# TOWN & COUNTRY PLANNING ACT 1990: SECTION 78

# TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 78 APPEAL MADE BY THE MINISTRY OF JUSTICE ON LAND ADJACENT TO HMP GARTH AND HMP WYMOTT, LEYLAND, LANCASHIRE

## Re-Opened Inquiry

**Appeal Ref: APP/D2320/W/22/3295556**
**LPA Ref: 21/01028/OUTMAJ**

## PROOF OF EVIDENCE OF
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**AUGUST 2023**

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## GLOSSARY

| | |
|---|---|
| **DMRB** | **Design Manual for Roads and Bridges** |
| **EIA** | **Environmental Impact Assessment** |
| **Junctions 10** | **Transport and Road Research Laboratory Software to Model Junction Operation** |
| **LCC** | **Leicestershire County Council** |
| **NH** | **National Highways** |
| **PCU** | **Passenger Car Unit** |
| **RFC** | **Ratio of Flow to Capacity** |
| **RSA** | **Road Safety Audit** |
| **TEMPro** | **Trip End Model Presentation Program (for forecasting traffic growth))** |
| **UWAG** | **Ulnes Walton Action Group** |
| **VIA** | **A Road Safety Consultancy** |

# 1. PERSONAL BACKGROUND, QUALIFICATIONS AND SCOPE OF EVIDENCE

1.1. My name is Graham Eves. I hold the Degree of Bachelor of Science in Civil Engineering. I am a Chartered Engineer, registered with the Engineering Council, and I am a corporate member of the Institution of Civil Engineers. I am also a member of the Chartered Institution of Highways and Transportation.

1.2. I am employed by PFA Consulting Ltd, a firm of consulting engineers specialising, inter alia, in transport and highway matters as well as flooding, drainage and other infrastructure-related matters associated with residential, commercial and industrial development schemes. I have been actively engaged in the construction industry generally and, in the development sector specifically, in UK for over 45 years. I have given evidence as an expert witness on highways, traffic, transportation and other engineering infrastructure-related matters at a variety of different tribunals including planning and compulsory purchase inquiries, and in magistrates, county, and crown courts. I was a Director of PFA Consulting for 20 years but as part of my "retirement" strategy have now stepped down from that role. I remain in a senior "consultancy" role at PFA Consulting, which involves mentoring junior staff and advising on strategic matters.

1.3. I have been involved with all aspects of the development industry and have been instructed to act for a wide-ranging variety of clients that includes housebuilders, land developers, commercial and retail operators, educational establishments, oil companies, government agencies and local authorities, in addition to private companies and individuals.

1.4. I was first contacted by the Ulnes Walton Action Group (UWAG) on 15th June (2023) as (due to personal circumstances) the Transport Consultant that the Group had been intending to use, had informed the Group that he would be unable to act for them at the re-opened Inquiry. I was provided with a copy of the SoS's "Minded to Grant" letter and asked if I could provide expert highway and traffic evidence at the re-opened Inquiry to support the Action Group in its objections to the development. Having reviewed the SoS's letter, and the "Additional Highway Evidence" dated March 2023 produced by the Appellant, I confirmed that it was my opinion that there were some matters where I felt could assist the Group and was therefore instructed on that basis.

1.5. To inform the production of this proof of evidence I undertook an inspection of the road network in the vicinity of, and surrounding, the appeal site on 19th July 2023.

1.6. The evidence that I have prepared, and provide, for this re-opened Inquiry in this proof of evidence is true and has been prepared, and is given in accordance with, the guidance of my professional institutions and I confirm that the opinions expressed are my true and professional opinions irrespective of by whom I am instructed.

## 2. THE APPEAL PROPOSALS

2.1. Details of the appeal proposals and a description of the highway network adjacent to, and leading to, the appeal site were set out during the initial appeal proceedings and there is therefore no need for me to repeat those details.

2.2. Similarly, the Policy Framework against which this re-opened appeal needs to be considered has also been well rehearsed and I do not need to repeat that.

2.3. I note that the MoJ and UWAG have agreed a Statement of Common Ground ahead of the re-opened Inquiry (Core Document P1), which comprises an introduction, matters agreed and matters in issue. I do not repeat that here.

# 3. THE MAIN ISSUES FOR FURTHER CONSIDERATION

3.1. The Inspector acknowledged that there would be a significant increase in traffic, reporting a 322% increase in traffic on Moss Lane north of the prison access, and a 48% increase at the Moss Lane / Ulnes Walton Lane junction. However, he noted that merely relying on percentage increases as evidence of a highway safety issue is overly simplistic: IR 13.20.

3.2. In particular the Inspector referred to existing hazards at the junction of Ulnes Walton Lane with Moss Lane where forward visibility looking south is restricted for vehicles turning right into Moss Lane and where there are hazards for pedestrians: IR 13.22.

3.3. He then went on to express potential concerns regarding Ulnes Walton Lane both north and south of the junction and also Moss Lane itself, which is straight and relatively wide and suffers from excessive traffic speeds: IR 13.27.

3.4. He noted that all parties accepted that mitigation was required at the junction of Ulnes Walton Lane with the A581 but that a design (and costings) for appropriate mitigation had not been agreed: IR 13.29.

3.5. Finally, he commented that construction traffic had not been modelled or assessed by the Appellant, and whilst the mitigation measures had been designed for operational traffic, it had not been demonstrated that highway effects at the construction phase could be adequately mitigated: IR 13.35.

3.6. My evidence will therefore look at these matters further having regard, *inter alia*, to the additional highway evidence produced by Atkins dated March 2023.

3.7. To inform my evidence I have had regard to two additional Automatic Traffic Count Surveys, one on Ulnes Walton Lane south of the Moss Lane junction and the other on the A581 immediately east of the Ulnes Walton Lane junction, which had been commissioned by UWAG from a specialist traffic data collection company (cts) on instructions from the Group's previous consultant. These surveys, which were undertaken between 15th and 21st June 2023, are attached at **Appendix 1** (I have added columns to the data provided by the survey company to enable me to convert the "vehicle" flows to "passenger car units" (PCUs), and to provide "average" flow figure as used by the Appellant).

# 4. THE APPELLANTS HIGHWAY IMPROVEMENTS

**Moss Lane Junction**

4.1. The Inspector has noted that the Moss Lane junction is on a bend where visibility is limited (IR: 13.22). In fact, the available visibility for southbound vehicles turning right into Moss Lane is only about 50m.[1] Ulnes Walton Lane is subject to a 40mph speed limit, for which the appropriate "stopping sight distance" is 120m (DMRB, CD 109 Table 2.10). However, the UWAG traffic survey identifies that the majority of vehicles are travelling at slightly less than the speed limit around the bend, with around 45% of vehicles travelling at between 30 and 40 mph. The appropriate "stopping sight distance" for such actual speeds is around 90m. The available visibility is therefore significantly below that required to meet an acceptable stopping sight distance standard. The Road Safety Audits do not identify this deficiency (presumably on the basis that it is a "pre-existing" hazard which remains unchanged as part of the proposals). However, whilst the "hazard" may remain unchanged, the level of traffic negotiating this hazard will increase significantly with a corresponding increase in accident risk.

4.2. The Appellant proposes new chevrons and additional 40mph repeater signs together with the repositioning of signs generally. However, they do not provide northbound drivers, or turning southbound drivers, with any new indication that visibility is limited, nor is it clear how they will reduce traffic speeds (which are already generally below the speed limit). In this respect the provision of new high-friction surfacing through the junction is an acknowledgement that the general speed of traffic through the junction warrants more than a "normal" level of "grip" to the road surface (to avoid skidding), as speeds around the bend are higher than any assessment of likely speeds based on the radius of the bend would suggest.

4.3. Any increase in right turning traffic, from Ulnes Walton Lane into Moss Lane will increase the risk of a side impact collision occurring. In this respect the Appellant's new evidence presently identifies that, during the AM construction peak, the number of vehicles turning right into Moss Lane will increase from 46 PCUs to 281 PCUs (Table 6-4) - in approximate terms an increase of 250 vehicles or an additional vehicle every 15 seconds[2]. Table 6-5 of the Appellant's further evidence identifies that the delay per vehicle amounts to 18.52 seconds and, thus, at peak periods, there will always be at least 1 vehicle waiting to turn right into Moss Lane (Table 6-5 identifies a queue of 1.7 vehicles)[3]. For many drivers a delay of even 19 seconds at an "uncontrolled" junction, before a turning movement can be undertaken, can seem "interminable" and can lead to "chances" being taken, which then increases the risk of a collision occurring. The new/relocated signage will not reduce the extent of delays which the Appellant's new evidence predicts will occur. (In Sections 6 and 7 below I undertake my own analyses of traffic flows which demonstrate much greater levels of traffic and longer delays).

4.4. The proposals also now include the provision of a new footway around the north eastern side of the junction. This will require the existing signage and/or any new signage to be located such that it does not impede the use of the footway by pedestrians. From the plan at Appendix B of the Additional Evidence it appears that the signage required (and any relocated cabinet) will encroach into the new footway to be provided for pedestrians thus narrowing the width available for pedestrians at a location where turning vehicles may be closer to the kerb (and thus closer to pedestrians), and pedestrians may be waiting to cross the road (for example to get to the post

[1] At Core Document M3a (p.163 of the pdf document) a visibility figure of 28.8m is identified.
[2] Core Document M3, p.33
[3] Core Document M3, p.34

box). The present proposals do not identify how the necessary signage can be provided whilst maintaining adequate space for pedestrians.

4.5. The proposals also now include for the "northbound" bus stop on Ulnes Walton Lane (which is some 50m north of the junction) to be upgraded to a "high-quality disability compliant" standard, and includes the new footway to be extended from the junction to this bus stop. There does not appear to be a formal "southbound" bus stop in this location – that facility being some 70m south of the junction. Even if there is a *de facto* southbound stop opposite the northbound stop, the proposals do not include for any footway links (or carriageway crossing facilities) to that facility nor any upgrading of that facility (or any other "southbound" bus stop) to provide a disability compliant standard.

4.6. The proposals for improvements in this location therefore remain deficient, and there remains a lack of sufficient evidence to support even those improvements which are proposed, notwithstanding the further material produced to date by the Appellant.

**Ulnes Walton Lane/A581 Southport Road Junction**

4.7. The Appellant's original proposal for this junction was for the introduction of traffic signals, but it now proposes the conversion of the existing "priority" junction to that of a mini-roundabout. The Inspector noted that, there was no design for a mini-roundabout, even at an indicative level, and no modelling of the effects it would have with the development in place, or how it might affect the flow on other arms of the junction. There was also no evidence of any costings so the financial contribution proposed could be either insufficient or excessive.

4.8. The additional evidence now includes (at Appendix J[4]) a "General Arrangement" layout for a mini-roundabout, together with an analysis of its operation both during construction (Appendix T) and during its operational phase (Appendix K[5]).

4.9. First, with respect to the layout, the Additional Evidence identifies that the Appellant would need to agree a "Departure from Standards" as part of the proposed S278 Agreement[6]. This is a formal process informed inter alia, by traffic data, and a Road Safety Audit. In this respect the traffic analysis that I have undertaken, and which is summarised in Sections 6 and 7 will be a material consideration in any departure approval process.

4.10. National Highways (NH) has produced a guide to working on planning matters **(Appendix 2)**. The guide advises that scheme promoters **should not assume** that a departure from standard will be acceptable, and the principle of any necessary departures should be agreed **before** planning permission is granted – approval of a "Departure" will normally require developing any design to a relatively advanced level (to include signage, road markings street lighting etc). Although NH is not the highway authority for this particular scheme, nevertheless, the advice in that guide can reasonably be applied to any highway scheme which requires a "Departure" from normal highway design standards , and, at present, whilst the additional evidence states[7] that the Appellant has discussed the required departure and the finding of the RSAs with LCC (who are the highway authority here), it is not clear that LCC will agree such departures, nor that the design has been progressed to a level sufficient to support a "Departure" submission. If planning permission is granted (by the SoS) before a Departure is agreed, it would effectively mean that the Departure

[4] Core Document M3a p.98
[5] Core Document M3a p.101
[6] Core Document M3 p.24 ¶5.8.2, fifth bullet
[7] At Core Document M3 (p.21 ¶5.6.4 of the pdf document)

was acceptable on the basis that the SoS's view, in effect, becomes the only tenable view on the issue of road safety: see R v Warwickshire County Council ex p. Powergen Plc (1998) 75 P.&C.R.

4.11. The extent of the Departure (which is identified at Table 5.3 of the Additional Evidence) is significant, representing a "halving" of the requisite visibility (in very approximate terms) from that which assumes an approach speed of around 25mph to that which is only sufficient for an approach speed of about 15mph. The UWAG traffic survey at **Appendix 1** Identifies that the 85%ile eastbound traffic speeds are presently around 35mph, and thus a very significant reduction in these existing traffic speeds will be required to be commensurate with the reduced visibility which will be available for the new junction layout.

4.12. This lack of visibility is an issue identified in the Road Safety Audit undertaken by VIA (and included at Appendix D of the Additional Evidence), and, whilst the Designers Response considers that the proposed speed reduction measures will reduce speeds to below 25mph, no technical justification for this bold assumption is provided (VIA would no doubt have taken the proposed measures into account when identifying the issue), and the proposed measures would seem unlikely to achieve a reduction on the approach to the mini-roundabout to 15mph.

4.13. In addition to this visibility deficiency, the Hydrock RSA (at Appendix C of the Additional Evidence) has identified further problems in respect of available road space for turning vehicles, and a potential "vertical" alignment issue with a raised table tying into the private driveways on the south side of the junction, as well as turning long vehicles becoming unbalanced (the Designers' Response suggests that, because Ulnes Walton Lane has a weight restriction, the number of HGVs making a turning movement will be restricted but this seems to ignore the fact that this is an identified access route for construction vehicles with 1350 HGVs per month, each way, undertaking this manoeuvre). These issues are fundamental to the acceptability of the proposed traffic calming measures and must be addressed before planning permission can be granted, and not left to be approved as part of the S278 Agreement – if these "problems" cannot be satisfactorily resolved as the design is progressed to approval stage, then the S278 agreement would deliver a scheme with inherent road safety problems.

4.14. The Junctions 10 analysis printout of the operation of this junction contains a warning that "Mini-roundabout appears to have unbalanced flows with Arms 1 and 3 having 91% of the total flow for the roundabout for one or more time segment. It may behave like a priority junction; accordingly, the results should be treated with caution". Notwithstanding this, the capacity analysis of this mini-roundabout (using the Appellants traffic flows) identifies that, at an opening year of 2025 (see my paragraph 4.15 below) the western approach along Southport Road will be operating with an RFC (Ratio of Flow to Capacity) of 0.87 and experiencing delays of almost 40 secs (Table 5.1 of the additional evidence), whilst during the 2027 network peak with construction traffic, the RFC will reach 0.83 with delays of 31 secs (Table 6.10 of the additional evidence). Again, in Sections 6 and 7 below I undertake my own analyses of traffic flows which demonstrate greater levels of traffic and longer delays.

4.15. The choice of 2025 as an "opening" year is clearly incorrect as construction (according to Fig 6.2 of the Additional Evidence) will still be occurring throughout 2028 (this assumes that any delays as a result of re-opening the Inquiry will still permit construction to begin in Dec 2023). Thus, an "opening" year no earlier than 2028 would be more appropriate and, if this is adopted, the RFCs and delays identified in Table 5.1 will increase.

4.16. In general, an RFC of 0.85 is considered to be the maximum desirable as high RFCs result in "unstable" conditions where queues and delays may fluctuate considerably. Accordingly, any increase in queues and delays from those identified in Table 5.1 may be considerable.

4.17. The flow conditions will be a material consideration in any "Departure" consideration and may militate against the approval of any Departure.

**Moss Lane Traffic Calming**

4.18. Moss Lane is a straight road over half a kilometre in length subject to a 30mph speed limit. The proposed traffic calming comprises a "vertical" feature (a raised table) at the existing prison entrance, and road markings at intervals along the remainder of the road.

4.19. The most effective traffic calming measures for reducing vehicle speeds involves vertical shifts in the carriageway such as road humps, plateau and cushions. Other measures may be used in supporting roles such as road narrowing, chicanes, islands, etc., however, these measures are less effective in reducing speeds when used in isolation. In this instance a single vertical feature is supported only by road markings along the majority of the length of Moss Lane (approximately 450m). The road markings "suggest" a carriageway width of 5.5m which will comfortably accommodate the two-way flow of "light" vehicles (cars and vans) but no physical reduction of the existing carriageway width is proposed and the road remains "straight". It is therefore hard to understand how such measures will result in any significant reduction in the speed of most traffic – the Technical Note submitted by WSP on behalf of Chorley Borough Council as a review of the additional evidence identifies existing 85$^{th}$ percentile traffic speeds of around 40mph despite the poor road surface (which is probably more effective in reducing potential speeds than paint will be on a new road surface)[8]. There must therefore be serious doubts as to the efficacy of the proposed traffic calming.

[8] Core Document N2, Para 4.1.1

# 5. VULNERABLE ROAD USERS

5.1. The Institute of Environmental Management and Assessment has recently updated its guidelines for assessing the impact of traffic and movement, which although directed towards assessment of formal EIA projects, nevertheless can inform judgements on the effect of traffic from non-EIA projects and provide helpful analogies for those considering any scheme where traffic impacts may be an issue.

5.2. In this respect it contains two "Rules" **(Appendix 3**). Rule 1 indicates that, on highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles increase by more than 30%), there may be discernible impacts on, pedestrians in particular, but also users of other modes of travel, including horses, cycles, mobility scooters, e-scooters and e-cycles. Rule 2 indicates that along highway links of high sensitivity there may be a discernible impact where traffic flows have increased by 10% or more. However such increases are only a "starting point" and specific local circumstances (such as the absence of a footway or a verge which can provide a refuge from passing traffic) must be taken into account.

5.1. Such impacts include noise, severance, pedestrian delay and intimidation. It goes on to indicate that severance and intimidation are particularly sensitive to traffic flow. I therefore consider this further in section 6 and 7 below.

5.2. The UWAG survey (**Appendix 1**) identifies cycle flow along UWL (in the vicinity of Moss Lane) as being up to about 100 cycle movements (2 way) per day. The survey indicates that a great many of these movements occur during normal working hours and will thus be in conflict with normal weekday operational (and in particular construction) traffic from the proposed development both north and south of the Moss Lane junction. South of Holker Lane (where Sustrans Route 55 follows Ulnes Walton Lane) cycle flows may be expected to be a little higher.

5.3. Pedestrian flows along Ulnes Walton Lane are not quantified in the surveys, but clearly people do walk along the Lane (and, also, as can be seen from the UWAG's own evidence, use mobility scooters) both as part of their ordinary daily life, and as part of the longer distance Sustrans route along the lane, which (apart from its extreme northern end where it becomes School Lane) has no footway. Additional traffic, and in particular HGVs during construction, will increase fear and intimidation, not only for pedestrians using the lane, but also for cyclists and equestrians who also have no option but to share the carriageway with HGVs.

5.4. Similarly, the surveys do not identify equestrian movements along Ulnes Walton Lane, however, there are three equestrian premises with direct access on to Ulnes Walton Lane, which provide stabling for around 100 horses in total, together with a further establishment off Dunkirk Lane to the north.

5.5. Attached as **Appendix 4** is an image showing bridleways in the vicinity of Ulnes Walton Lane. Equestrians from the livery stables will need to use the Lane to access these routes and do so on a frequent basis as identified in the surveys appended to UWAG's evidence.

5.6. The length of Ulnes Walton Lane between Moss Lane and the A581 is approximately 1.5km and an average cyclist would therefore take about 6 minutes to cycle along this stretch of road. HGV flows throughout the day are estimated (at Table 6.3 of the Additional Evidence) to amount to 14 HGVs/hour (two way), which "averages" one HGV movement about every 4 minutes. It is therefore very likely that any cyclist cycling along Ulnes Walton Lane will encounter an HGV (either coming towards them or attempting to overtake them).

5.7. The Highway Code was recently revised to introduce a 'hierarchy of road users' that places those road users most at risk in the event of a collision at the top of the hierarchy. The road users most likely to be injured in the event of a collision are pedestrians, cyclists, horse riders and motorcyclists, with children, older adults and disabled people being more at risk.

5.8. Motorists are advised (Highway Code Rule 163 which I attach as **Appendix 5)** to give cyclists and horse-riders "at least as much room as you would when overtaking a car", and to pass cyclists leaving a minimum of 1.5m (if travelling at up to 30mph). Typically, a cyclist (with a cycle width of 0.5m) will be cycling about 1m from the edge of the carriageway, and, with road widths being less than 5.5m in many places (Doc R6 Appendix 11), an HGV may be unable to pass a cyclist safely and, if following the cyclist, may have to remain following the cyclist for a significant length of the Lane.

5.9. Motorists are also advised to leave at least 2m – at speeds under 10 mph – when passing horse-riders (who are likely to be riding at a "walking pace"). Given that Rule 163 states that motorists should "wait behind the… cyclist, horse-rider, horse drawn vehicle or pedestrian and not overtake if it is unsafe or not possible to meet these clearances", the circumstances here may make it impossible for an HGV to pass a horse rider at any point along the lane.

5.10. The risk to vulnerable road users will therefore increase significantly as a result of the very significant increase in traffic arising from the development which I quantify at para 7.16 below.

# 6. TRAFFIC SURVEY DATA

6.1. It was agreed at the Case Management Conference that it would be appropriate to test the robustness of the Appellant's traffic data (which is based on a March 2021 traffic survey), and as identified above UWAG has commissioned two surveys in order to enable me to undertake such a test.

6.2. One survey location was on Ulnes Walton Lane immediately to the south of the Moss Lane Junction, with the other being on the A581 immediately to the east of its junction with Ulnes Walton Lane. Both surveys were "automatic" (i.e. by way of "tubes" across the carriageway to provide a week's worth of data) which include traffic flows in each direction on an hourly basis with the "type" of vehicle also being identified (ie cars, cyclists and different sizes of goods vehicles). The surveys also recorded vehicle speeds.

6.3. Table 6.1 below provides a comparison of this more recent survey data which provides full week of data with the data used by the Appellant (which was based on 2 days' data).

| | **Two Way Traffic Flows:** | |
|---|---|---|
| **Location** | 2023 Survey | **2021 Survey** |
| Ulnes Walton Lane (south of Moss Road) | 3543 | 2960 |
| A581 East of Ulnes Walton Lane | 13203 | 10150 |

**Table 6.1 – Daily Traffic Flow**

6.4. In very broad terms therefore the present-day flows are some 20% - 30% greater than the 2021 flows which informed the Appellant's traffic analyses.

6.5. Whilst the Appellant has sought to adjust the 2021 surveyed traffic flows to provide 2027 baseline figures by factoring the surveyed figures to account for any suppression of traffic due to Covid, and to account for traffic growth generally, with the benefit of the new surveys, and a more rigorous consideration of "Committed Developments" in the area, I am able to provide a more realistic and robust estimate of 2027 baseline traffic flows.

6.6. With the benefit of this more recent traffic data, information regarding "committed" developments in the area (i.e. developments which are not yet generating their anticipated levels of traffic onto the highway network – in this particular location this includes a major development of almost 1000 dwellings and over a ¼ million square feet of employment space, which is predicted to result in an additional peak hour two-way flow on Ulnes Walton Lane) I am able to provide an alternative (more robust) estimate of 2027 Baseline traffic flows (if, having regard to my comments in para 4.15 above, that is indeed an appropriate baseline year). I have therefore, at **Appendix 6,** set out my calculations of the 2027 baseline traffic which enables me to make a comparison between these updated 2027 baseline flows along Ulnes Walton Lane, and those used in the Appellant's Additional Evidence is as follows: -

| | **UPDATED FLOWS** | **APPELLANT FLOWS** |
|---|---|---|
| AM Peak Northbound | 342 | 332 |
| AM Peak Southbound | 154 | 95 |
| PM Peak Northbound | 171 | 132 |
| PM Peak Southbound | 201 | 214 |

**Table 6.2 - Comparison of flows (Ulnes Walton Lane)**

6.7. On this basis, it is clear that some of the traffic data used by the Appellant, *inter alia* in the analysis of the operation of the Moss Lane junction, significantly under-estimates traffic flow and is not

appropriate, or sufficiently robust, to consider the traffic (and in particular the traffic safety) implications of the proposal.

6.8. I have therefore remodelled the predicted operation of the Ulnes Walton Lane/Moss Lane junction during the 2027 AM "operational" peak using amended "through traffic" flows along Ulnes Walton Lane (but maintaining the Appellants assumptions of development traffic). The calculation of the amended flows that I have used are set out in **Appendix 7** and summarised in Table 6.3 below (and compared with the original TA flows).

| Arm (From) | Arm (To) | AM Peak Original TA (2025 with development) | AM Peak using amended 2027 with development |
|---|---|---|---|
| Ulnes Walton Lane (S) | Moss Lane | 359 | 371 |
| | Ulnes Walton (N) | 84 | 87 |
| Moss Lane | Ulnes Walton Lane (N) | 42 | 42 |
| | Ulnes Walton (S) | 35 | 35 |
| Ulnes Walton Lane (N) | Ulnes Walton (S) | 71 | 80 |
| | Moss Lane | 342 | 387 |

**Table 6.3 Update version of Appellants Original TA Table 7.8**

6.9. I have then re-run the Junctions 10 analysis using these revised figures. The full analysis is set out in **Appendix 8** and summarised in Table 6.4 below and compared with the original TA analysis.

| | 2027 Baseline + Development AM Peak | | | TA 2025 Baseline + Development AM Peak (TA Table 7.9) | | |
|---|---|---|---|---|---|---|
| | Queue (pcu) | Delay (s) | RFC | Queue (pcu) | Delay (s) | RFC |
| **UWL (S)** | **0.1** | **6.43** | **.1** | **0.1** | **6.34** | **.07** |
| **Moss Lane** | **0.1** | **13.34** | **.1** | **0.1** | **12.68** | **.11** |
| **UWL (N)** | **5.7** | **41.63** | **.85** | **4.4** | **36.02** | **.82** |

**Table 6.4 Model Outputs**

6.10. It can be seen that (because the junction is already operating close to capacity), even a modest increase in traffic flows (as a result of changing the assessment year and adding a more rigorous analysis of "committed" development) has a detrimental effect on the operation of the junction, increasing delays and queue length for southbound traffic by 10% - at this junction, because of the limited width of Ulnes Walton Lane any vehicle waiting to turn right into Moss Lane will "block" traffic wishing to go straight on towards the A581. The Junctions 10 output at Appendix 8 includes a "Level of Service" (LoS) column which identifies a maximum LoS of E – which is an indication of unstable flow when queues and delays may fluctuate considerably. The effect of increased delays and unstable traffic conditions identified in this more rigorous analysis is that driver frustration will increase, which in turn, will be detrimental to road safety as drivers can become frustrated and "take risks".

6.11. The Additional Evidence (at Table 6.10) predicts similarly high RFCs and relatively long delays at the A581 junction (Table 6.8) and, accordingly, again any modest adjustment in the baseline flows (as a result of changing the assessment year and adding a more rigorous analysis of "committed" development") will have a significant detrimental effect on the operation of the junction.

6.12. **However,** for the reasons that I set out in Section 7 below, the impact of construction traffic may be significantly more severe than these "baseline" adjustments identify.

# 7. CONSTRUCTION TRAFFIC

7.1. The Additional Evidence provides an estimate of the number of construction vehicles which will be involved in the construction of the development, with 64 HGV's and 760 cars each way per day (Table 6.2) predicted during the peak month, reducing to 61 HGV's each way, and over 200 cars (400 vehicles movements) per day, as an average, over the 5-year construction period (Table 6.1).[9] I am unable to verify these figures and accordingly, for the purposes of my analysis below, I have taken them at their face value.

7.2. The construction traffic profiles at Appendix P[10] of the Additional Highway Evidence suggests that the workforce will be arriving in sufficient time to enable construction activities on site to commence at 07:00 hours, with HGV's commencing arrival at 07:00 hours (i.e. construction staff arriving up to about an hour before starting work and deliveries commencing immediately work commences). However, the Noise and Vibration Assessment (Document A22) indicates that construction works are likely to be restricted to standard daytime work hours (i.e., not commencing before 08:00 hours – Doc 22, Paragraph 4.1.1). Given the proximity of residential development immediately to the north east of the site, and the residential areas on the road network through which construction traffic will pass, this would seem to be a reasonable assumption (the Test Track planning permission has such a restriction – Condition 20).

7.3. If there is to be a condition which restricts construction activities to standard daytime work hours, then this will impact on the timing of peak construction traffic flows. That being the case, the traffic flow profiles at Appendix O[11], which then inform the traffic flow inputs into the junction operation assessments, must be treated with extreme caution. The UWAG traffic survey identifies existing traffic flows as being very low (less than 100 PCUs/hr two-way) during the identified AM construction peak period, and thus the cumulative effect of existing traffic and the 'peak' construction traffic is still relatively small. The UWAG survey identifies the existing network peak (which has much higher flows) as being 07:00 – 08:00 hours. Accordingly, if the peak construction traffic flow occurs during this period (as a result of construction not commencing before 08:00 hours) then the predicted operation of both the Moss Lane and the A581 junctions will be materially different, as I confirm in paragraph 7.4 below.

7.4. For simplicity at this stage (to avoid any argument as to whether the Appellant's new evidence has properly taken into account committed development and updated traffic surveys) I have used the Appellant's own traffic figures to derive the peak construction traffic but then assumed that this peak flow will occur in the hour immediately preceding a 08:00 work start, and then added these to the network peak flows which results in a combined peak traffic flow. I have set out this calculation at **Appendix 9.**

7.5. I have then re-run the "Junctions 10" program to provide the model outputs attached at **Appendix 10** and as summarised in Table 8.1 and 8.2 below.

**Moss Lane Junction**

| | | | TA 2027 Baseline + construction peak AM Peak |
|---|---|---|---|
| | Queue (pcu) | Delay (s) | RFC |
| **Moss Lane to UWL (S)** | **0.1** | **6.34** | **.06** |

[9] See Fig. 6-1 and 6-2, Core Document M3, (pp. 30-31 of the pdf document)
[10] Core Document M3a p.156
[11] Core Document M3a p.154

| | | | |
|---|---|---|---|
| Moss Lane to UWL (N) | 0.2 | 28.06 | .15 |
| UWL (N) to UWL (S) | 105 | 720.24 | 1.35 |

**Table 8.1 Model Outputs**

**A581 Junction**

| | 2027 Baseline + construction AM Peak | | | |
|---|---|---|---|---|
| | Queue (pcu) | Delay (s) | RFC | |
| Moss Lane to UWL (S) | 51.3 | 301.46 | 1.15 | |
| Moss Lane to UWL (N) | 0.2 | 7.41 | .18 | |
| UWL (N) to UWL (S) | 39.9 | 136.39 | 1.06 | |

**Table 8.2 Model Outputs**

7.6. At the Moss Lane junction this results in a queue, from the junction back towards School Lane, of 105 PCUs (around 600m in length) with a delay of 720 seconds (12 minutes, whilst at the A581 junction, the maximum queue is 51 PCUS (300m) and the delay is 5 minutes.

7.7. These queues and delays are clearly unacceptable and amount to a "severe" cumulative impact, warranting refusal of the application (NPPF para 111).

7.8. Even if the construction traffic can be managed so that the peak flows do not coincide with the network peak, (and there is no evidence to show that it can) the analysis that I have undertaken demonstrates just how sensitive the two junctions are to increased development and construction traffic flows and **any** modest increase (for example because the baseline figures change) is still likely to result in a severe impact.

7.9. If there is to be no working hours condition, and construction activities **can** commence before 8am (with construction vehicles arriving before 7am), the Noise Assessment and Vibration assessment may need to be revisited as the period before 7am is considered "nighttime" and the noise impact of such large volumes of additional traffic travelling through residential areas will need to be assessed.

7.10. I turn now to the routing of construction traffic (in particular that of HGVs).

7.11. The Logistics Report (Appendix N to the Additional Evidence[12]) identifies that Routes 1, 2 and 3 (which use Ulnes Walton Lane north of Moss Lane) pass through numerous (heavily) residential areas, identifying Routes 4 and 5 as being preferred (and most sensible) for HGV traffic.

7.12. On this basis, in the event that Planning Permission should be granted, any Construction Traffic Management Plan should ensure that **all** HGV traffic arrives and departs the site via the A581 and Ulnes Walton Lane (south) and does not use Ulnes Walton Lane (north) towards School Lane. The Logistics Report does however note that HGVs can only pass each other "with care" along UWL (indicating the shortcomings for HGV usage of even this preferred route).

7.13. Such a routing will require careful monitoring to ensure that there is no breach of such a routing requirement, together with a penalty regime if such breaches do occur. Any penalties will need to be sufficiently severe to be a real deterrent and the monitoring system sufficiently robust that

[12] Core Document M3a p.142

it is accurate and reportable (possibly requiring the installation of an Automatic Number Plate Recognition (ANPR) System).

7.14. The Additional Evidence does not provide any indication of the routes that non-HGV construction traffic will use but, on the assumption that workforce vehicles trips will have a similar distribution to that of staff, from Figure 5.1 of the original TA it may be estimated that 44% of the construction "car" trips will use Ulnes Walton Lane (north) with 56% using the southern section of the lane[13].

7.15. Accordingly, the comparative two-way daily construction traffic flows on Ulnes Walton Lane (on the basis that all HGVs use UWL (S) can be seen as follows: -

| 2027 BASLINE TWO-WAY FLOW | HGV Peak construction traffic/day | HGVS Average construction traffic /day | CARS Peak construction traffic/day | CARS Average construction traffic/day | TOTAL Peak increase construction traffic/day | TOTAL Average increase construction traffic/day |
|---|---|---|---|---|---|---|
| UWL (N) 4400[1] | 0 | 0 | 668 | 92 | 668 | 92 |
| UWL(S) 3663 | 128 | 122 | 851 | 118 | 973 | 240 |

Note: the UWAG survey does not cover UWL north of the junction and this figure has been estimated by comparing the 2021 flows with the available 2023 flows.

7.16. The flows on Ulnes Walton Lane (north) will increase by up to 668 vehicles per day during the peak months of construction (an increase of 15%) whilst those on Ulnes Walton Lane (south) will increase by 973 vehicles (an increase of 27%), of which 128 will be HGVs. At present the number of HGVs using UWL (S) is identified in the UWAG survey as being 157HGVs/day. An increase of 128 HGVs is an 81% increase in HGV flows.

7.17. The greatest numerical impact is therefore on the southern section of Ulnes Walton Lane which, for most of its length (from Holker Lane south to the A581) is part of Sustrans Route 55. An 81% increase in HGVs (which may be of maximum HGV size – i.e. 44 tonnes) during the entire construction period, and an increase in total traffic at the peak construction period of 27% along a "country lane", subject to an existing weight limit and without footways, or verges which can provide a refuge from passing traffic, is clearly significant. Whilst the impact on Ulnes Walton Lane (north) and School Lane is numerically smaller, this part of the network is more "sensitive" (being a residential area providing routes to a school and local facilities) such that "Rule 2" is material.

7.18. The CTMP indicates that Ulnes Walton Lane is subject to a 7.5T "access only" weight restriction at either end. However, the CTMP identifies that Ulnes Walton Lane will be used to gain access to the construction site as there are "no other suitable roads to provide access to the construction access off Moss Lane". It does not matter if any other roads are "not suitable" – if the site can be accessed without using Ulnes Walton Lane (along public roads which have no weight limit or along roads and tracks that are in the ownership of the Appellant), for example via Moss Lane (north) and Willow Road), then use of the lane by vehicles heavier than 7.5 T will be a traffic offence. If therefore the route for construction traffic is to be via Ulnes Walton Lane, the weight restriction Order may need to be to be rescinded for the duration of the works.

[13] Core document A35, Figure 5.1

# 8. SCHEME COSTINGS

8.1. In respect of the A581/Ulnes Walton Lane improvement the Inspector was concerned (IR: 13.29) that it had not been demonstrated that the proposed "financial contribution" to the works at would be sufficient, nor that the timing of such works would be appropriate (IR: 13.30). The statement at para 7.1.2 in the Additional Evidence that "the Appellant can confirm that the additional scheme costs do not adversely impact on the delivery of the development" does not address the Inspector's concerns, nor does it provide any certainty as to when such improvements might take place if the A581 junction improvements are reliant on them being carried out as part of the wider A581 calming proposals.

# 9. CONCLUSIONS

9.1. My evidence examines the highway, traffic, road safety implications of the proposals.

9.2. It concludes that, irrespective of the appropriateness of the traffic flows used in the analysis, the mitigation proposals for the Moss Lane junction do not address the existing underlying visibility deficiency at the junction, nor has the ability to provide adequate pedestrian provision at the junction been demonstrated. Nor do the proposed bus stop improvements include any improvements, or provision, for southbound bus passengers.

9.3. The proposed mitigation at the A581 junction relies on a (very significant) "departure" from highway standards, which has been identified as a problem in the Appellant's own Road Safety Audits, and it does not appear that such a departure (which must be informed by correct traffic flow predictions) has been formally agreed.

9.4. The traffic calming in Moss Lane itself seems unlikely to have any meaningful impact on the speed of vehicles along the Lane (which are presently traveling above the speed limit).

9.5. These omissions and deficiencies are such that, without rectification, the impact of the development will be severe and therefore contrary to national policy.

9.6. Most importantly however my evidence throws doubt on the traffic data used by the Appellant to support the mitigation works. In particular the assumptions used regarding the timing of peak construction traffic flows appears to contradict assumptions in the original Noise Assessment and would necessitate any planning permission having a "non-standard" construction working hours condition. If standard working hours are to be adhered to, the impact that construction traffic will have on traffic queues and delays on the road network will be very substantial indeed – which can then adversely affect road safety.

9.7. I have also examined the implications that the additional traffic will have on the use of Ulnes Walton Lane by vulnerable road users and conclude that the impact on these users will be significant.

9.8. The SoS's minded-to-grant letter gave the Appellant an opportunity to address gaps in the evidence (which he specifically identified at paragraphs 15 and 16 of his letter) and to address his initial conclusion that proposal would have an unacceptable effect on highway safety contrary to CLP Policy BNE1(d) and paragraphs 110 (d) and 111 of the Framework. The new evidence produced by the Appellant (the Additional Highway Evidence and its associated Appendices) does not satisfactorily address the gaps in the original evidence nor provide the SoS with sufficient justification to change his initial conclusion that proposal would have an unacceptable effect on highway safety.

9.9. Overall, my evidence demonstrates that there would be an unacceptable impact on highway safety, and the residual cumulative impacts on the road network would be severe such that planning permission should not be granted.