Appendix 7.2

Environmental Effects – Transport Assessment Criteria

1. Column 3 in Table 2.1 of The Guidelines for the Environmental Assessment of Road Traffic ("IEA Guidelines") sets out a list of environmental effects which should be assessed for their significance. Each of these potential effects, along with some explanatory text relating to the assessment criteria, is listed below. It is on this basis that the assessment in chapter 7 of the ES has been undertaken.

2. It is acknowledged at paragraph 2.4 of the IEA Guidelines that not all the effects listed in the guidance (and summarised below) would be applicable to every development.

- Noise and Vibration: The environmental implications of noise and vibration arising from changes in traffic flow are assessed within chapter 12 of the ES.

- Visual Effects: The visual effect of traffic is complex and subjective and includes both visual obstruction and visual intrusion. The IEA Guidelines acknowledge that in the majority of situations the changes in traffic resulting from a development will have little effect and so is not considered further. A Landscape and Visual Assessment is however provided within chapter 10 of the ES.

- Severance: Severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery. Severance is difficult to measure and by its subjective nature is likely to vary between different groups within a single community. In addition to the volume, composition and speed of traffic, severance is also likely to be influenced by the geometric characteristics of a road, the demand for movement across a road and the variety of land uses and extent of community located on either side of a road. All these factors are considered when determining the likely severance effect. In general terms according to the IEA guidelines a 30% change in traffic flow is likely to produce a 'slight' change in severance, with 'moderate' and 'substantial' changes occurring at 60% and 90% respectively.

- Driver Delay: Delay to drivers generally occurs at junctions where opposing vehicle manoeuvres are undertaken with vehicles having to give or receive priority depending upon the type of junction arrangement. A number of traffic

modelling computer programs are available which are able to predict the queuing delay at junctions. Where development flows increase above the IEA thresholds, assessments could be undertaken on the adjoining road network to establish the baseline queuing delay during the weekday peak hour periods when traffic flows are at their greatest. Development traffic flows could then been added and further operational assessments undertaken to establish the queuing delay following development. The change in queuing delay as a result of the proposed redevelopment could then be identified and its significance assessed.

- Pedestrian Delay: The delay incurred by pedestrians is generally a direct consequence of their ability to cross roads. Thus the provision of crossing facilities, the geometric characteristics of the road, and the traffic volume, composition and speed are all factors that can affect pedestrian delay. It should be noted that the IEA guidelines advise that in assessing levels of, and changes in, pedestrian delay, assessors should not attempt to use quantitative thresholds. Instead, the Guidelines recommend the use of professional judgement to determine whether pedestrian delay is a significant effect.

- Pedestrian Amenity: The term pedestrian amenity is broadly defined as the relative pleasantness of a journey. It is considered to be affected by traffic flow, speed and composition as well as footway width and the separation/protection from traffic. It encompasses the overall relationship between pedestrians and traffic, including fear and intimidation which is the most emotive and difficult effect to quantify and assess. There are no commonly agreed thresholds for quantifying the significance of changes in pedestrian amenity, although where traffic flow (or its Heavy Goods Vehicle (HGV) component) doubles, significant effect is likely to arise. All the above factors are considered in reaching a professional judgement when assessing this effect.

- Accidents and Safety: To establish the effect on the road safety record of the adjoining road network Personal Injury Accident (PIA) statistics have been obtained from Derbyshire Constabulary. These statistics provide information on the location and severity of PIAs. The data obtained cover the three-year period up to 31 August 2011. Consideration has been given to the local circumstances, in particular to vehicle conflicts and pedestrian activity. These assessments enable a professional judgement to be made regarding the significance of the effect.

- Hazardous Loads: The IEA Guidelines acknowledge, in paragraph 2.4, that most developments would not result in an increase in the number of movements of hazardous or dangerous loads. In this instance, the Proposed Development would not result in any hazardous loads and therefore this effect is not considered further.

- Heritage & Conservation Areas: The assessment of this potential effect is contained within Chapter 8 of the ES.