

Prepared on behalf of Countryside Properties PLC

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Client	Countryside Properties PLC
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1.0 EXECUTIVE SUMMARY

This Technical Note has been produced following the granting of planning permission by the Planning Inspectorate on the development known as Land at Station Road, Elsenham (S62A/22/0012). Key considerations of the Inspector’s findings on that permission as well as the implications upon the determination of the Land South of Henham Road are covered within this Technical Note.

These are summarised as follows:

- The Inspector in determining the Land at Station Road scheme concluded the highway impact of that scheme AND the Land South of Henham Road scheme would not be severe;
- VISSIM modelling produced for the Land South of Henham Road scheme is considered to be overly robust and pessimistic, but does not show any potential for ‘gridlock’;
- Conclusions reached by ECC and EPC are incorrect, in main because they do not compare the impact to the correct baseline nor consider the effects fully of modal shifts;
- The scheme, generating only 28 / 29 vehicles in the peak hours, would not have a severe residual impact on the highway network.

2.0 KEY CONSIDERATIONS

Introduction

The application for residential development at Land South of Henham Road, Elsenham was made under a Section 62 application in August 2022 under reference S62A/22/0007. Subsequently, significant post-submission work including traffic modelling and discussion has occurred on the application with involvement from Essex County Council (ECC) Highways, the operator of Stansted Airport Manchester Airports Group (MAG) and Uttlesford District Council (UDC). Representations on the application have also been received from local residents and Elsenham Parish Council (EPC).

In addition to the application set out above, a further consideration is a much larger residential development that was submitted by others, via the Section 62 process at land adjacent to Elsenham railway station for up to 200 residential units. That scheme received outline planning

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consent on 11th April 2023 under reference S62A/2022/0012. The scheme is known as “Land East of Station Road, Elsenham”.

Following consent of the “Station Road” scheme, Ardent Consulting Engineers (ACE) has reviewed the Inspector’s comments on that permission alongside the responses received by ECC and EPC to the Ardent Consulting Engineers (ACE) Transport Addendum Report (**doc. ref. 2008170-011**) submitted in February 2023, and this Technical Report provides responses to the pertinent points arising subsequent to the ‘Land East of Station Road, Elsenham’ consent. This includes:

- Cumulative Impact of Proposed Developments
- Differences between Modelling Approaches
- Queue Lengths
- Impact upon Junction Operation
- Changes to Modes of Transport
- Grove Hill Junction
- Draft Scheme of Improvement at Grove Hill
- Impact of the Proposal upon the Highway Network as Modelled

Pertinent points arising subsequent to ‘Land East of Station Road, Elsenham’ consent

The key points that have emerged following the granting of the “Station Road” scheme which are pertinent to the assessment of the Land South of Henham Road (S62A/22/0007) scheme are as follows:

Cumulative Impact of Proposals

1. The Station Road application has received consent with the Inspector clearly accepting that the cumulative impact of Station Road and other proposed development in the area, including the proposal at ‘Land south of Henham Road, Elsenham’, is not severe. This is referenced at paragraph 84 of the Inspector’s findings on the Station Road scheme, whereby it is clear that the Station Road development was considered acceptable with all development scenarios “*including the sensitivity test with the additional flows from the development currently applied to the south of Henham Road*”. It is clear that the Inspector in determining the Station Road site was content with the impacts of the schemes cumulatively. This should carry significant weight when determining the Land

South of Henham Road scheme.

Differences Between Modelling Approaches

2. The VISSIM modelling carried out in relation to the Land South of Henham Road submission, which was prepared to meet ECC's requirements, is considered to be overly robust and far more pessimistic than the Station Road model due to the following:

- a. Additional Committed Development flows – the Station Road model did not include the same full committed development flows that were requested by ECC for inclusion in the Land South of Henham Road model. Therefore, the committed development flows in the Land South of Henham Road modelling are slightly higher than those in the Station Road model.

However, the Inspector for the Station Road application acknowledges that the Station Road model did not include the committed development flows for Land South of Vernon's Close within their model but was content that the impacts would not be considered significant if added (paragraph 92 of the Inspector's report on Station Road).

- b. The approach to modelling parameters and coding of situations will naturally differ between models as they are produced by different consultants. As such, unless consultants use the same models (or are instructed to) there will be differences in output. In this instance, ECC does not have an agreed base model that they own, nor have they requested consultants to use the same model for all analysis – this has been the situation on a number of applications and appeals previously held with each consultant producing their own models.
- c. In addition to the differences between the Station Road model and the proposed Land South of Henham Road model, there were a number of factors that were highlighted in the Transport Addendum Report that would impact on the model results. Without specifically re-stating the fullness of these points, it is worth noting that the use of the Sensitivity Tests portrayed in the Transport Addendum Report are important. It is noteworthy that ECC and EPC dismiss such matters, but they are key considerations e.g. the spread of traffic through peak times, including the use of viable alternative routes, the robust distribution of traffic throughout the network, the effects of significant contributions to new bus

services and the limitations to the modelling approach requested by ECC.

Cumulatively, they provide an overly robust and far more pessimistic assessment in terms of traffic flows compared to the Station Road model.

Queue Lengths

3. Both Essex County Council and Elsenham Parish Council reflect on the queue lengths to assess the impact of the development on the highway network. However, queue lengths are not ideally suited to assessing impact but are used as an indicator for calibrating the model. Journey times have defined validation criteria and take account of queuing. Both The Modelling Group (creators of the VISSIM model for the Land South of Henham Road) and WSP (creators of the VISSIM model for the Station Road scheme) highlight that observations of queues are subjective. The Modelling Group state that *“journey time comparisons are a more reliable tool to assess the relative impact of scenarios tested.”* WSP state that *“there is no formal length validation criteria prescribed by industry guidance, but in general the length, variability and profile of modelled queues throughout the hour should match observations.”* The Inspector in relation to the Station Road scheme was content with the calibration and validation of the modelling produced.

Impact upon Junction Operation

4. The focus of the response from ECC is on the difference in junction operation against 2023 scenario as referenced by ECC (which for clarity is against the 2022 survey data). This is not considered to be the appropriate comparison in terms of development impact as it excludes the now consented scheme impacts that have been accepted by ECC / UDC / PINS through previous applications and appeals i.e. the Land South of Henham Road scheme would not cause an additional impact of 77 seconds and 133 seconds in AM peak as characterised (in the ECC response), or 398 and 194 secs in the sensitivity case (in the ECC response). The proposals against the consented schemes locally are judged to be a maximum of 167 seconds through the whole wider network in the AM peak (westbound) and 30 seconds through the whole wider network (eastbound). In the PM peak the impacts are judged to be a maximum of 64 seconds westbound and 43 seconds eastbound, again through the whole wider network in both cases. These impacts are inclusive of the now-consented Station Road development and all other committed development flows as set out previously.
5. Again, it should be highlighted that the excessively robust nature of the model provides

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an overly pessimistic approach to the operation of the network. For example, the model has been coded so that all areas of on-street car parking are fully utilised during the peak hours modelled which does not accord with on-street operation currently.

Changes to Modes of Transport

6. As was evidenced within the submitted Transport Addendum Report a small reduction in trip rates for consented schemes or changes in travel behaviour for local residents would free up further capacity locally. The Sensitivity Test that was completed in VISSIM showed how a modest 15% reduction in committed development would add further capacity to the local highway network. This is considered a realistic, deliverable scenario, albeit dismissed by EPC and not the focus of consideration in ECC's response.
7. The significant financial contributions towards bus services being made by committed developments and also secured as part of the appeal scheme (if permitted) is part of that modal shift. However, the change in travel patterns would also play an effect as increased and persistent trends in home-working that had been occurring and have only exacerbated by the COVID pandemic are set to continue.
8. Such minor changes in background or committed development flows would further improve network operation over and above the main case scenario (noting the levels of robustness contained within that scenario). Whilst it is not considered that the impacts of the main case are severe, the sensitivity test outlines how a modest change in travel patterns can further enhance network performance.

Grove Hill Junction

9. ECC suggest the northbound queuing on Lower Street at the Grove Hill junction due to the development and sensitivity test (proposed development + Station Road) will "*very likely cause gridlock*". It suggests this gridlock will have a knock-on effect to the operation of the whole network and cause negative driver behaviour that could impact highway safety. It should be noted that the modelling does not show there is (a risk of) gridlock and that this has been checked with the modelling team with locking up of the model not occurring. Therefore, there is no evidence to show that the operation of the network would be unsafe in the manner suggested.
10. It is also noted and acknowledged by the Inspector in relation to the findings at the Station Road scheme (paragraph 98) that an acute issue that causes significant problems at the Grove Hill signal junction is when HGVs are caught in the area either due to driver mistakes or insufficient road width being left to allow oncoming vehicles to pass.

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11. It is understood that ECC have required a contribution towards the assessment and potential further restriction of HGVs along this route from the Station Road scheme. Such a contribution has also been requested in relation to the Land South of Henham Road scheme.

Draft Scheme of Improvement at Grove Hill

12. In acknowledgement of the comments raised about the impact upon Grove Hill, and following site visits to the area, a draft scheme (see attached to this Note as **Appendix A**) has been prepared (Drawing Reference: **2008170-046**) which could be implemented to restrict queueing traffic from entering adjacent to where the parked cars are located, should the Inspector have residual concerns about the operation of this junction; whilst it is considered that this scheme is not necessary, Countryside would be agreeable to implementing it.
13. Site visit observations identified that those familiar with the junction are aware of the approach needing to be taken at this junction and will wait at a point prior to the first (eastern-most) parked car until the vehicles at the stopline move off. However, drivers less familiar to the area do not take such caution. The draft scheme could introduce 'Keep Clear' / hatch markings that would deter drivers from entering this area thereby reducing the potential of conflicts with vehicles travelling in the opposite direction. The draft scheme would be enforceable at all times.



Image 1: Similar example from Chorleywood, Hertfordshire

Impact of the Proposal upon the Highway Network as Modelled

14. In relation to the predicted operation of the highway network as modelled, a couple of key points are also to be considered. Firstly, the proposed development at Land South of Henham Road is predicted to increase traffic movements by fewer than 30 movements in a peak hour which is considered the starting point for discussions in relation to the requirement for modelling. Secondly, the impacts of junction operation are currently focussed on peak hour operation only – this is a very intense and short period of impact in which commuters, residents and other highway users would typically expect delays to occur. Outside of such commuting times there are no issues with the key Grove Hill junction experienced, nor would the proposed development be predicted to adversely affect it (given the trip generation of the site would be far lower than the 28 to 29 vehicles predicted to occur in the peak hours).

Off Site Highway Improvements

15. In relation to the off-site improvements and mitigation measures put forward on other parts of the network (e.g. the Coopers End roundabout and Parsonage Road/ Hall Road mini-roundabout) it is noteworthy that the much larger Station Road development granted consent by the Inspectorate was not required to make contributions or upgrade these locations. The applicant has sought to work pro-actively with the local highway authority and MAG to identify potential measures to enhance junctions to the benefit and improvement of all road users even though impacts from the proposals are far lower than would need to be mitigated. It is requested that this is considered by the Inspectorate in determining this application in that either a) the proposed Land South of Henham Road scheme equally should not have to contribute or upgrade the off-site highway junctions that were not required to be upgraded by the Station Road development for consistency purposes or b) that the package of improvements be viewed holistically in that additional capacity is being provided to the network by the applicant where improvements can be made.

Summary and Conclusion

16. As per all previous highway assessments relating to the Land South of Henham Road scheme, it is considered that the proposals would not result in a severe impact on the highway network (as not also concluded by the Station Road Inspector) and that the application should be granted permission.