

Inspection of Carriageway Markings

Title: (Double White Line Surveys)

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1 Introduction

As an employer, Lincolnshire County Council has certain duties under the Health and Safety at Work Act 1974 regarding mobile surveys and inspections.

This Code of Practice is intended to provide a means of meeting those responsibilities; it should be read in conjunction with the separate Code of Practice CPC7 'Mobile Surveys and Inspections'.

The inspection of carriageway markings for maintenance purposes should be carried out in accordance with CPC7. However, a request for double white lines usually requires a forward visibility survey in order to determine whether such lines are necessary. An experienced officer should have assessed the site for suitability, prior to requesting a full and detailed inspection of the available forward visibility and the appropriateness of any existing carriageway markings.

It is not appropriate for double white lines to be installed on roads that are less than 6.1 metres wide and a survey of carriageway widths should be carried out during the experienced officer's assessment.

All improvements to a carriageway alignment should now be designed in accordance with standards that provide sufficient forward visibility, so in time, any requirements for double white lines are likely to be as a result of encroachment of vegetation rather than insufficient vertical or horizontal alignment. Where vegetation is encroaching into the highway and restricting forward visibility this should be brought to the attention of the relevant highway division and addressed by a reduction in the width or height of the vegetation, or where possible removing the vegetation completely.

Following the removal of vegetation, the road is then reassessed by an experienced officer to decide if a forward visibility survey is still required. This assessment should be carried out using guidance provided by the Department for Transport in the form of the Traffic Signs Manual Chapter 5 – Road Markings.

Visibility distances used to determine a system of double white lines should be based on actual 85th percentile speed, where this is higher than the speed limit, so it may be beneficial to obtain speed-readings before the survey is carried out.

2 Traffic Management

By the very nature of requiring a forward visibility survey, there will be an expectation of limited forward visibility, even if it is momentary. The visibility survey will therefore require traffic management. A works order will need to be placed with the Highway Term Maintenance Contractor (HTMC) well in advance of the expected date of the survey and a convenient date agreed with the Contractor. The works order should

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ideally refer to this Code of Practice (CPC10). A survey of this nature should not be carried out in adverse weather conditions that restrict forward visibility, so regular liaison with the contractor will be necessary to ensure that the survey is only carried out under the appropriate conditions a certain amount of flexibility will be required by all parties. Traffic Management supplied by the HTMC should consist of STOP/GO boards and operatives, and advance temporary signing (in accordance with Safety at Street Works and Road Works A Code of Practice or Chapter 8) on all approaches to the survey. The approximate parameters of the survey together with a suitable meeting place large enough for operatives and all vehicles to meet prior to the survey should be indicated on a plan which is issued to the contractor to assist with the locations of temporary signs (See appendix A).

3 Equipment (also see restrictions and limitations)

The contractor should supply a minimum of:-

- Two traffic management operatives with STOP/GO boards together with third operative to act as a liaison person at the time of the survey. The third person can be the driver of the support vehicle.
- Support Vehicle must be of conspicuous colour and with appropriate markings in accordance with Chapter 8, Section 5 of the Traffic Signs Manual.
- Communication equipment so that verbal contact can be maintained with the entire survey team at all times. Mobile phones with fully charged batteries capable of sustained use for up to an hour are acceptable for this purpose.
- Traffic management in the form of signage in accordance with Safety at Street Works and Road Works A Code of Practice or Chapter 8 should be erected in advance of the survey area.

The County Council survey team should supply:-

- Communication equipment so that verbal contact can be maintained with the entire survey team at all times. Mobile phones with fully charged batteries capable of sustained use for up to an hour are acceptable for this purpose.
- Two survey wheels are required – one per team.
- T-Bars if horizontal forward visibility is an issue.
- Note Pads and pens to record the results of the survey.
- Minimum two team members, one of which must take the lead and make this obvious to all involved.

4 Survey

In addition to traffic management personnel, a double white line survey team requires a minimum of two persons; one will lead the survey and must have proven experience in carrying out double white line surveys, the other should be competent and have some knowledge of white line surveys. It is desirable to have additional staff available to assist at the time of the survey as the equipment required to carry out the survey can be cumbersome. The attendance of additional staff is also beneficial as it provides training and will possibly lead to their attendance at future double white line surveys.

The forward visibility survey should be based on guidance provided by the Department for Transport in Chapter 5 of the Traffic Signs Manual and is briefly carried out as follows (refer to Appendix A):-

- The survey team is split into two (Team A, and Team B) with a minimum of one LCC/design staff and one traffic management personnel (STOP/GO board) per group (see also restrictions and limitations).
- The lead surveyor is identified to the survey team and the traffic management provider and will start the survey in Team B.
- It is useful for the lead surveyor to brief all involved before entering the live carriageway to commence the survey DO NOT expect the TM operatives to know what is expected of them as this is a specialist survey that isn't carried out on a regular basis.
- The lead surveyor should ensure that communication equipment is turned on, and is in good working order expected for the duration of the survey. If mobile phones are used, all numbers should be made available to all taking part in the survey.
- Once the traffic management provider confirms that signing is in place, the survey team should make its way safely to the edge of the carriageway in order to begin the survey.
- Traffic management operatives should immediately begin to control the traffic with STOP/GO boards (where necessary). Each team is shielded individually by a traffic management operative with a STOP/GO board. Team B is also shielded by the support vehicle as this allows the lead surveyor to communicate with TM operatives (via the driver).
- Each survey team will generally walk close to the verge unless instructed otherwise by the lead surveyor; by walking close to the verge this will limit the requirement to fully STOP the traffic. The traffic management operative will maintain a short distance in front of Survey Team A. Survey Team B will have

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the traffic management operator behind them where they should also maintain a small distance behind.

- The survey is then progressed by both survey teams maintaining a set distance between them at all times. The set distance is determined and instructed by the lead surveyor in Team B.
- Where it is no longer possible for the two teams to maintain the distance pre-determined by the lead surveyor, a possible requirement for double white lines is indicated and measurements will be recorded by the lead surveyor.
- Intermittent forward visibility checks and any recorded measurements must be taken from the centreline of the road and it is usually necessary for both traffic management operatives to synchronize STOP boards in order to simultaneously stop both directions of traffic whilst the measurements are recorded.
- The lead surveyor will communicate with the TM operative via the driver of the support vehicle when a short period of "ALL STOP" is required.
- The lead surveyor will determine when the survey, in one direction, is over. Inevitably, if there is a recorded loss of forward visibility in one direction the survey will need to be carried out again in the opposite direction.
- To assist with accurate data recording of results and to help the TM operatives (and vehicle) to reverse the survey it is useful to maintain the level of TM until a suitable access/junction/layby is reached. Measurements can then be recorded from a decent reference point and it provides a reservoir for the re-establishment of roles for the return leg of the survey.

5 **Restrictions and Limitations**

There are restrictions and limitations to where this type of survey should be carried out. Where it is determined by the experienced officer, during the initial assessment that a road is not suitable for the type of survey detailed above, improvements can be considered to traffic management by including highly visible vehicles or vehicles fitted with a crash cushion. Programmed road closures should also be taken advantage of, although traffic management will still be necessary. Lincolnshire Police (via the Road Safety Partnership) may also be able to assist with very temporary road closures (usually when a survey is required as a result of a fatal accident). It is likely that any investigations into the possible cause of a fatal accident will require the road to be closed.