

Proposed Industrial Development
AXIS 50, Etwall Road, Willington, Derbyshire

Technical Note 01 – Response to DCC Highways Consultation Comments

This Technical Note has been prepared in response to the consultation comments from Derbyshire County Council (DCC) Highways with regards to the planning application for the above development proposals (App Ref: DMPA/2019/0948).

1) Employment Density and Trip Rates

In general, the highway network peak hour assessment periods are not expected to capture all of the employee's movements to and from the site. The employees could be expected to predominantly work shifts, and the timing of shift work often avoids traditional peak hours, and may not be the same for each unit, creating a number of key arrival/departure periods over a 24-hour period. The figure quoted for total number of employees could well be split into 3 shifts, plus some working more traditional office hours.

The Planning Statement submitted with the planning application stated that the employment floor space of the proposed development will support around 1,566 full time jobs on-site. Using the densities in the Employment Density Guide (HCA, 2015), assuming the higher density 'regional distribution centre' rather than 'national distribution centre' for the B8, and half B1c and half B2, suggests 1,576 employees. So that is consistent, but a fair bit higher than the 1,250 suggested by DCC.

Based on the expected 1,566 full time employees arriving and leaving the site, that would generate 3,132 trips per day (by all modes of transport). There would also be operational journeys.

When applied to the GFAs the "daily" TRICS trip rate using the data in the TA, suggests 2,886 vehicular trips per day (total arrivals and departures), and the multi-modal data suggested that 87% of journeys by car, so that would suggest 3,317 person trips per day. This would equate to more than an arrival and departure for the expected number of employees and so allow for some operational journeys too. However, it is important to note that the daily TRICS trip rates are generally not 24hrs and only include data for 7am-7pm, although in this case one or two sites provided a trip rate for an hour or two beyond this period. Nonetheless, there are still several hours during the late evening and early morning, which may include shift changes, when trips are not accounted for in the "daily" TRICS trip rates. On this basis the trips are considered to be robustly related to the expected employment density.

As confirmed in the comments, vehicular TRICS trip rates were previously agreed with HE and DCC. We used the TRICS data to establish estimated modal split percentages for the remaining non-car driver trips to and from the site. This method suggested a higher proportion of car-based trips, compared to the local 2011 Census Data. If we apply the Census Data modal split, rather than the TRICS data, we would have a higher number of person trips, but with the balance made up of more people using sustainable transport modes, therefore not affecting the agreed level of vehicular trips. (TA Paras 6.7 - 6.10).

2) A50/A38 Mitigation Scheme

We discussed a previous approved mitigation strategy known as the "Highfields Farm / Rykneld Road scheme" which signalises the A50 west and A38 north off-slips of the A50/A38 junction with Highways England (HE). This was one of the 5 sites in the Conjoined Public Inquiry. However, we were

informed that there was no guarantee of funding/scheme delivery in a suitable timeframe for the currently proposed development and following initial assessment work, the scheme was not considered to provide sufficient mitigation in any case. We were also informed that a wider improvement scheme is being designed by HE but was only at initial stages of development, however, depending on timing, a contribution equivalent to the cost of our agreed scheme to mitigate the impact of the development could be provided towards this wider improvement scheme instead of the highway works.

A mitigation scheme for this development proposal has been approved in principle with HE, subject to a condition for additional modelling work to finalise the finer details of the scheme. **Appendix M** of the Transport Assessment contains the initial A38-A50 Impact Assessment report, and **Appendix N** contained the chain of correspondence with HE working up the mitigation scheme up to agreeing a planning condition, but in error appears to not have included all of the detailed information that is discussed in the e-mails. The final A38-A50 WSP Development Assessment report dated November 2018 and the updated General Arrangements drawing, which should be in **Appendix N** alongside the correspondence with HE, are both attached.

As demonstrated in the WSP Development Impact Assessment report (see attached the full intended content of the **Transport Assessment Appendix N** now including the attachments referred to in the e-mail discussions), the assessment results of the draft mitigation scheme show the potential for performance improvement achievable through the signalisation of 5 arms and change of some lane allocations.

The mitigation scheme demonstrates improved vehicle throughput in both modelled periods, a reduction in average delay experienced per vehicle in both modelled periods and an average reduction in journey times through the junction.

Source: WSP A38-A50 Burnaston Cross Development Impact Assessment report, Nov 2018

It has been concluded that adaptive control (MOVA) is likely to be required to balance the A50 WB and the B5008 approach arms, which are in close proximity to each other, and the circulating traffic in this area. The current assessment has been undertaken based on fixed time operation of the traffic signals, and therefore modelling the mitigation scheme with MOVA to demonstrate the benefits of this will be one of the focuses of the additional modelling work to be completed to satisfy the planning condition recommended by HE. This additional modelling work will also help to determine appropriate trigger levels.

The following commentary summarises the assessment results for the B5008 which is a key area of interest for DCC Highways.

During the AM peak hour there are improvements in terms of journey time, delay and queue length when local residents are travelling to work from Willington towards Derby or other locations via the A50 or A38 north. The initial results do show increases in journey time, delay and queue length during the PM peak hour on this approach to the junction, when these residents would generally be traveling home in the opposite direction and therefore would not be affected. The main impact of this situation would be on those leaving the development site during the PM peak hour. Notably the values in the PM with the development and mitigation scheme are still generally lower than the Do Minimum situation in the AM peak hour (e.g. without the development or mitigation scheme).

The results show the queue length to extend to or beyond the site access in the AM DM scenario (before the development), and certainly beyond the services roundabout (c. 140m), however there is a notable improvement in the DS scenario with the development and mitigation scheme. In this scenario, the average queue does not extend beyond the service roundabout, and the max queue would extend just beyond the services roundabout. In the PM the initial results show that the max and average queue is likely to be beyond the service roundabout in the DS scenario with the development and mitigation scheme. However, the use of MOVA would potentially improve this

situation by the optimisation of the use of the green time at each of the arms, and this will be investigated further in the next step of modelling to fine tune the mitigation scheme.

3) Travel Plan

The comments suggest the following, which will be provided:

- Staff changing facilities to encourage walking and cycling (see Travel Plan para 8.8)
- Prominent, secure, covered cycle storage close to staff entrances (see Travel Plan para 6.11-6.12, 8.8). Cycle storage will be made up of a number of Sheffield type stands sufficient to cater for likely demand, and sited to enable expansion should demand arise
- Prominently sited dedicated car share spaces close to staff entrances (see Travel Plan para 8.24-8.28)
- A number of electric vehicle charging points for the use of staff and visitors (see Travel Plan para 6.13)
- Uninterrupted pedestrian walkways to all unit main entrances from the proposed site road network.
- Pedestrian walkways at all proposed access points provided to relevant standards to match into existing provision, complete with lighting, surfacing and dropped tactile kerbs as appropriate.

It is noted that the measures suggested to improve public transport options are suggested to be in place upon first commercial operation. These are:

- Extension of the Villager V3 service
- Provision of a new hourly bus service from Swadlincote to the site, via rural villages not currently served by public transport, providing links to existing bus and rail services at Repton and Willington, and potentially provide access to other large employment sites in the area to increase potential patronage and further reduce existing car journeys through Willington. (TA para 7.56)
- It is proposed to use to the Travel Plan to tailor the bus service to the actual demands of the employees.
- The exact route and full details of the new bus service are to be agreed with the local authorities, and will include liaising with Toyota to investigate extending the service to also serve their site, as this has potential to reduce existing car journeys on the network.
- New bus stop(s) will be provided to serve the site using the above bus services with location(s) to be agreed with DCC and the operators. It is also noted that any new bus stop infrastructure should include lighting, raised kerbs, shelters, timetable cases, bus stop markings and real time information wherever feasible.

A link will be provided from within the site to the proposed segregated pedestrian/cycle access, and the crossing point on Etwall Road and widened footway on the opposite side of Etwall Road, “to ensure continuity of pedestrian walkway provision from that proposed adjacent to Unit 11.”

Consideration will be given to the establishment of:

- a site-based website, detailing travel options
- a social media presence, or other method, to facilitate prompt communication between the Travel Plan Co-ordinator and employees.

The Travel Plan is proposed as a working document and will be monitored and developed. It is suggested that individual Travel Plans for each occupier, in accordance with the Framework Travel Plan are implemented and developed for at least 5 years after occupation of the unit (see Travel Plan para 4.2). The comments confirm that 5 years is appropriate, or one year post occupation of all units, whichever is greater.

It is noted that a Travel Plan Monitoring Fee and Greenways contribution have been suggested for inclusion in a S106 agreement. It is also noted that the Travel Plan can be monitored by STARSFor, but it is not an obligation.

The Greenway contribution is in relation to Section 26 of the proposed Derbyshire Key Cycle Network runs along the towpath of the Trent and Mersey Canal at Willington. The comments state “Consult Countryside for current KCN budget requirements.” **Please can information or contact details be provided to determine the total budget cost for the scheme and the proportion or value of the contribution that is being requested?**

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