

SUMMARY OF NEWMARKET HORSEMEN'S GROUP HIGHWAYS EVIDENCE - MAY 2019

Introduction

1. The Newmarket Horsemen's Group (NHG) (the Rule 6 Party at the forthcoming Inquiry) have instructed COTTEE Transport Planning and SYSTRA (microsimulation modelling experts) to examine highway and transport matters associated with the proposed residential development of up to 400 dwellings at Hatchfield Farm (HF), Fordham Road, Newmarket. This is of relevance to the wider question of soundness of the highways evidence presented to the Plans examinations in relation to Newmarket as a whole.
2. The traffic situation in Newmarket has moved on from the previous Inquiries in 2012 and 2015 with more information and a greater depth of understanding of the traffic issues. New evidence, including that submitted to the Local Plan examinations, has emerged that warrant traffic congestion and highway safety issues in Newmarket to be considered afresh.
3. Representations were made on behalf of NHG at the Plan examinations and NHG appeared at them explaining that essential underpinning traffic modelling evidence had not been provided, and stating that it should be provided.
4. NHG expressed concerns at that time that no analysis had been undertaken to assess traffic interaction at key junctions in the town. They stated that modelling should extend to include the Clocktower Roundabout, Bury Road and High Street to assess junction and new horse crossing interaction and the associated impact on traffic queuing and delay to determine whether the residual cumulative impacts are severe in the context of NPPF - and therefore determine whether there was sound evidence to underpin the SALP proposals. Since the Local Plan examinations it has been established that Jockey Club Estates will deliver a Pegasus crossing at Rayes Lane in 2020 to improve the safety of horses and their riders. This is being implemented in partnership with Suffolk County Council (SCC).
5. At the hearings the councils' consultant Aecom concluded that the Clocktower roundabout was overcapacity in future scenarios and that there are no obvious solutions. This is an important inconsistency with the evidence presented to the HF Inquiry where HF's consultant WSP have concluded that the key junctions will operate with spare capacity in 2031 with development and growth despite the junctions operating with considerable congestion now and no mitigation proposed. The HF evidence is counterintuitive and plainly incorrect.
6. In the Local Plan examinations the councils failed to engage with NHG on the issues identified and as a result NHG decided, given the forthcoming re-opened inquiry, to commission the necessary surveys and modelling to demonstrate the traffic issues experienced by those living, working and visiting Newmarket. This work was undertaken in the latter part of 2018 when it was clear the councils were not prepared to properly consider the seriousness of NHG's concerns.

7. NHG's future years modelling work confirms severe residual cumulative impacts arising from the HF proposals. When HF produced their Updated Transport Assessment (UTA) in December 2018 with no acknowledgement of the existing junction interaction it was apparent that they had followed the same path as the councils in ignoring the conditions that are clear to all those using Newmarket's road network each day. In short, HF submitted flawed analysis that fails to take proper account of existing traffic conditions and how key junctions interact.
8. NHG's work shows that even with lower growth factors than used by Aecom for the Local Plan, traffic conditions will become more severe and there is no coherent strategy by the councils to address the issues their own consultant has identified. On this basis NHG consider there is a lack of sound evidence to underpin the Plan.
9. At the 2015 Inquiry NHG explained that the issues identified at that time needed to be examined on a strategic plan-led basis, rather than by the means of a planning application / appeal, given the long term implications involved and the importance of considering the options in detail before a final decision is taken.
10. Whilst a plan-led approach has been undertaken, having closely examined the reports NHG remain of the view that the council's evidence base was flawed and did not properly consider locations where cumulative traffic impact is severe to be dealt with on a co-ordinated basis. The piecemeal approach, which appears to be the way the council wish to proceed via their Development Management policies, will not achieve a comprehensive or consistent solution to Newmarket's transport issues.
11. Furthermore, there is no evidence available that the councils have considered how to deal with the issues Aecom raised as regards measures to increase trips by sustainable modes.
12. The councils' position at the hearings was based on their consultant Aecom's assessments which did not take account of the considerable existing congestion in their modelling and therefore did not identify the severity of the residual cumulative impacts of the proposed allocations. The joint authority West Suffolk Council, which came into force on 1 April 2019, will be producing a Local Plan for the wider area and therefore traffic and sustainable transport issues identified will need to be addressed as part of that process and underpinned by the appropriate evidence in this regard.
13. Another opportunity therefore exists to properly examine these issues under the new joint West Suffolk Council.

Traffic Modelling

14. When HF submitted their UTA in December 2018 it was apparent that their consultant had not used the appropriate software to adequately model the two key junctions in Newmarket. The key junctions are the Clocktower roundabout, which is the focal point for five main routes into Newmarket; and the closely associated Fred Archer Way / Fordham Road traffic signal junction which is around 70m to the north. Queues at these junctions currently interact with each other due to high volumes of traffic leading to considerable congestion.

15. A close inspection of HF's work by NHG revealed the modelling to be seriously flawed. Some illustrations of this are:
- WSP's stand-alone junction modelling is predicated on key junctions operating without interaction when in reality they do.
 - WSP's modelling fails to replicate existing traffic conditions therefore there is no confidence that it will model future conditions.
 - The outcome of WSP's failure to properly model the key junctions led to their modelling results showing better traffic conditions in 2031 with development than observed existing conditions despite there being no proposals to improve the junctions.
16. In discussions with SCC it became clear that they had not examined HF's submissions properly or objectively and had recommended approval without requiring the necessary evidence from HF. In their letter of 23 January 2019 recommending approval to FHDC, and meetings held with them before and after the letter, there were a number of warning signs which are explained below.
17. NHG's video footage demonstrating significant junction interaction and congestion was shared with SCC on 17 January 2019 and it soon became clear that SCC did not fully appreciate the interaction of the junctions and the extent of queuing that exists. The microsimulation modelling commissioned by NHG was also presented to SCC at this time showing how existing conditions were replicated by the model; and it was explained how and why the HF's model failed in this respect. A total of four meetings took place with SCC and it was clear that some officers involved in the decision making process had not at that time undertaken a full site visit to closely examine existing traffic conditions. Meetings were also held with representatives of HF commencing in January through to March.
18. In their letter SCC had also suggested that traffic will re-route around the A14 or onto other local roads in Newmarket to avoid the congested junctions, but there are no alternative suitable or feasible routes for traffic to re-route to in Newmarket. The routes identified by SCC are lower category (all), have high levels of accidents (Exning Road) and many are traffic calmed (Rowley Drive and George Lambton Avenue). NHG consider that these are inappropriate routes to identify for the re-routing of traffic and will exacerbate further rather than solve existing traffic issues. The need to rely on such routes seems an implicit recognition of SCC's failure to address the issue properly. In any event with the existing levels of congestion it is highly likely that re-routing will have already occurred and any 'headroom' available elsewhere will already have been used up. This is apparent from existing traffic conditions, especially in the evening peak period, when both Fordham Road and Fred Archer Way approaches are heavily congested. It is notable that SCC did not mention the possibility of re-routing in their letter to FHDC in connection with HF's modelling. This is one example where SCC applied different criteria to the requirements for the HF modelling to those applied to the NHG modelling.
19. The evidence from RPS for HF underlines several times the considerable existing congestion in Newmarket (including by reference to previous Inspector's Reports) which in NHG's view emphasises the scale of the problem, which has not been properly assessed by the councils in the context of the Local Plans.

20. SCC's letter of recommendation to FHDC also stated that residents of Newmarket and HF could use horses to travel around the town as a way of reducing traffic congestion, which is considered by NHG to be absurd. It is another example of SCC's failure to appreciate or understand the problems.
21. Contrary to HF's conclusions, and SCC's support for them, the councils' own consultant Aecom (as part of their Local Plan evidence - August 2016 Section 8.6), found the Clocktower roundabout junction to operate overcapacity in future year scenarios. Importantly Aecom concluded there are no obvious improvements to increase capacity at the Clocktower roundabout without inappropriate impacts on pedestrians (it should be noted that existing conditions for pedestrians are unacceptable in highway safety terms as explained later). They referred to measures being required to increase trips by sustainable modes. However, there are no significant proposals in the Plan Period to increase sustainable travel, reduce traffic and create spare capacity at these key junctions.

Aecom's Local Plan evidence

'8.6.3 The capacity assessment results for [Clocktower roundabout] the existing layout show that the B1063 Old Station Road and A142 Fordham Road arms are shown to be over-capacity in the future scenarios....'

'8.6.7 There are therefore no obvious improvement options to increase junction capacity without taking space away from pedestrians/ public realm which would be inappropriate in this town centre location. Measures to increase trips by sustainable modes should therefore be a focus for delivering developments in Newmarket.'

22. Aecom's SALP Cumulative Impact Study – Addendum dated October 2016 for FHDC Table 9 (Summary) junction number 19 (Clocktower Roundabout) states:

"...Further options should be explored as part of a wider Newmarket town centre study to include the Fordham Road signals and Exeter Road junction."

23. HF (supported by SCC) concluded that the impact of the development is not severe in the context of Paragraph 109 of the NPPF. However, the basis upon which they draw their conclusion is flawed and it is apparent from their work that they only take account of 'residual impacts' (i.e. their development traffic only) rather than the 'residual cumulative impacts' NPPF stated test which takes account of traffic growth in addition to development traffic. This is especially important when the network is currently congested because adding traffic with no mitigation will exacerbate existing congestion.
24. There are parallels between this call-in Inquiry and the Kidnapper's Lane case. The Inspector's Report to the Secretary of State dated 11 January 2016 Appeal reference APP/B1605/W/14/3001717. The Inspector in that case was called upon to consider whether the appellant's case (supported by the Local Authority and the Highway Authority) that the proposed development should be expected to do no more than "wash its own face", or whether it is the residual cumulative impacts i.e. the cumulative effect of all expected development which must be taken into account, rather than the individual contribution of each development in turn.
25. The Inspector concluded that unless effective measures were taken, the cumulative impact of development on conditions on the highway network in the future year scenario, both for existing residents and for potential future residents of the appeal proposal, would be unacceptable; and taking account of measures included in mitigation, the residual cumulative effects of development proposed

would increase demand for use of sections of the highway network which are already operating at over-capacity levels, contributing to a severe impact. The Appeal was dismissed.

26. The developers challenged the decision based on the approach to the highways conclusions in particular as adopted in the Inspector's report and Secretary of States' Decision letter. The High Court rejected a challenge to the decision (including to the approach to traffic impact) as unarguable and refused permission to apply (*Bovis Homes & Miller Homes v Secretary of State* [2016] EWHC 2952 (Admin)).
27. Due to lack the lack of engagement by the council's with NHG's serious concerns on traffic issues, NHG committed to a substantial financial investment in commissioning a study to properly examine and understand how key junctions and crossings interact in future years with proposed development.
28. As regards the horse crossings there has been good progress recently on specific horse crossing safety improvement schemes, with Jockey Club Estates (part of NHG) working with SCC on jointly funded projects to address existing issues. However, Newmarket's broader traffic issues are another matter that require a coordinated strategic approach with a particular focus on the area around the Clocktower roundabout.
29. In August 2018 NHG commissioned SYSTRA, who are recognised specialists in microsimulation modelling, to commence the process of examining the area around the Clocktower roundabout and the five routes that converge at that point. This junction is the focal point for all traffic moving in, out, through and around the town. NHG commissioned the collection of substantial data from surveys, and a traffic model has been developed by SYSTRA to replicate existing conditions as closely as possible. SYSTRA have visited Newmarket on many occasions and viewed hours of video recordings for them to ensure their model is fit for purpose and can be used with confidence in predicting future traffic conditions.
30. The study commissioned by NHG contrasts markedly with the seriously flawed modelling undertaken by HF. This will be an issue for the re-opened inquiry. The issue of cumulative impacts is key because HF's modelling shows no significant queuing or junction interaction either existing or in 2031 - but then it would be surprising if it did because the model is not calibrated to replicate existing conditions and is therefore invalid for the reasons explained earlier.
31. Various criticisms have been made by HF of NHG's modelling one of which is that its microsimulation ought to have included a wider area of Newmarket. Whilst this criticism is not accepted it does highlight the absence of such a model, even for local plan purposes and that Aecom have not modelled Newmarket properly or as a whole, with no account taken of the interaction of all key junctions in Newmarket.
32. The lack of a systematic approach undermines the soundness of the transport evidence for the Local Plan examinations.
33. Whilst there are issues between NHG and HF on the modelling, these issues have simply not been considered by the councils for the purposes of the Local Plan. Furthermore, the issues are not

something to be simply dealt with in the context of a single development. If the issue of cumulative transport impacts are not resolved in the context of the plan examinations this issue is likely to recur in the context of the bringing forward of allocated sites in Newmarket and must threaten their deliverability. This also underlines the sense of the NPPF which requires cumulative impacts to be examined as opposed to consideration on a site by site basis, such as HF contends, where each development is only required to 'wash its own face'.

Highway Safety – the first Paragraph 109 NPPF test

34. Turning to the first test under paragraph 109 of the NPPF i.e. whether there are unacceptable impacts on highway safety. This has been considered in detail by studying the road network both onsite, and through observing many hours of video recordings. During this study numerous unacceptable highway safety issues have been identified involving vulnerable pedestrians attempting to cross at both the Fred Archer Way signals and the Clocktower roundabout; and drivers having to manoeuvre their vehicles awkwardly in congested traffic conditions to make their way through each junction. Bearing in mind no mitigation measures are proposed to address highway safety, adding traffic from HF will worsen conditions of safety further, and will result in unacceptable impacts on highway safety contrary to the first NPPF test.
35. The following video clips from the NHG traffic surveys of pedestrians crossing at Fred Archer Way signal junction can be viewed (and downloaded) at the link below.
https://www.dropbox.com/sh/hq9gu65kxftoew/AAAhYbdFEiTf-6Qtp8I4_qY0a?dl=0
36. The lack of formal pedestrian crossing opportunities throughout this part of the network makes it difficult for pedestrians to know the safest point to cross and also for car drivers to know where to expect pedestrians to be crossing. The video clips illustrate that pedestrians cross at various points; and in the absence of pedestrian 'green man' signals to provide pedestrians with a safe passage across this busy junction unacceptable highway safety conditions persist.
37. The following video clips from the NHG traffic surveys of pedestrians crossing Bury Road and Fordham Road at the Clocktower roundabout can be viewed (and downloaded) at the link below.
https://www.dropbox.com/sh/hq9gu65kxftoew/AAAhYbdFEiTf-6Qtp8I4_qY0a?dl=0
38. The Clocktower roundabout has no kerbed pedestrian refuges; and only one non-standard zebra crossing (with no beacons) is provided on the High Street arm. This means that pedestrians are highly vulnerable when they need to cross three of the four arms of the roundabout i.e. Fordham Road, Bury Road and Old Station Road. This is considered to be unacceptable in highway safety terms.
39. Many of the same problems regarding pedestrian vulnerability and lack of formal pedestrian crossing facilities described above for Fred Archer Way are also applicable to pedestrian movements at the Clocktower roundabout with the video clips regularly showing pedestrians feeling it necessary to run to cross Bury Road and Fordham Road to make sure they avoid traffic, including heavy goods vehicles, that is either exiting or entering the roundabout sometimes at speed.
40. HF's statement in their UTA that reduced car travel would lead to safer roads is particularly important in the context of the evidence on highway safety because there will be no reduction in traffic in the

vicinity of the Clocktower roundabout, on the contrary, traffic levels will increase. If as HF say, reducing traffic would lead to safer roads then it must be right that increasing traffic from HF will lead to less safe roads when there is no mitigation to address it.

Severe Residual Cumulative Impact – the second paragraph 109 NPPF test

41. The second test in paragraph 109 of the NPPF is whether the residual cumulative impacts are severe. No mitigation measures are proposed by HF to address the capacity and congestion issues identified by NHG, and the Council have not advised of any schemes planned, therefore for the purposes of the HF Inquiry and Local Plan examinations it must be assumed that the road layout will be the same in the future years modelled as it is now.
42. NHG consider that existing conditions are severe based on the capacity and congestion references set out in paragraph 108 of the NPPF, and many hours of studying Newmarket's road network and observing junction interaction, long traffic queues and congestion.
43. SCC have disagreed and have sought in discussions to compare 'severe' in other towns to 'severe' in Newmarket, however Newmarket's circumstances are very different to other towns in the UK and it should be assessed in light of its own special circumstances.. It is the internationally recognised home of the Horse Racing Industry with 2,500 horses in training, crossing the roads and interacting with traffic almost every day of every year. Horse racing industry (HRI) personnel need to move around the town efficiently and with predictable and reasonable journey times to carry out their day to day business, this is particularly the case with emergency vets and first aid responders in the event of an accident on the gallops or on the road. However, it is not only the HRI that needs a properly functioning transport network. All residents and businesses in Newmarket need to carry out their daily activities safely and without having to negotiate congested roads so the issue extends well beyond impacts to the horse racing industry and has serious implications for all of the proposed housing in the Local Plan.
44. The councils' consultant Aecom provided evidence to the Local Plan examinations confirming there are no obvious improvement options to increase junction capacity at the Clocktower roundabout without taking space from pedestrians, which they consider to be inappropriate. They recommended a multi-modal assessment encompassing surrounding junctions (as referred to earlier) to ensure the needs of all users are catered for. They added that measures to increase trips by sustainable modes should be the focus for delivering developments in Newmarket.
45. HF's proposals, which form only part of the proposed allocations for Newmarket will, together with other development, involve substantial additional traffic at these junctions, and their Travel Plan figures confirm a very small shift in cars to sustainable modes. The same will be true of other development in Newmarket unless it is located in a genuinely sustainable location close to the town centre and the station. Furthermore, no mitigation is proposed at the junctions and there has been no multi-modal assessment to ensure the needs of all users are considered. The additional vehicles from the residential scheme are set out below based on HF's own development traffic and growth figures:
 - Clocktower roundabout – 329 AM peak (13.2%); 378 PM peak (13.9%)
 - Fred Archer Way signals – 283 AM peak (15.4%); 334 PM peak (16.3%)

46. Although the employment land is not part of the HF Inquiry it is relevant to the Local Plan to identify HF's cumulative figures for that when added to the residential figures as follows:
- Clocktower roundabout – 362 AM peak (14.5%); 404 PM peak (14.8%)
 - Fred Archer Way signals – 339 AM peak (18.5%); 373 PM peak (18.2%)
47. These levels of traffic added to existing congested conditions without mitigation and no proposals by the councils during the plan period to address them is considered by NHG to be unacceptable.
48. Given Aecom's 'no obvious improvement options' conclusion the only option remaining is for measures to achieve a substantial transfer of car drivers to sustainable modes. Aecom have therefore identified the need for multi-modal assessment and a wider town centre study but have not been instructed to carry out the work. NHG has considered by how much traffic levels would need to be reduced to allow the road network to function adequately. As identified by Aecom this would involve a combined study of sustainable travel and analysis of the two key junctions. However, there is no study or committed proposals for Newmarket that NHG are aware of that quantify, demonstrate or deliver the required transfer to sustainable travel with commensurate reduction in traffic to overcome the severe traffic conditions identified. The percentage reduction in car trips from HF's projected 2031 figures (38%) has been identified by NHG which is significant and NHG consider it very unlikely that this can be achieved.
49. The veracity of NHG's microsimulation modelling is demonstrated through the use of lower base flows than HF, and by using the HF's own data in all other respects. In other words NHG's modelling has underplayed the HF traffic impact with the likelihood that the outcome would be worse than modelled. In addition, there are concerns over whether the growth rates applied by HF provide a robust test. This has been examined below.
50. In their UTA HF used growth rates which are significantly lower, and in some cases half those used for the Local Plan upon which the HF's site relies. This suggests that HF's modelling has not examined the residual cumulative impacts on the road network in a robust manner. HF's predicted Local Plan traffic growth is about 12% by 2031. However, Aecom presented significantly higher figures to the Local Plan examinations, which the councils accepted.
51. A comparison of the two sets of growth rates relating to key roads in the vicinity of the Clocktower roundabout are set out in the table below. Similar issues have been identified as regards junction 37 of the A14 and with larger differences identified in evidence to the HF Inquiry. Furthermore, HF's surveys were undertaken in September and prior to the opening of the Ely bypass at the end October 2018. SCC have said that the opening of the Ely bypass will worsen conditions at junction 37.
52. It is clear that despite the differences in growth rates between HF and Aecom, even on HF's lower figures demonstrate there are severe residual cumulative impacts. The Inspectors can therefore take it that the Aecom rates presented to them at the examination hearings give rise to even greater concerns.

Location	AECOM - Site Allocation Cumulative Impact Study 2018 2018 -2031 Adjusted Growth Rate		WSP UTA OVERALL APPLIED GROWTH RATE 2018 - 2031		DIFFERENCE BETWEEN AECOM 2018 - 2031 GROWTH RATE AND WSP 2018 - 2031 GROWTH RATE	
	AM	PM	AM	PM	AM	PM
Fordham Road (S of Willie Snaith Road)	32.7%	27.5%	19.4%	15.3%	13.3%	12.2%
Fordham Road (S of Fred Archer Way)	22.2%	16.6%	13.8%	14.6%	8.5%	2.0%
Bury Road	24.5%	29.0%	12.6%	12.8%	11.9%	16.2%
High Street	30.8%	30.6%	12.3%	13.1%	18.5%	17.5%
Old Station Road	12.4%	5.9%	13.7%	14.8%	-1.3%	-8.9%

Sustainability

53. It was suggested at the Local Plan hearings that Newmarket is more sustainable than other towns in the District. However, Newmarket’s comparative sustainability with other locations of poor sustainability does not mean that it is acceptable and does not overcome the overriding NPPF severe cumulative residual impact and highway safety objections. Furthermore, in the context of Newmarket HF is in one of the least sustainable locations being remote from the town centre and most key facilities. The location adjacent to junction 37 of the A14 will encourage car use to the detriment of sustainable alternatives.

54. HF’s own Travel Plan target of 8 or 9 peak hour drivers transferring to cyclists and walking over a 5 year period (i.e. less than 2 per year for each mode) demonstrates that they do not anticipate a significant modal shift at this site. HF’s own assessment of mode transfer involves no car drivers transferring to public transport due to the poor rail and bus services and facilities in Newmarket. It is noted that evidence presented to the Local Plan Inquiry by Aecom showed 70% of Newmarket’s work trips are to destinations outside Newmarket (Aecom gave a figure for people living and working in Newmarket as 30.4%). On this basis and given the poor public transport opportunities at HF, and its proximity adjacent to the A14 junction it is expected that the large majority of work trips will be by car.

Conclusions

55. The work undertaken with regard to the HF Inquiry has produced results which demonstrate a lack of soundness of transport assessments for the Local Plans under examination. Aecom have not modelled significantly more than HF and have presented growth rates to the Local Plan examinations which are higher than those used for HF. This shows that the concerns expressed by NHG in the Local Plan examinations were justified.

56. NHG’s future year microsimulation modelling using HF’s own car trip rates and traffic growth figures shows there to be significant queuing involving hundreds of vehicles and a significant fall in network performance indicators. These are at a level where extreme severe residual cumulative impacts will

exist. These severe impacts will have serious adverse effects on the way Newmarket as a whole, and the Horse Racing Industry in particular, functions and therefore on this basis should fail the NPPF test.

57. HF's modelling which takes no account of existing junction interaction and congestion has been found to be seriously flawed and cannot be relied upon. This is illustrated by their models showing better conditions in 2031 that exist now despite there being no mitigation. The councils' own consultant Aecom provided evidence to the Local Plan examinations which demonstrates congested traffic conditions that need to be addressed and considered further but they have concluded that there are no obvious improvements .
58. In addition to the severe residual cumulative impacts NHG have concluded from their work that unacceptable highway safety conditions exist and these will be made worse still with the addition of more traffic. This is also contrary to the NPPF..
59. HF's own assessment of mode transfer supported by SCC involves very few car drivers transferring to non-car modes and with no transfer to public transport due to poor rail and bus services and facilities. This demonstrates that HF's location adjacent to junction 37 of the A14 will encourage car use.
60. It is uncertain whether it would be appropriate for individual developments to solve the severe residual cumulative impacts at the town junctions. However, the council's development management policies will not address these strategic issues since each development that comes forward with incremental addition of traffic onto a severely congested road network could show 'no material change' leading to those severe conditions progressively deteriorating and with no guarantee that the councils will address them. This is a major concern for NHG and is inconsistent with the consideration of residual cumulative impacts in the NPPF
61. Based on the detailed examination of HF's submissions and the results of the modelling commissioned by NHG, in the context of the Aecom material presented to the Local Plan examinations, there will be severe residual cumulative impacts on the road network and unacceptable highway safety impacts arising from the development contrary to the NPPF. The consequences for the Local Plan examination are that this assessment underlines the lack of soundness in the transport evidence put forward to support the plans (as proposed to be modified)..