehicles will be "parked" at the Hoverport so all construction vehicles will travel to and from the compound at points of high tide. This will be up to 40 movements a day.

The Applicant does not appear to have produced up to date contours for the access route from Sandwich Road to the compound. This is important because there are properties close to the exit / entry point to the Hoverport.

Contours should include both airborne noise but also a separate one for surface vibrations.

The Applicant has to respond to this point in EV9-018 Action Point 56 and I look forward to reading their response.

6) Ecology and Biodiversity

a) 13.3 Mitigation for Daubenton's bats in Pegwell Bay

It has been acknowledged by the Applicant that Daubenton's bats are present at the Hoverport site. Thanet District Council (TDC) in REP4-160 1.1.9 indicated that:

"*TDC objects to the proposed activity of siting and operating up to 40-tonne vehicles on the former hoverport site, particularly involving crossings over the concrete skirt into Pegwell Bay. The potential for environmental damage outweighs the operational benefits; and alternative access methods should be considered and prioritised*.

Should the Examining Authority determine that some form of site access is unavoidable, TDC recommends the imposition of the following commitments to safeguard Pegwell Bay from contamination risks caused by structural damage. These commitments emphasize prevention, monitoring, and rapid response".

One of these conditions involves the use of wheel-wash facilities:

"*All entry/exit points must incorporate wheel-wash facilities (non-toxic to marine environment and aquatic organisms) or decontamination zones to prevent tracking of materials from the pad into the bay. Vehicles should be inspected and cleaned before and after bay access*".

Contrary to what the Applicant suggested at the ISH3, TDC are asking for these wheel-wash facilities at the point where the vehicles transition from the intertidal area to the Hoverport site. To suggest, as the Applicant did, that these facilities could be at the junction between the Hoverport Access route and Sandwich Road is to miss the point.

Since the construction at Pegwell Bay will be during low tides both day and night it seems inconceivable that the wheel-wash facility will not require lighting to enable the vehicles to "*be inspected and cleaned before and after bay access".*

This lighting will have a severe detrimental effect on the Daubenton's bat colony and it is hard to see how this can be mitigated.

b) 13.4 Pegwell Bay and former Hoverport access and disturbance

As indicated above TDC are very concerned at the serious risk of pollution caused by the movement of very heavy vehicles over the weakened Hoverport site and require:

"Vehicles and machinery must not directly traverse the edge of the concrete skirt. Instead, access should be facilitated via engineered ramps or temporary bridging structures designed to distribute weight and prevent direct contact with the skirt. These structures must be constructed from non-contaminating materials (e.g., geotextile-reinforced matting) and approved by an independent structural engineer prior to use. The hoverport area and all access points must be pre-assessed via non-invasive surveys (e.g., ground-penetrating radar) to identify weak zones.

Limit vehicle movements to designated structurally sound pathways within the apron, avoiding proximity to the bay edge by at least 5 meters unless bridged".

The use of an engineered ramp or temporary bridge would have the added benefit of giving certainty to the route used by the Applicant and would reduce the area of the Hoverport required to give "flexibility". Obviously, there would be the additional area set aside for wheel-washing but the uncertainty would be removed giving clarity to the Ex A in their change of order limits decision.

7) Conclusion

Throughout this examination it has become clear that the documentation provided by the Applicant contain frequent errors, omissions, contradictions and misrepresentations. The Ex A will know whether this Application is normal for NSIPs or is worse than normal, but it seems to me that the Applicant was underprepared because they assumed it was a fait accompli. Considering the resources at their disposal it is unacceptable to me that their work is so poor.

David Stevens.