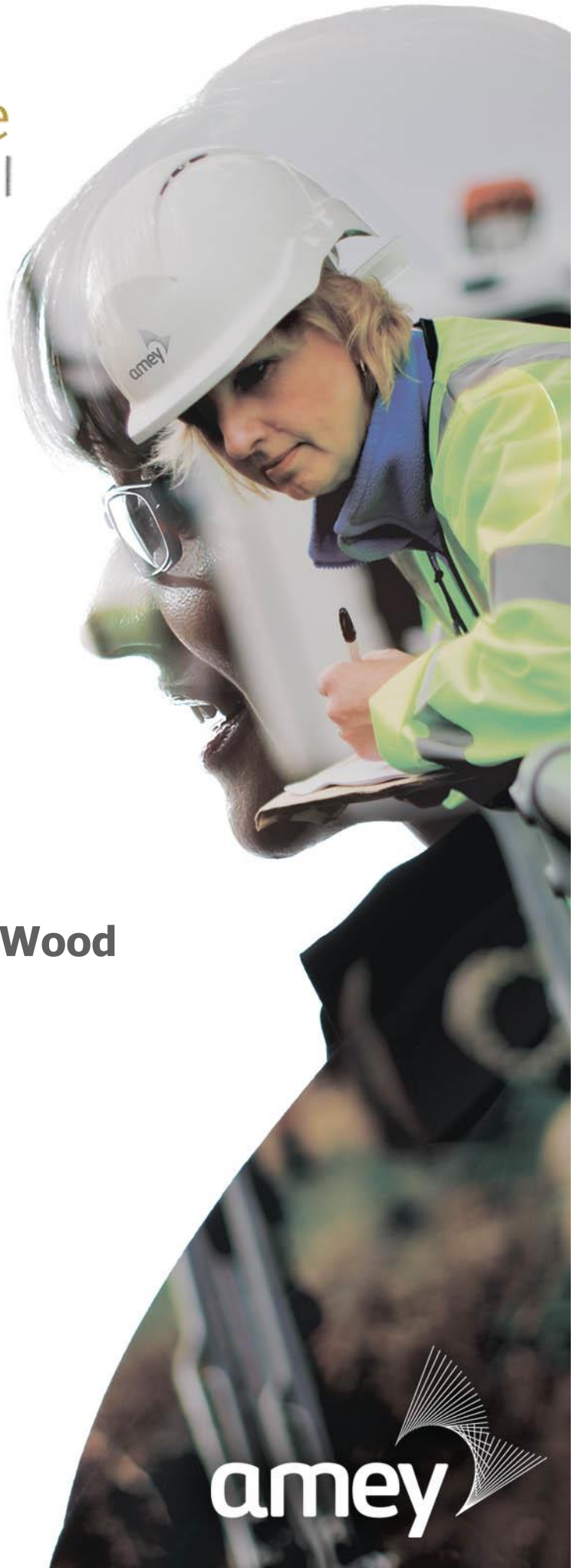




Staffordshire
County Council



Option Review

A515 Weight Restriction, Wood End Lane to B5017

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Executive Summary

This study has been undertaken by Amey on behalf of Staffordshire County Council. The works brief was to conduct an independent option review of a potential weight restriction on a section of the A515. The section of road under consideration is the A515 between the junction with Wood End Lane and the B5017 at Stubby Lane, Draycott in the Clay.

The A515 has been found to be correctly classified as an A road and as part of the Principal Road Network.

The percentage of HCVs in A515 traffic ranges from 7.4% to 11.3% which is acceptable for an A road. HCVs are not over-represented in accidents for the latest 5 year period of accident data available.

The implementation of a weight restriction would need to be with access exemptions. The number of HCVs affected by a weight restriction is not known without further survey work.

The A515 would need to be removed from the Principle Route Network for a weight restriction to be implemented due to an EU requirement.

The A515 is part of the Emergency Diversion Route for the A38 and there is a conflict between this role and a weight restriction.

A weight restriction would be difficult to enforce and without enforcement the restriction is unlikely to be effective.

It is the recommendation of this option review that a weight limit should not be considered. However, should the decision be taken to progress with the establishment of a weight restriction on the A515, a number of issues that need to be addressed before implementation are listed in the conclusions.

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1 Introduction

Amey have been commissioned to conduct an independent review of a potential weight restriction on a section of the A515. The specific tasks Amey were requested to undertake were:

- Determine if the route is designated correctly
- Determine what changes (if any) are required
- Determine if a weight limit (7.5t) is feasible and deliverable.

The section of road under consideration is the A515 between the junction with Wood End Lane and the B5017 at Stubby Lane, Draycott in the Clay.

2 Existing situation

The A515 is approximately 48 miles long, running from Lichfield, Staffordshire to Buxton, Derbyshire in a roughly north-south orientation.

The section of the A515 under consideration in this report is between the junction with Wood End Lane and the B5017 at Stubby Lane, Draycott in the Clay. It is a single carriageway road, with at-grade intersections and private and commercial accesses along its length. It passes through rural countryside.

This section of the A515 passes through several communities, the largest being the villages of Draycott in the Clay, Yoxall and Kings Bromley. It is bisected by numerous local routes (including the A513, B5014, B5016, B5017 and B5234) with links to conurbations such as Uttoxeter, Rugeley and Burton-upon-Trent and to the distribution park at Fradley.

Speed limits on this section are generally 50 or 60mph. There are speed limits of 30mph through King's Bromley and Yoxall and a 40mph speed limit through Draycott in the Clay.

This section of the A515 forms part of the Emergency Diversion Route (EDR) for the A38.

2.1 Route designation

Discussions in this report relating to road classification are based on the Guidance on Road Classification and the Primary Route Network document published by the Department for Transport (January 2012).

2.1.1 A Road

As the name indicates, the A515 is an A road. A roads are defined as "major roads intended to provide large-scale transport links within or between areas." B roads are defined as "roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network."

A roads are generally among the widest, most direct roads in an area, and will be of the greatest significance to through traffic. There is not a single standard for selecting classes of road; instead classifications are set in a way that reflects the road network in their local area.

Relative to the B roads that intersect with it (eg B5016, B5017, B5234), the A515 has a greater significance to through traffic, and the B roads have in turn a greater significance to through traffic than the surrounding unclassified roads. Given the local relative hierarchy the A515 is correctly classified as an A road.

2.1.2 *Principal Road Network (PRN)*

In addition to being an A road, the A515 is part of the Principal Route Network (PRN). The PRN designates roads between places of traffic importance across the UK, with the aim of providing easily identifiable routes to access the whole of the country.

The PRN is constructed from a series of locations (primary destinations) selected by the Department for Transport, which are then linked by roads (primary routes) selected by the Local Highway Authority. Local centres classified as primary destinations include Lichfield, Uttoxeter and Ashbourne.

The A515 is logically part of the PRN given its alignment relevant to nearby primary destinations.

2.2 *Freight*

The County Council's Freight Strategy (2011) recognised that the freight transport and logistics industry is an important activity in Staffordshire and the prevalence of the logistics industry with storage and warehousing facilities in the county is, in part, a reflection of good access and the central position in the country to serve a national distribution service. It is evident that there is strong market interest for major logistics operations, particularly in the East Staffordshire and Lichfield areas of the county, and employment in these industries is well above the national average.

The Strategy also identified that much of the HCV traffic in rural areas has a legitimate right of access to a point of collection or delivery and a significant proportion of it is related to business operating in the rural area. However, the County Council recognises that freight movement can have negative environmental and social implications for local communities and has pledged to support ways of moving freight from unsuitable roads and neighbourhoods.

2.3 Percentage of HCVs

Traffic counts on the A515 provided by the County Council at Yoxall and Draycott in the Clay indicate that the percentage of HCVs range from 7.4% to 11.3%. This percentage is what would be expected on an A road.

Table 1: Traffic volumes and calculated HCV content (12hr 2-way 5 day averaged flows)

Road	Location	HCV volume	Total volume	% HCVs
A515	Yoxall (2012)	321	4364	7.4%
	Draycott (2013)	674	5948	11.3%

2.4 Accident analysis

Accident data for the latest 5 year period available (December 2009 to November 2014) for the A515 between the A50 and the A51 was analysed. A total of 73 accidents were recorded on this section of the A515 during the time period addressed. HCVs were involved in 6 of the accidents, which is 8% of the total. A breakdown of accidents per 12 month period is shown in the table below.

Table 2: Accidents on the A515 between A50 and A51

Period	Accidents		
	Total	Involving HCVs	Percentage
Dec 09 - Nov 10	15	0	0%
Dec 10 - Nov 11	13	1	8%
Dec 11 - Nov 12	11	3	27%
Dec 12 - Nov 13	16	2	13%
Dec 13 - Nov 14	18	0	0%
Total	73	6	8%

HCVs are represented in accident figures at a similar rate to their composition in traffic.

A review of the contributory factors for the accidents involving HCVs does not indicate that the presence of HCVs was a factor in the accidents in which they were involved.

2.5 Average speed cameras

Average speed cameras are in the process of being installed on the A515 (Duffield Lane to Lower Hoar Cross Road). The installation of average speed cameras may be a deterrent to HCVs using the A515 as a through route. If HCVs were still to use the A515 the average speed cameras are likely to reduce the incidence of them using excessive speed along the route.

The average speed cameras are in addition to the fixed safety cameras already on the route near Draycott in the Clay.

2.6 HS2

The alignment of HS2 stage 1 crosses the A515 at the southern end of the study area, approximately 150m north of the A515 intersection with Wood End Lane.

HS2 Phase One environmental statement volume 5: traffic and transport indicates that construction traffic will affect the southern-most 600m of the study area. The A515 north of this is not included in the proposed routing of HS2 construction traffic and hence should not see an increase in HCV traffic from the construction works.

3 County Council Powers, Duties and Responsibilities

The County Council has a range of powers and duties as the Local Highway Authority including the power to prohibit or restrict HCVs from using certain routes and the power to reclassify a route; but also a duty to secure the expeditious movement of traffic ensuring efficient use of the network.

3.1 HCV restriction

The County Council uses its powers as Highway Authority under the Road Traffic Regulations Act 1984 to prohibit or restrict HCV's from using certain roads. Generally restriction orders are used to prohibit the entrance of 7.5 tonne gross weight vehicles, although they may be restricted to 3 tonnes to protect a particularly vulnerable or weak structure. Traffic Regulation Orders are only applicable to vehicles passing through an area and they would not prevent legitimate access to rural businesses. The level of access required within the area is an important factor when considering a restriction, along with the likely impact of displacing vehicles and whether the restriction could be practically enforced.

3.2 Local highway classifications

In April 2012, the Department for Transport (DfT) passed responsibilities for managing the local highway classifications to local highway authorities. In principle, local highway authorities already fulfilled these responsibilities but they no longer need to seek approval from DfT to implement them. The prevailing guidance has remained unchanged and any decisions made by local highway authorities must be defensible.

3.3 Traffic management

The Traffic Management Act 2004 was introduced to tackle congestion and disruption on the road network. Section 16 of The Act places a legal duty on local traffic authorities to make sure that traffic can move freely and quickly on their roads and on the roads of nearby local highway authorities, such as the Highways Agency.

In light of the above, many operational processes exist to ensure that works/events/activities are carried out at the right time, taking account of road classification and sensitivity, but that also considers how these will affect other authorities' road networks and the Strategic Road Network (SRN). This also works in reverse where they support Council to develop measures to enable the positive movement of traffic.

3.4 Civil Contingency

The Civil Contingencies Act 2004 guides how the government prepares and plans for emergencies including disruption of facilities for transport. It listed County councils (among others) as Category 1 responders, giving the specific responsibility to reduce, control or mitigate the effects of an emergency (along with other responsibilities). Council has a duty of care to the public stranded in traffic congestion.

Emergency diversion routes are an important component of mitigating the effect of a disruption of facilities for transport.

3.5 Strategic plan

In addition to all of the above, the County Council's Strategic Plan outlines a vision to create a connected Staffordshire, where everyone has the opportunity to prosper, be healthy and happy. As a result of this vision the strategic plan outlines three priority outcomes –“that the people of Staffordshire will:

- be able to access more good jobs and feel the benefits of economic growth;
- be healthier and more independent;
- feel safer, happier and more supported in and by their community.”

4 Option- Weight restriction

The implementation of a weight restriction on the A515 between the junction with Wood End Lane and the B5017 at Stubby Lane, Draycott in the Clay is being considered. This report investigates if a weight restriction is feasible and deliverable.

The weight restriction would prohibit goods vehicles with a plated maximum gross weight exceeding 7.5 tonnes from using the A515 for the length the weight restriction applies unless accessing locations within the restricted area. The restriction would be displayed on route with the installation of signs to diagram 622.1A from the Traffic Signs Manual with a plate to diagram 620 reading, "Except for access".

The implementation of a weight restriction would require access exemptions due to the access needs of residents and businesses serviced by the A515.

4.1 Principal Road Network and weight restriction

The Department for Transport's Guidance on Road Classification and the Primary Route Network (January 2012) states that under EU Directive 89/460/EC, the PRN must provide unrestricted access to 40 tonne vehicles.

Therefore the implementation of a weight restriction on the A515 would require a reclassification of the road to remove its status as a Primary Route.

The Local Highway Authority has responsibility for PRN decisions, but the Secretary of State retains legal responsibility for the PRN and retains the right to intervene. Changes to the PRN do not require public consultation or advertisement.

4.2 HS2

As the overall aim of a weight restriction is to reduce the numbers of HCVs on the A515, it should be noted that there will be an increased volume of HCV traffic on the southern section of the study area during HS2 construction, regardless of the implementation of a weight restriction with access exemptions. The construction traffic would not be affected by a weight restriction with access exemptions as they will be accessing the construction site.

5 Option impacts

5.1 Primary Route Network de-classification

A Local Highway Authority may decide that there is no need for a primary route to link two destinations. In this case, the authority should be able to demonstrate either a) that direct traffic between the two primary locations is too low to justify a primary route; or b) that a journey of broadly similar convenience is possible through the other sections of the PRN. It may be argued that the A38 could be classed as providing a journey of similar convenience to the use of the A515.

Supporters of the implementation of the weight restrictions have argued that the A38 could be used by HCVs instead of the A515. If this journey represented a “journey of similar convenience” then it may be possible to remove the A515 from the PRN.

5.1.1 *Journey of similar convenience*

Google maps was used to compare a typical journey between Lichfield and Ashbourne to see if a route via the A38 is a “journey of similar convenience” compared to a route using the A515. A comparison of the alternatives offered by the query indicates that a typical journey between the two locations would be 9.2 miles longer and take an additional 3 minutes if the A38 was used instead of this section of the A515.

Table 3: Journey details Lichfield to Ashbourne (Google Maps)

Journey via	Distance (miles)	Journey Time (mins)
A515	26.9	44
A38	36.1	47
Difference	9.2	3

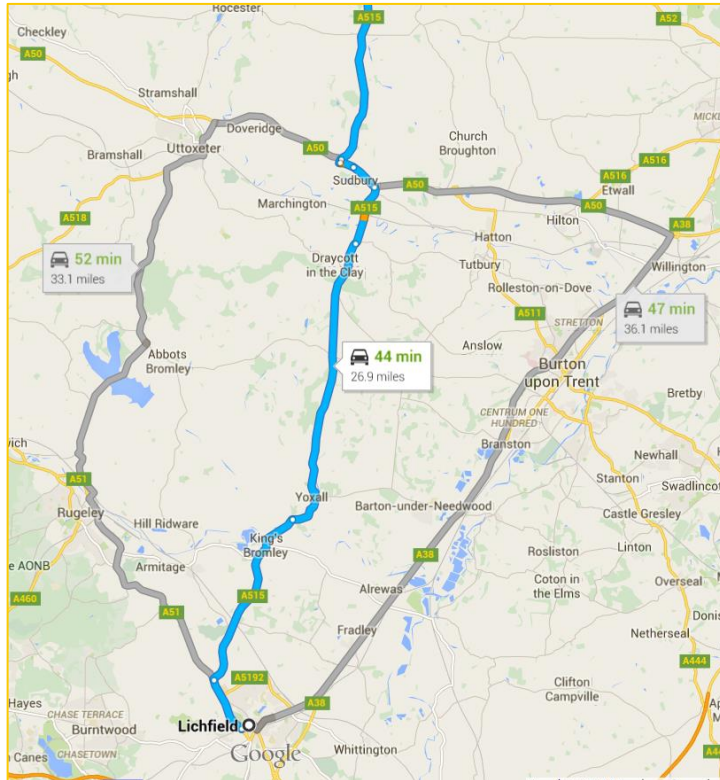


Figure 1: Lichfield to Ashbourne via A515 Route

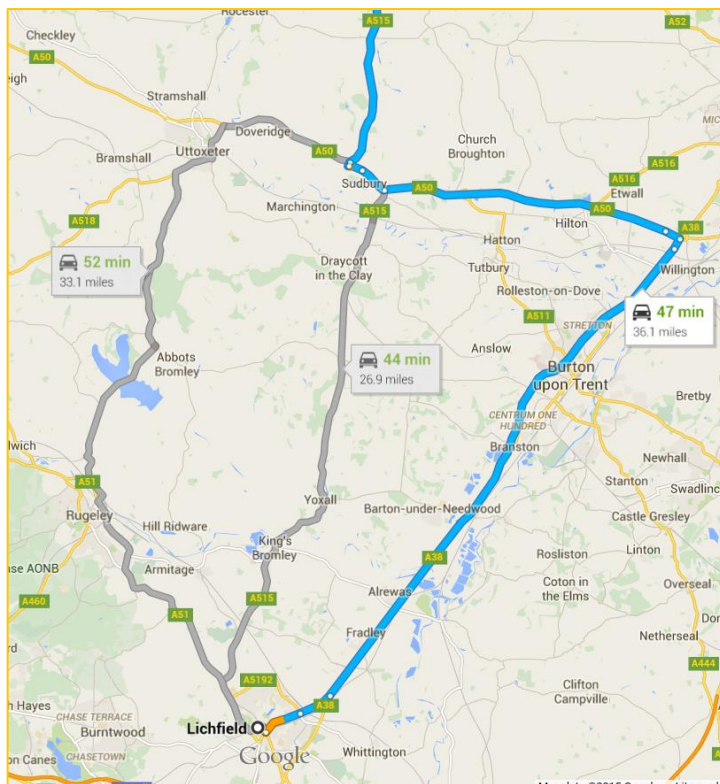


Figure 2: Lichfield to Ashbourne via A38 Route

It is acknowledged that more rigour could be applied to the analysis of the difference between the two routes, but this initial investigation suggests that an argument could be made against the removal of this section of the A515 from the PRN. This is on the basis that the use of the A38 doesn't represent a journey of similar convenience due to the additional distance and travel time caused by using this route instead of the A515.

Before an argument can be made either for or against removal from the PRN, further investigation would be required including assessment of observed journey times, journey time reliability and the impacts on the A38 from the displaced traffic.

5.1.2 Signage

Road signs on the PRN are green with white and yellow text. This colouring also appears on patches and panels on directional signs on adjacent roads. The removal of this section of the A515 from the PRN would require replacement or modification of all signs on this section of the A515 and all directional signs that indicate this section of the A515 is a primary route. The cost of this sign replacement would be the responsibility of the Local Highway Authority and should be part of any consideration of the implementation of a weight restriction.

5.2 Emergency Diversion Route

This section of the A515 forms part of the Emergency Diversion Route (EDR) for the A38. Should a weight restriction be implemented, it would need to be temporarily suspended whenever the EDR is being used, otherwise the weight restriction would hamper the A515's ability to accommodate the HCVs that would inevitably be required to use the route as part of the diversion.

The temporary suspension of a weight restriction is legally feasible; however the practicalities of this would make a suspension operationally difficult. It would also serve to undermine the effectiveness of the ban as it may give the impression to HCV drivers that the A515 is a viable route for them.

If the practicality issues of a temporary suspension are not able to be adequately addressed then the route would need to be removed from the EDR list in the event of a weight restriction being implemented on the A515. Consultation with Highways England would be required and approval for the removal is unlikely to be granted.

Emergency diversion routes are routes deemed to be the most suitable / closest equivalent to the strategic road. The A515 is the logical EDR route for the A38. It is not feasible to direct non-motorway traffic onto a motorway, ruling out the M42 as an alternative and other routes are significantly longer than the A515 route. If EDR routes are too much longer than the route being diverted from, drivers are likely to ignore the route and find their own way, which in the case of an A38 closure is likely to include the A515 regardless of its EDR status. Not having an effective EDR would also cause unnecessary dispersion of traffic through local road network and would contravene Council's legal responsibilities for traffic management and emergency planning.

5.3 Enforcement

Experience in other parts of the country indicates that weight limits with access exemptions are unlikely to be effective unless they are rigorously enforced and enforcement is notoriously difficult. Enforcement would require evidence that "access" to premises along the route was not required. The length of the restriction adds to this difficulty. Due to difficulties in enforcement local Police may not allocate resources to enforce the restriction.

Should a weight limit with exemption be implemented on the A515, a clear and funded plan for enforcement, agreed with and supported by local Police, would be required for the scheme to be effective.

5.4 Magnitude of problem

A weight limit with access exemptions on the A515 would impact HCV through movements only. The remaining HCV traffic would be using the A515 for access and therefore remain unaffected.

It is not known what proportion of the HCV traffic is using the A515 for access and what proportion for through journeys. An Origin-Destination (OD) survey would be required to ascertain the percentage of HCVs accessing the A515 that are using it as a through route and therefore the number of HCVs that would be affected by the weight restriction.

Without knowing the proportion of HCVs using the A515 as a through route, it is not possible to determine if a weight restriction would have any significant impact on the number of HCVs on the route, even if the restriction was 100% effective.

6 Conclusions

6.1 Designation

The A515 is correctly designated as both an A road and part of the Primary Route Network according to the descriptions in the Guidance on Road Classification and the Primary Route Network document published by the Department for Transport (January 2012).

6.2 Access exemption

The implementation of a weight restriction on this section of the A515 would need to be with access exemption so that residents and businesses along the road could still be serviced by HCVs.

The implementation of a weight restriction with access exemptions would only target a (unknown) proportion of the HCVs on the A515 and the effectiveness of the restriction on these HCVs is unlikely to be high due to the length of road covered and subsequent difficulties with enforcement.

The implementation of a weight restriction with access exemptions would require this section of the A515 to be removed from the Primary Route Network. There would be a cost implication for the replacement or modification of signage to reflect this change.

6.3 Recommendations

It is the recommendation of this option review that a weight limit should not be considered. The issues leading to this conclusion are detailed in this report, and are summarised below:

- The A515 contributes to the efficient movement of traffic within the County and to destinations along the route.
- A HCV restriction along the entire route would be practically unenforceable. Enforcement would require evidence to confirm that "access" to premises along the route was not required.
- Restricting HCV movement within just villages along the A515 could serve to displace traffic to other sensitive areas.

- The A515 is designed and maintained to an A road standard, appropriate for HCV usage.
- Freight transport and logistics industry is an important activity in Staffordshire. Any disruption to HCV movements within Staffordshire may have a negative impact on this industry.
- The introduction of a weight restriction would require the A515 to be removed from the PRN. Any changes to the PRN must be defensible and because the A515 is currently correctly included in the PRN, its removal from the PRN would need a strong, defensible argument.
- There would be a cost implication to update signs on the A515 and surrounding road network to reflect the A515's removal from the PRN.
- Construction traffic for the HS2 will use the southern section of the A515 regardless of any weight restriction due to access requirements.
- Without knowing the proportion of HCVs using the A515 as a through route, it is not possible to determine if a weight restriction would have any significant impact on the number of HCVs on the route, even if the restriction was 100% effective.

6.4 Further considerations

It is the recommendation of this option review that a weight limit should not be considered due to the issues highlighted in this review. However, should the decision be taken to progress with the establishment of a weight restriction on the A515, it is recommended that the following need to be addressed before implementation.

- The number of HCVs affected needs to be determined. Origin-Destination surveys over the length of the study area would show how many HCVs are using the A515 as a through route as opposed to for access.
- Further investigation of the relative performance of the A515 against the A38 is required to determine if the A38 represents a journey of similar convenience and hence whether the A515 can be removed from the PRN.
- The impacts on the A38 and other surrounding roads of a weight restriction on the A515 need to be assessed. It is possible that any displaced HCV traffic onto the other roads may have a significant impact on the efficient traffic performance of those roads.

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- A plan to accommodate a temporary suspension of the weight restriction whenever the A515 is being used as the Emergency Diversion Route for the A38 would need to be developed. If this is not possible, the A515 would need to be removed from the EDR in consultation with Highways England.
 - Funding would need to be allocated for the modification or replacement of road signs on the A515 and adjacent roads to reflect the weight restriction and removal of the A515 from the PRN.
 - A clear and funded plan for enforcement, agreed with and supported by local Police, would need to be developed.