

**Review Of The London Lorry Control Scheme:
Recommendations Report**

by P Emmerson

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TRL Limited



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Review of the London Lorry Control Scheme: Recommendations Report

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by P Emmerson (TRL Limited)

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Executive summary

This report sets out how the Exempt Network relates to other networks within London, in particular the Transport for London Route Network (TLRN). It also sets out the initial thoughts on what changes we consider possible to the Exempt Network. It sets out what proposals were considered and the qualitative assessment of the proposed changes. Issues that are considered include the relationship to the TLRN, past history of any possible changes and any data requirements. Finally the Summary sets out our initial recommendations of the changes to the Exempt network.

1 Introduction

This report sets out the initial recommendations for any changes in the extent of the Exempt Network and covers the following issues from the original tender document.

1. Reducing or increasing the exempt network using TLRN and Borough roads
2. New HGV travel patterns with the revised LLCS
3. The effects of other proposals for London, such as the Congestion Charging Zone and Low Emission Zones on revised LLCS
4. Identify operational and procedural measures, which will achieve economic benefits to operators without compromising the environmental protection offered by the scheme.

At this stage (May 2003), with work on collecting HGV travel survey data not being available, the report concentrates on an initial assessment of a range of proposals that have been put forward. Most of these proposals have been suggested following discussions with members of the Working Group or the LLCS team, (who have been consulting boroughs on changes) and these recommendations by the study team, in the light of the work undertaken so far and the 1999/2000 review. The initial assessment of the recommendations has taken into account comments made by the boroughs in the 1999/2000 report review to those put forward originally in that review. It was not the purpose of this stage of the work to consult the boroughs. This would be part of a later consultation stage. The approach to obtaining an initial selection of proposals was not the same as originally envisaged in the tender for this work (Section 4 of this report explains the change in approach and sets out the list of proposals). Section 2 discusses, the derivation of the Exempt Network and its relationship with that of other London networks such as the Transport for London Road Network (TLRN), the Congestion Charging Zone (CCZ) and the proposed Low Emission Zone (LEZ) strategy. Section 3 discusses the original tender requirement to identify operational and procedural measures, which will achieve economic benefits to operators without compromising the environmental protection offered by the scheme.

Section 5 provides a discussion of the issues raised in the initial assessment of the proposals, including the quantitative, qualitative and political issues that have been considered. Section 6 sets out our assessment of the list proposals set out in Section 4. The assessments are largely qualitative at this stage but the assessment includes any interaction with the other London road network definitions and our considered opinion as to whether the proposal merits a cost-benefit analysis. Some proposals will not require such an analysis, either because they are unlikely to find any political acceptance, or the proposal is of such a nature that full analysis is irrelevant. Section 7 draws together those proposals that we feel have some merit to them and identifies which ones TRL believes should be subject to a cost-benefit analysis.

2 The Exempt Network and its relationship to other London networks

2.1 Context of Exempt network

The LLCS provides a limited network of roads to provide access to commercial and industrial areas of London for *all goods vehicles* within the controlled area. As originally conceived in 1985, only 250 miles of roads in Greater London were not restricted. This network is known as the Exempt Network. The roads originally chosen were based upon an appraisal of industrial and commercial areas, and discussions with firms known to be affected by the LLCS. In addition, complications arising from the position of trunk roads, controlled by the Department of Transport, meant they formed the bulk of the Exempt Network, along with some additional roads to accommodate vehicles which might wish to turn around and avoid the controlled area.

As currently set out, the Exempt Network:

- includes all motorway links and most of the Transport for London Road Network (TLRN);
- has been designed to give access to most of the major industrial sites, by means of extending the Exempt Network to minor roads in these areas so that HGVs can access these sites without requiring permits;

- has been designed to discourage cross-London movement from going through Central London, or more generally residential areas with a low incidence of goods traffic;
- includes some roads that are principally included to allow HGVs to turn around if they enter the LLCS restricted area by mistake, for example the A4008 in Harrow;
- has been designed to choose the least environmentally damaging routes among alternatives, or concentrate traffic on the already popular one, for example on the A41 as opposed to the parallel A5;
- some roads on the boundary of the scheme are shared with other local authorities outside London;
- some roads included at the behest of a local borough, for instance Lower Road in Erith (even though it forms a disconnected section of the Exempt Network);
- almost all of Greater London is covered by the LLCS but there some areas on the edges of London which are not covered by the LLCS and where roads, whilst not being part of the Exempt Network are open to all goods vehicles during the LLCS operating periods.

The extent of the Exempt Network does determine the routing of Very HGVs (18+ tonnes) holding permits, since under Condition 5 of the LLCS, vehicles travelling within the restricted area must access the nearest points of the Exempt Network to both the origin and destination of their journey. Thus any extension or of the Exempt Network can have knock-on repercussions for lorry traffic on banned roads.

Minor changes were made to the definition of the network in 2000 when the transfer of much of the trunk road network from the DETR to Transport for London. The definition of the vast bulk of the Network predates the setting up of other London based networks such as the Transport for London Road Network (TLRN), Congestion Charging area, and the Low Emission Zones (LEZ) strategy. However the existence of these networks may have implications for the definition, and proposed changes to, the Exempt Network and these networks are discussed in turn in the following sub-sections.

2.2 The Exempt Network and the Transport for London Road Network (TLRN)

The Transport for London Road network (TLRN) covers London's most important roads (580km) (Appendix B Fig.1). The TLRN accounts for about 5% of London roads but carries 33% of London's traffic. London's 33 local authorities manage the other roads, apart from motorways. These are run by the Highways Agency.

The Exempt Network includes most of the TLRN except Central London and some of the TLRN roads in south London area (Appendix B Fig. 2).

The majority of roads that are on the TLRN and not on the Exempt Network are those in Central London. This is because of the diametric aims of the two networks. The TLRN is in place to facilitate access to and around London and concentrates on those roads with the greatest strategic value, and those capable of handling high flows, whereas the Exempt Network is in place to minimise the environmental impact of one sector of the traffic flows, namely VHGVs. Both networks have, as their core network, the Motorway system in London and, by history, the bulk of the former trunk road network. However, the different aims of the Exempt network from that of the TLRN network saw some small sections of the former trunk road network (and still part of the TLRN network), removed from the Exempt Network because there were environmentally preferable alternatives (a section of the A10 for example).

The impact of the differing aims of the two networks can be best appreciated by separating London into the region within the North and South Circular and the region outside the circular roads. Within the circular roads only the least environmentally sensitive TLRN roads have been included on the Exempt Network. This ensures that freight traffic is concentrated on these roads and prevents widespread disturbance to Central London. Examples of these roads that are judged to be the least environmentally sensitive are the A1, A41 and A501 which provide the main access points for Central London, especially from the M1. In consequence, all the dense network of TLRN routes south of the river are excluded from the Exempt Network. In Outer London a different pattern is noticeable. Generally, all roads that are on the TLRN are included in the Exempt Network except those deemed to be particularly environmentally sensitive or of less importance to freight traffic. These omitted

routes have not arisen from being taken out of the Exempt Network but rather become visible only when the two networks are superimposed. Some of these 'missing links' have been considered as part of the initial assessment of possible changes to the Exempt Network.

Other reasons for leaving roads off the Exempt Network are also valid. For instance when two TLRN roads run in a similar direction in the same region only one is included on the Exempt Network, therefore one of the roads is spared any disturbance. An example is the A24 London Road in Merton between the A2043 and the A297. This road has been left out because it runs similarly to the A217-A297 and there is no need to include both in the Exempt Network.

2.3 The Exempt Network and Congestion Charging

The Congestion Charge was introduced to Central London by the Mayor of London, Mr Ken Livingstone, and came into effect on February 17 2003. Traffic movement in Central London is currently severely hampered by congestion and under the scheme a daily charge of £5 is payable by all motorists (with some exceptions) to encourage a shift away from car use to alternative modes of transport. Money raised from the charge will go towards such things as:

- Improving bus transport
- Improving road safety
- Improving street lighting, and
- Crime prevention

The charge applies from 07:00 to 18:30, Monday to Friday, excluding Public Holidays.

The zone (Fig. 1) is bounded by the Inner Ring Road, which comprises:

- Marylebone Road
- Euston Road
- Pentonville Road
- City Road
- Great Eastern Street
- Commercial Street
- Tower Bridge Road
- New Kent Road
- Kennington Lane
- Vauxhall Bridge Road
- Grosvenor Place
- Park Lane, and
- Edgware Road.



Figure 1: The Congestion Charging Zone of Central London

Source: (Not including Exempt Network Roads): BBC London Website
www.bbc.co.uk/london/congestion/intro.shtml

Motorists using this route do not have to pay the congestion charge, which applies only to those streets within the area bounded by the Inner Ring Road. As currently defined, no part of the current Exempt Network passes into the Congestion Charging Zone (CCZ) but the northern boundary of the zone (A501) is part of the Exempt Network, from Marylebone Flyover to The Angel.

Possible interactions between the Exempt Network and the Congestion Charging Zone

It is unlikely that most goods vehicle drivers exclusively dependent on the Exempt Network will be directly affected by Congestion Charging since:

- Roads of the Exempt Network do not penetrate the Congestion Charging Zone. Much of the Ring Road along the northern edge of the Zone forms part of the Exempt Network, but drivers using the Ring Road do not have to pay the Congestion Charge.
- The times of operation of the Congestion Charging Zone (07:00hrs - 18:30hrs, Monday to Friday) do not coincide with the weekday times of operation of the Lorry Ban (midnight - 07:00hrs and 21:00hrs - midnight, Monday to Friday) on the restricted roads for goods vehicles.

Transport operators most likely to be affected by any interaction of the two schedules are those who require early morning access to central London.

Vehicles over 18 tonnes that deliver time sensitive items such as newspapers and fresh food produce could rearrange their deliveries wholly before 07.00hrs instead of undertaking their current journeys within the CC area wholly after 07.00hrs.

Condition 5 of the LLCS requires goods vehicles travelling within the restricted area to access the nearest points of the Exempt Network to both the origin and destination of their journey, commercial vehicle drivers will enter Central London from the north and west via the Exempt Network and will need to plan their journeys so as to leave this area. One area of possible interaction will be the encouragement of lorries to apply for permits so that they can deliver in Central London outside the charging hours.

Concern has been expressed by some operators to the Working Group about the short window of opportunity between the end of the Congestion Charging conditions and the start of the LLCS conditions. However, the current number of very Heavy Goods Vehicles on the roads in Central London in the hour *before* the Congestion Charging starts (06.00hrs-07.00hrs) is much higher than in the hour *after* (07.00hrs-08.00hrs). Those in the hour before 06.00hrs [Stephen Steele] M are of similar magnitude as those between 19.00hrs and 20.00hrs. In consequence, changes in the timing of the LLCS could be as important as any impact with the Congestion Charging scheme. Unfortunately a discussion of the implications of changes in the operating hours of LLCS are outside the remit of this part of the study.

2.4 The Exempt Network and London's Low Emission Zone (LEZ) strategy

A study has been recently completed which considered the introduction of a strategy to reduce emissions in London by setting up a Low Emission Zone (LEZ). Within such a LEZ vehicles of a certain type would be banned unless they reached a certain environmental standard (or EURO class). The study team is recommending that the best option would be for a LEZ that would be London-wide, consistent with the Greater London Boundary.

The study also recommended as that, initially, the LEZ targets lorries, London buses and coaches, as these vehicles have disproportionately high emissions. Targeting them would produce the greatest emissions reduction for the least cost. The levels of emission targets being recommended suggest that approximately 30% of HGVs by 2006/7 would not meet the required standard (EURO II + RPC) at current replacement rates.

At one level this study does not have much interaction with the Exempt Network. The LEZ would be proposed as an all-day control and is concerned with emissions, such as NO_x, CO₂ and particulates. It is however the daily totals that matter, rather than night-time noise which is the focus of the LLCS. Because the LEZ concept of HGVs is wider than that for the LLCS (which is only >18 tonnes), there is no need to consider possible changes in vehicle size affecting the number of vehicles affected by the LLCS. There may be implications for the LLCS, as a whole, from the LEZ study. This is largely relates to the method of operating the LEZ scheme (automatic enforcement or manual) and the administration of the scheme. In addition, the insistence on 'modern' vehicles *may* reduce the overall noise outputs but in terms of night-time noise it will not be easy to estimate given the interaction between type of vehicle, age of vehicle and length of haul. These are issues that relate mainly to a review of the LLCS as a scheme rather than the Exempt Network itself and is reinforced by the LEZ study's recommendation for a London-wide LEZ. The operation of a LEZ will not be able to achieve the same level of night-time residential noise protection or the minimisation of night-time cross-London HGV movements since it would operate on a London-wide basis and would not impact on the noise levels from HGVs directly.

We feel that there will be no issues relating to the LEZ concept as currently envisaged for the Exempt Network, (or those changes made to it) but the issue should be re-visited during any review of the LLCS scheme as a whole or any variation in the spatial extent of the LEZ.

2.5 The Exempt Network and possible lorry tolling schemes

At present, there are discussions regarding charging HGVs according to the roads they use, via GPS satellite technology. Currently, the concept is envisaged on a broad level at a national level - restricted to motorways only, but in theory the principle could be expanded to vary by time of day and type of road. Such a sophisticated system could, in theory, replace the ERN (and some of the LLCS conditions) by restricting HGV travel on certain roads in London by time of day, by using a suitable pricing structure. However, such a system is many years ahead. The principle of distance tolling replacing the LLCS would raise serious issues relating to the role of price restricting HGVs on certain roads and the visibility and enforcement of such a system. The current system is probably better

understood by residents and lorry operators than a sophisticated remote charging system. Noise levels are also likely to be easier to control.

3 Identification of operational and procedural measures

One of the secondary objectives in the original tender specification was a need to identify operational and procedural measures, which will achieve economic benefits to operators without compromising the environmental protection offered by the scheme. After discussion with the Working Group it was realised that it would be difficult to produce detailed advice about such measures without making a study of the way the Scheme operated at present. However such a review was not considered part of this stage of the review. Our suggestions set out here therefore arise as a result of discussions with interested parties on other issues related to this study and would need perhaps to be re-visited in the light on any such review of the operation of the LLCS.

The major measure that would produce economic benefits to operators and may provide additional environmental benefits, is to advertise more widely the availability of the Special Routing Agreements. At present, knowledge of these agreements does not appear to be widespread and few operators have applied for them. The introduction of the agreements, which allow HGVs to follow agreed routes, (that do not conform strictly with Condition 5 but which do have environmental and operating cost advantages), was perhaps viewed with apprehension by both operators and the LLCS. The latter may have feared inundation with requests and the operators wary of the potential additional work involved in suggesting and agreeing routes. In many cases the worst disadvantages of the ERN and Condition 5 could be avoided with no additional environmental impact. This permit system is of course no panacea since not all routes could show the right degree of operating disadvantage under the current system, coupled with little or no environmental disadvantage from the new route.

Other issues such as replacing the current paper-based system of exemption permits or the use of outside agencies to provide data-base support are more properly issues for the general review of the Scheme, rather than one focused on possible changes to the Exempt Route Network.

4 Proposals for change

4.1 Derivation of proposals

The major change that has occurred since the inception of the study is a change in the procedure for obtaining potential changes to the Exempt Network. Originally, it was hoped to use data from the LLCS permit applications to suggest routes that could be added to or dropped from the Exempt Network. Discussions with the LLCS team and the analysis of a very small sample of routes indicated that this approach would not be practical. It was decided, therefore, to elicit possible changes from interested parties through the members of the Working Group. This would have the benefit of ensuring that any cost-benefit analysis could be concentrated on routes that had at least one interested party. To this end TRL has held discussions with the FTA, the RHA and the LLCS team. TRL also looked at those proposals brought forward in the 1999/2000 review, where they can be identified, and considered those that TRL felt merited reconsideration.

4.2 Types of proposals

Some of the proposals, set out in Table 1 below are included as a result of a need to tidy up the existing network definitions and relate to small changes to include bits of the current banned network so that the Exempt Network can perform efficiently and lorry operators can be sure that by using the Exempt Network and conforming to street signing they will not be liable for prosecution from straying of the designated network. These are mainly the inclusion of small sections of currently banned roads to allow correct turning movements between sections of the Exempt Network.

Some of the proposals have been included to try and remove some operators from the need to have permits (the Thamesmead proposal falls into this category). Some are based on the freight organisations desire to have greater non-permit access to Central London. A final category is a small number of proposals to regularise the pattern of the TRLN and Exempt network in Outer London.

4.3 List of Proposals

Table 1 below sets out a summary of the proposals that the study team have considered. Most have been derived from proposals originally sought by organisations involved in the 1999/2000 study, as well as a number of new ones. The location of these proposals is shown in Appendix B, figure 3.

Table 1 List of proposals for changes to the Exempt Network

| Code | Roads | Road No. | Borough | Reduction | Junction 1 | Junction 2 | Addition | Junction 1 | Junction 2 | Reason |
|------|---|-------------|----------------------|--------------------------------------|---------------|----------------------------|-------------------------|------------------------------|---------------------------|---|
| A | Foxley Lane | A2022 | Croydon | Y | A237 | A23 | N | | | Benefit residents on Foxley Lane |
| B | Putney Hill / Roehampton Lane | A219 / A306 | Wandsworth | A306 | A3 | A205 | A219 | A3 | A205 | ? |
| C | Morden Road / Private Road | A24 | Merton | N | | | Private Road (The Path) | Morden Road (A24) | Industrial Estate | To link to Ind. Est. |
| D | A4 | A4 | Hammersmith & Fulham | Y | A3220 | Hammersmith Flyover (A219) | N | | | It goes to nowhere - no turning |
| E | | A312 | Hounslow | N | | | Y | | Industrial Estate | To link to Ind. Est. |
| F | Lion St./Baron St. & Goswell Road (A1) & City Road (A501) | | Islington | Goswell Road (A1) & City Road (A501) | Wakley Street | Pentonville Road (A501) | Lion St. Baron St. | Pentonville Road (A501) | A1 Upper Street | Turning Function |
| G | A2016 | A2016 | Bexley | N | | | Y | Plumstead High Street (A206) | North End Road | Planned East Thames Crossing |
| H | A10 | A10 | Hackney | A10 | Evering Road | Green Road / Seven Sisters | A503 Seven Sisters | High Road A10 | A1 | |
| I | A13 | A13 | Tower Hamlets | N | | | A13 | Limehouse | Commercial Street (A1202) | Make it the preferred acces to central London |
| J | A4 | A4 | Kensington & Chelsea | N | | | A4 | Warwick Road (A3220) | Piccadilly Circus (A4201) | Preferred access to the West End |
| K | Wandsworth Road | A3036 | Lambeth | N | | | A3036 | A3 | A202 (Vauxhall) | Preferred accesss to South Central London |

| | | | | | | | | | | |
|---|---------------------------|-------|------------|---|------|---------|------|----------------------------|----------------|-------------------------------------|
| L | Twickenham Road | A310 | Hounslow | N | | | A310 | A316 | A4 | |
| M | A4008 | A4008 | Harrow | Y | A404 | Watford | N | | | |
| N | Gypsy Lane / Queen's Ride | | Wandsworth | N | | | Y | A205 | A306 | Enable right-turn from A205 to A306 |
| O | A312 | A312 | Hounslow | N | | | Y | A315 | A316 | Regularise ERN and TLRN |
| P | Well Hall Road | A205 | Greenwich | N | | | Y | A2 | Woolwich Ferry | |
| Q | Waldram Park Rd | A205 | Lewisham | Y | A205 | | Y | Stanstead Rd (not on A205) | | |

5 Methodology

5.1 Criteria for assessment of proposals

On the basis of initial discussions with the freight organisations and the LLCS team, as well as quotes in the documentation of meetings to discuss possible changes in 1999/2000, it appears that the attitudes to changes in the Network by the interested bodies have been characterised by:

- An acknowledgement that new industrial estates require connection to the Exempt Network;
- A desire on the part of the freight haulage organisations for increased penetration of Central London by the Exempt Network and the removal of a need for a permit;
- A reluctance on the part of the public authorities for extensions to the Exempt network;
- A desire to concentrate HGV flows on routes with existing high flows of HGVs
- A desire to ensure that *extensions* to the network do not see the concentration of HGVs on a single route that is currently part of the network;
- A desire to ensure that the Network is consistent between Boroughs; that it does not stop at a borough boundary;
- A fear that HGVs will cut across Central London instead of using the M25 or the North and South Circular Roads (Concerns about this were expressed based on modelling work in 1985 when the M25 was partly built, and in a 1996 Oscar Faber TPA report (but not seen by the study team). The freight organisations consider this fear unfounded now but lorries are still caught attempting cut across between parts of the Exempt Network.)

As well as these qualitative attitudes there are concerns by the freight organisations that the pattern of the Exempt Network can lead to lorries having to undertake routes, to comply with Condition 5 of the permit system, that lead to excessive mileage, and so increased operating costs, compared with more direct routes. Associated with these 'excessive' mileages will be additional emissions.

Whilst the lorry operators are concerned about the possibility of the Exempt Network (and associated permit system) leading to additional operating costs, the LLCS was set up to control the night-time (and weekend) lorry nuisance for London residents. This is most directly perceived in the form of lorry noise. There is no doubt that the LLCS has had a profound effect in some areas of London. As an example, the night-time HGV flow on the Chelsea Embankment was reduced by 80% between 1989 and 2001 (based on 24hr TfL cordon counts) but only 60% over the 24 hour period. In contrast, night-time medium goods vehicles (MGVs) declined by only 20%. In this light, each proposed change in the Exempt Network has the capacity to alter the pattern of flow of lorries, and so the amount of lorry noise a resident would experience. As well as the amount of change in lorry noise there is also the issue of the number of residents that would be affected (for better or for worse).

5.2 Approach to evaluating the proposals

The initial sift of the proposals has attempted to take three sets of issues into account in a qualitative manner. Each proposal was assessed in the light of likely changes to existing lorry routes and the likelihood of any change leading to changes in residents exposed to lorry noise, and to changes in the operating costs of the Lorries themselves. TRL has also set out the likely political considerations that might influence attitudes to the change, along the lines of the issues raised in section 5.1. For a number of the more likely candidates, TRL proposed a multi-criteria analysis to be undertaken, based on changes in operating costs, changes in noise levels and some function of the number of London residents affected undertaken to try and put a quantitative feel to the assessment. Limited time and resources prevented the production of a full cost-benefit analysis, regardless of whether agreement could have been made on an approach to monitoring changes in noise levels and their perception. In addition, each proposal was assessed for any interaction with other London networks such as the TRLN and the Congestion Charging area. No attempt was made to assess any combination of proposals such as for example combining more than one new entry to Central London, a proposal favoured by the freight associations.

6 Initial assessment of proposals

Suggested Changes to the Exempt Road Network

A. Foxley Lane

Removal of the A2022 (Foxley Lane) in Croydon between the A237 and the A23 from the ERN.

Removing Foxley Lane from the ERN would obviously benefit the residents of Foxley Lane. Implications of the removal would include some reassignment effects for traffic travelling north and east, but not traffic travelling south. The environmental impact would be positive for Foxley Lane but some negative impact will be felt on reassignment roads (A237 and A23). Also lorries travelling north and east would incur some increase in operating costs. The assessment in terms of environment and operating costs will depend on the relative current flows on the A2022 and A237. The removal would have little affect on the need for permits.

In the previous review the LLCS were keen to remove Foxley Lane but the borough (Croydon) are happy with the current situation. The future construction of a Coulsdon by-pass may affect the situation and the removal of the A237 instead may be a more logical deletion once the Coulsdon relief road is built.

Data availability:

There is a TfL Boundary Cordon count site on the A2022 to the west of the A2022/A237 junction (Croydon Lane). In 2001, only 15 HGVs were counted during the LLCS weekday operating period. To conduct a full assessment, a turning count at the A2022/A237 junction would be required. However, there is the added complication that the Foxley Lane entrance has an old LLCS sign on it (although the northward extension of the A237 (Woodcote Rd) does not) and this might influence the routeing of lorries without a permit, so that the turning counts would not be a true representation of routeing requirements.

B. Putney Hill / Roehampton Lane

Removal of the A306 Roehampton Lane from the ERN and the addition of the A219 Putney Hill to the ERN in Wandsworth.

The addition of the A219 to the ERN would enable vehicles travelling east to travel from the A205 to the A3. This change would involve significant reassignment effects from the A306 to the A219 but little change elsewhere. Whilst the extent of the banned network with HGVs would be less, the environmental impact would tend to be negative, as the majority of sites on Roehampton Lane are not affected by lorry noise (with the exception of a hospital). Also the haulier's operating costs would increase. The change would have very little affect on the need for permits. Operationally the proposed route is easier since the current route via Roehampton Lane requires HGVs to travel over banned streets in order to turn into Roehampton Lane from Richmond.

Data availability:

There is currently an ATC site on Roehampton Lane (weekday LLCS operating period flow of about 20 HGVs).

C. Morden Road / a private Road

Add a small section of private road, The Path, to the ERN in Merton.

Adding this small section of road would allow access to an industrial estate without the need for a permit. The main implication of this change would be to reduce the need for permits. There would be no reassignment effects, environmental impacts or impact on operating costs. The private road is not on the TLRN and there may be a legal issues of whether the ERN can include a private road.

Data availability:

None required.

D. A4 reduction

Removal of the A4 between the A3220 and the Hammersmith Flyover (A219) from the ERN (Hammersmith and Fulham).

There is no possibility of turning once past the Hammersmith Flyover without leaving the Exempt Network so removing this section would stop drivers being caught out and being forced to leave the network without a permit. With the addition of the roads making up Hammersmith Broadway it would allow HGVs to turn around at the Flyover. There is little industrial or commercial property on this part of the A4 so there will be little change to permit requirements. The complication arises from the fact

that cutting back the A4 may lead the West Cross route becoming the closest ERN access for Central and South Kensington and Chelsea. (Under Condition 5 the short distance to access/egress the Exempt Network should be used and differences between the new access point on the A4 and the West cross route will be small for quite a considerable area of west central London. The actual changes depend on the precise travel pattern which will require survey information). This could lead to re-assignment of lorries from the A4 to Holland Road. If this is substantial, there would be significant environmental impacts on the A4, Holland Road, North Circular and A40 if the numbers re-assigning were high. When raised at the last review, Kensington & Chelsea Borough were very much against this and this is still likely to be a sensitive issue, but with travel and traffic data the quantitative assessment is relatively straightforward compared with most potential changes.

Data Availability:

Apart from political considerations the main problem with this proposal is the lack of data. There is a TfL Inner Cordon at end of A4 on Brompton Road but information on the use (count or travel survey) of the affected stretch of the A4 is lacking (as is current HGV travel on the main alternative route – Holland Rd).

E. Hounslow Industrial Estate - Heron Road

Addition, to the ERN, of a new access road (Heron Road) to a new Industrial Estate in Hounslow, off the A312.

This addition enables permit-free access to the industrial estate. The main implication would be the reduction in the need for a permit. There would be no reassignment effects, environmental impacts or changes in operating costs. (The existence of this estate came to light during discussions with the LLCS team) but as yet its precise location has not been determined.

Data Availability:

None required.

E. Lion St. / Baron St. / Goswell Road

Addition of Lion Street and Baron Street between Pentonville Road and A1 Upper Street and the removal of Goswell Road (A1) and City Road (A501) between Wakley Street and Pentonville Road (Islington).

This addition would enable left turns to be made from the A501 to the A1 and remove the need for a permit. There would be no reassignment effects, environmental impacts or change in operating costs. The section of road to be added is already part of the TLRN.

Data Availability:

None required.

F. Thamesmead

Addition of the A2016 in Bexley from North End Road to Plumstead.

Adding the A2016 would provide access to the industrial areas along the Thames without the need for a permit as well as connecting disconnected pieces of the Exempt Network. The need for a permit would be removed. There would be no immediate large reassignment effects, environmental impacts or changes in operating costs. There may be some potential disadvantages in the long-term due to the implications of a proposed east London river crossing but this is likely to be quite a few years away. Also, the route may potentially form an alternative route to the Dartford crossing and may encourage illegal use of the Woolwich Ferry (not on the ERN). Bexley borough was not keen on this change at the last review. A compromise would be to extend the Exempt Network along the A2016 (Bronze Age Way and Eastern Way as far as the junction with the Central Way in Thamesmead., including the roads off Anderson Way and Yarnton Way as far west as its junction with The Eastern Industrial Estate. This alternative would still leave the Woolwich Industrial Estate on the restricted network, but if the Exempt Network was extended as far as the Plumstead Rd then Nathan Way could be included as well. Including at least part of the A2016 would also remove the anomalous position of the disconnected part of the Exempt Network along Lower Road in Erith. In summary, TRL believes that this would be a worthwhile change, although the precise details of the change would need to be discussed with Bexley and TfL in relation to the potential future impact of the East London river crossing.

Data Availability:

No counts available but none required for assessment although the scale of the HGV flows would be useful to gauge the usage of the road. A suitable count site does exist on Bronze Age Way.

G. A10 from Seven Sisters

Removal of the A10 from Seven Sisters to Rectory Road. Replaced by A503 from Seven Sisters to A1. (Hackney).

Freight organisations see little advantage in the current A10 route and would rather have access to the Central London via A503 to reduce operating costs of routes from the north and east. However, the local borough was opposed to the new route at the last review due to the few generators of freight traffic on A503 (which would mean that changes to permits would be small). There could be a major reassignment impact for traffic from East to Central London and a significant environmental impact on the A503. The scale of the impact depends on the travel pattern of trips to Central London. Both the roads are on the TLRN.

Data Availability:

TfL Inner Cordon sites on both roads. In 1993, (the last time the sites were counted for 24 hours), the A10 had 72 HGVs during the LLCS weekday operating period; the A503 had 62 HGVs. Whether this split is the same under the current LLCS conditions is not known but one should expect a greater proportion of HGVs using the A10 or diverted to the A1. Potential re-assigners heading for Central London could be gauged from the results of an A501 travel survey.

H. A13 extension

Extension of the ERN on the A13 from Limehouse to Commercial Street A1202 in Tower Hamlets.

This addition would improve non-permit access to Central London, reducing the need for permits and providing a new access point for Central London and the City. It would cause major reassignment and large-scale shifts of environmental impacts and operating costs. The A13 is currently part of the TLRN. This addition may encourage skipping across Central London.

Data Availability:

TfL Central cordon sites. On the proposed extension (A13 Commercial Road) some 202 HGVs were counted during the LLCS weekday operating period in 2001. In contrast, the parallel route, A1203 The Highway, carried 224 HGVs during the same period, despite being a banned route. To what extent these are lorries accessing sites on The Highway or on longer journeys will need to be ascertained.

I. A4 extension

Extension of the A4 in Kensington and Chelsea from the A3220 Warwick Road to Piccadilly Circus (A4201).

This extension would improve non-permit access to the West End. Along with reducing the need for permits, there would be a large reassignment impact as this would become the new entrance to the West End and City. Large-scale shifts of environmental impacts and operating costs would also occur. The A4, beyond Hyde Park Corner, is currently not part of the TLRN. The extension of the A4 may encourage skipping across Central London and is highly unlikely to be looked upon favourably by the boroughs.

Data Availability:

Travel data on the A4 corridor is limited. Approximately 84 HGVs use the Brompton Road during the weekday operating period, less than third of the level in 1991.

A3 Extension to Vauxhall.

The addition of the A3 from Clapham Common to Vauxhall. Note this is a compromise between an earlier proposal using the A3036 Wandsworth Road from Clapham to Vauxhall and a proposal for including the A3 from Clapham to the Elephant & Castle proposed by the FTA in their study of the Exempt Network (FTA, 2002). This proposal was thought the best of a number of options proposed by the RHA & FTA for better access from the South of London.

The addition of this route would reduce operating costs of access to Central London from the Southwest and improve environmental conditions on parallel routes. There would be some reduction in the need for permits. Large reassignment would occur, in particular the Nine Elms / Covent Garden traffic would come through Vauxhall. This would create complex environmental changes and changes in operating costs. The A3036 is on the TLRN but any change is likely to be resisted by the borough, which stated at the last review that it did not want to see a concentration of HGVs onto one route (or an access route to central London).

Data Availability:

No relevant traffic data on the proposed route. The proposed A501 travel survey would provide information on possible wide-area assignment, but not on local re-assignment.

J. Twickenham Road

Addition of the A310 Twickenham Road in Hounslow between the A316 and the A4.

This would form an alternative route for HGVs from the South-west wishing to access West London, without having to go along the South Circular/Kew bridge route which is congested at weekends. This addition would reduce the need for permits and cause reassignment from the existing route of Mortlake Road to the M4. There would be environmental disbenefits but savings in operating costs. This road is not part of the TLRN. Any change would require both boroughs (Hounslow and Richmond) to agree.

Data Availability:

None.

K. A4008

Removal of the A4008 in Harrow up to Watford.

This road is currently only included in the ERN for turning purposes. Removing it would have no effect on permits and the reassignment effect would be small. The effect on operating costs would be neutral but there would be environmental benefits for Watford. Any change would require the consent of Three Rivers and Watford but TRL believes it is a worthwhile change.

Data Availability:

None.

L. Roehampton Lane

Keep Roehampton Lane on the ERN and include Gypsy Lane - Queen's Ride.

This small addition would enable right-turns from the A205 to the A306. The main implication would be the fact that non-permit lorries could turn right. There would be no reassignment, environmental impact or change in operating costs.

Data Availability:

Site on A219 but no turning data at Junction of Roehampton Lane and Mortlake Road.

M. A312

Add the A312 in Hounslow between the A315 and A316

This change would regularise the ERN and TLRN in outer London as the A312 is already on TLRN and part of the route is already on the Exempt network. There would be a small reduction in permits required, with some reassignment and environmental and operating cost benefits.

Data Availability:

None.

N. A205 Woolwich Ferry

Extend the A205 in Greenwich from the A2 to include the Woolwich Ferry.

This extension would give an alternative route for VHGV's at times when the Dartford crossing is very busy and they cannot physically use the Blackwall tunnel but it would be of little use when the Woolwich Ferry is shut (overnight) It would also reduce the number of permits required and have major reassignment impacts. There would be negative environmental impacts with the exposure of new areas to lorry noise at weekends. There may be some reduction in operating costs. London-based organisations may wish to see congestion and environmental costs kept outside London and reduce the alternative available to HGVs.

Data Availability:

None

Q A205 Stanstead Road

Delete that part of Stanstead Rd not part of the A205 and add, Waldram Park Rd and that part of Sunderland Rd that is the A205.

This appears to have been an error on the Schedule of the setting up of the Exempt Network caused by the fact that the western part of Stanstead road is not part of the A205, which uses part of Sunderland Rd and Waldram Park Rd instead to reach Forest Hill. In fact the western end of Stanstead Road is one way (eastbound) at one point and subject to a night-time 5 tonne lorry ban.

Data availability:

None

7 Summary and recommendations

The study team has considered a number of possible changes to the Exempt Network and these are discussed in the section above. From this original list TRL considered the following potential changes to be worth further consideration. The amount of additional assessment required depends on the type of proposal.

In addition, TRL has considered the Working Group's request that a revised approach to the travel surveys is considered which will provide much of the basic travel data to assess some of the proposals (see Appendix A for details of the relative merits of possible routes). After consideration of the characteristics of the corridors and the usefulness of the potential data, TRL believes that the most useful corridor is the A501 **but** in terms of a pilot survey the A4 Hammersmith is much more ideal. It is easy to specify. It has a direct use in assessing the proposed deletion of part of the A4 and adds information on a route that appears to have no data at all on current HGV night-time usage. If this pilot (to undertaken before Easter) is successful then TRL considers the A501 corridor by far the most useful since it will contribute to any proposed extensions into Central London and the Seven Sister diversion as well. Beyond this corridor the choice is much less certain and TRL has concerns about overloading the freight operators (and organisations) with additional surveys. **If** the Working Group is against **any** extension of the Exempt Network into Central London then the A205 South Circular would be the best one to survey, as it would add to the knowledge of Lorry movements in London most. Otherwise surveys of the A13 corridor to Aldgate and the south-west Inner London (Vauxhall/Kennington) are the next most useful survey corridors. The former would be the simplest to undertake but the latter would add most to the knowledge of lorry movements. Neither would be particularly useful for assessing any other current proposals outside their respective corridors.

7.1 Technical changes

These are changes that, in a sense, correct deficiencies in the operating of the Exempt Network as defined by the 1999/200 review. They are for the most part uncontentious and require no assessment. These are:

C. Morden Road / Private Road

Add a small section of private road, The Path, to the ERN in Merton.

E. Hounslow Industrial Estate - Heron Road

Addition, to the ERN, of a new access road (Heron Road) to a new Industrial Estate in Hounslow, off the A312.

E. Lion St. / Baron St. / Goswell Road

Addition of Lion Street and Baron Street between Pentonville Road and A1 Upper Street and the removal of Goswell Road (A1) and City Road (A501) between Wakley Street and Pentonville Road (Islington).

N. Roehampton Lane

Keep Roehampton Lane on the ERN and include Gypsy Lane - Queen's Ride.

Q A205 Stanstead Road

Delete that part of Stanstead Rd not part of the A205 and add Waldram Park Rd and that part of Sunderland Rd that is the A205.

7.2 Changes not dependant on cost-benefit analysis.

TRL is in favour of the following two changes, but their acceptance is not directly related to a cost-benefit analysis but on other factors, in particular the agreement of the local authorities concerned.

F. Thamesmead

Addition of the A2016 in Bexley from North End Road to Plumstead.

M. A4008

Removal of the A4008 in Harrow up to Watford.

7.3 Changes which could be worthwhile but need to be subject to some form of assessment as well as non-quantitative considerations.

A. Foxley Lane

Removal of the A2022 (Foxley Lane) in Croydon between the A237 and the A23 from the ERN (or the removal of the A237, once Coulsdon relief road finished)

D. A4 reduction

Removal of the A4 between the A3220 and the Hammersmith Flyover (A219) from the ERN (Hammersmith and Fulham).

G. A10 from Seven Sisters

Removal of the A10 from Seven Sisters to Rectory Road. Replaced by A503 from Seven Sisters to A1. (Hackney).

7.4 Changes which may yield large benefits and costs but which TRL believes may not be suitable for further considerations either because of the complexity of measuring the changes or other more political considerations.

H. A13 extension

Extension of the ERN on the A13 from Limehouse to Commercial Street A1202 in Tower Hamlets.

Potential complications due to issues of jumping across Central London, local re-assignment and Special Routeing Agreement traffic complicating any analysis. The extension itself would yield few benefits because most lorries are probably not accessing sites on the proposed extension.

K. A3 Extension to Vauxhall.

The addition of the A3 from Clapham Common to Vauxhall

Very complex changes in routing and traffic flows possible plus contrary to borough's previously declared aim of not concentrating HGVs. Undoubted wide-scale changes to operating costs and impacts on HGV travel patterns. Proper analysis would require good travel pattern data from an A501 survey and an A3 corridor survey.

O. A312

Add the A312 in Hounslow between the A315 and A316

A change for which the type of travel survey being collected for other proposals is not suitable e.g. – too low flow counts to merit an e-mail travel survey but where re-assignment is still a potential issue.

7.5 Changes which may yield benefits and costs but which we feel unlikely to find much acceptance.

I. A4 Extension

Add A4 from Talgarth Road to Piccadilly Circus

Of all the extensions into Central London TRL believes that this is the most problematic. As a route, it is much more environmentally damaging than the existing A40/A501 route. Because it parallels the current favoured route but is slightly more direct, there may be some operating cost savings, but it does not have the clear-cut advantages that an extension from a totally different part of London has (for example the A3 or A13).

L. Twickenham Road

Addition of the A310 Twickenham Road in Hounslow between the A316 and the A4.

This was put forward in the 1999/200 review but has not been raised since. Whilst it does have some advantages as an alternative to the South Circular there would be no major operating cost changes involved and the road is not part of the existing TLRN.

P. A205 Woolwich Ferry

Extend the A205 in Greenwich from the A2 to include the Woolwich Ferry.

In contrast to the previous proposal, this addition was initially considered because it was a major part of the TLRN that was NOT part of the Exempt Network and did not facilitate cross-London traffic. Even though parks and non-residential uses edge a good proportion of this route, it would lead to some additional lorry traffic in residential areas. Its incorporation into the TRLN however, is partly related to the Woolwich Ferry, which is not available at night. In consequence, its main use would be at weekends, however, when the Blackwall tunnel is not available to use or the Dartford Tunnel is very busy.

7.6 Other proposals.

After consideration, TRL believes that the other proposals considered in the previous section are too unlikely to be acceptable, either because the benefits to lorry operators are small (either in terms of the number of lorries involved or the costs per lorry) in relation to the additional noise to residents, or that the proposal 'violates' too many of the principles behind the LLCS with little benefit to lorry operators.

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Postscript

Subsequent to the draft version of this report, it was found that the e-mail/fax survey for the Central London area produced insufficient responses and data from an HGV tracking data-base was used as the main source of data for a Central London-wide estimation of the night-time HGV travel pattern. The availability of data therefore made it possible to assess the impact of the A4 extension into London even though it was not recommended as one for detailed consideration in the report.

Appendix A. LLCS Review – Which corridors to survey.

After the meeting of the Working Group on March 14 TRL was asked to justify which corridors it would wish to survey by using the freight organisations network of contacts. In addition, TRL was asked to consider a more considered approach of a pilot survey followed by one or more other route surveys. After reflection on the needs of the study TRL considers the following corridors the most suitable to ask operators about in rank order of usefulness to the study and ease of survey.

Routes considered

1. A501 from the Westway along Euston Road to the Angel, including lorries crossing this route.

Justification. This route is the major access route to Central London during the LLCS operating periods. By obtaining information on lorries using this route, TRL should be able to gain a good overview of the travel pattern of VHGVs for most parts of Central London (certainly north of the river and west of the City). Combined with data from the A4 route (see later) it should provide a basis for estimating the effect of any wide-area re-assignment **IF** an exempt route was extended towards the city from the A3 or from the east along the A13.

Advantages. Route is used or crossed (from A41 and A1) by most of the VHGVs entering Central London during the LLCS operating periods. (See table below). A wide range of origins and destination will be intercepted, and these will be trips most sensitive to changes in access to Central London. There are existing MMC traffic data from the TfL Central London cordon (although most of it is not current (1999)).

Disadvantages. It will not be possible to provide validation manual classified counts from just one location. Counts will be needed on the Westway, A41 and the A1 which are all TfL sites.

2. A4 Corridor from Hammersmith Flyover towards the City.

Justification. It will be of direct benefit for considering either the removal of the Exempt Network on the A4 east of the Hammersmith Flyover or its extension westwards towards Piccadilly Circus.

Advantages. This route is relatively self-contained and easy to describe. It also provides a useful addition to data from a possible A501 survey. Only a single validation survey would be required, on the A4 (although an additional MCC count on Holland Road would also be undertaken). This is the simplest route to describe and would TRL believes makes the easiest to pilot.

Disadvantages. There are no traffic data on its current use at night so the number of lorries using it is unknown. The A4 at this point is a fast dual carriageway and so would mean additional count (and noise) survey costs.

3. A13 corridor from Limehouse westwards. This would be useful for estimating how many VHGVs would not require permits if the Exempt Network were extended, but this is not expected to be as useful as knowing how much traffic would re-assign to this corridor **IF** the Exempt network were extended. The flows on the parallel A1203 appear to be nearly as high as those on the A13 Commercial road itself. Comments from the freight organisations suggest that operators avoid this route during the LLCS operating hours, yet the corridor (from Limehouse westwards) carries over 400 HGVs per night.

4. Access to Central London from the South-west (A3 extension). This corridor is more complex than the other possible corridors, consisting of at least three different TRLN roads, all currently banned. Knowledge of the travel pattern in this area would be vital to knowing how the designation of one of these routes as an Exempt Network would affect lorries using the other routes, but it would not provide any information on any possible wide-area re-assignment under the Condition 5 rule. Describing the survey to lorry operators would need particular care in order to pick up the travel in the whole of the sector. There would need to be quite an extensive validation survey of routes into Vauxhall/Kennington for which there is, with the exception of Nine-Elms Road, no current night-time HGv traffic data.

5. A205 South-Circular. The designation of this route as a surveyed route has more to do with gaining a general understanding of the VHGV lorry patterns in South London than of being of direct

use by a specific proposal (assuming that the South Circular continues to be part of the Exempt Network).

6. A 2016 Eastern Way/ Bronze Age Way. This route is relatively self-contained and there would not be expected to be any significant re-assignment of lorry routes if it were added to the Exempt Network (at least without a new Thames crossing). Survey data collected on this route would add little to the general understanding of Lorry travel in London.

7. Other corridors.

The form of survey envisaged using the freight organisations is only suitable for routes with a relatively large flow per night because of the problems of possible sample size (even if a month's worth of data.)

Validation Issues

There have been some concerns that the data from a survey of lorry operators through the freight organisations could result in biased estimates of the travel patterns. This could arise because the freight organisations do not equal representation by size of operators. They have a greater proportionate representation among the larger operators. Secondly, Those who respond to the survey could give rise to additional bias if for instance large operators are more likely to respond than small operators.

Unfortunately there is no evidence of the relative travel patterns of different sizes of operator. In order to test this TRL intended to undertake validation counts on the routes, by not only doing a manual classified count but also take the registration numbers of the HGVs with more than three axles. These numbers would be compared with the data-bases that the LLCS hold of vehicles with permits. The location of most of the possible routes (with the main exception of the A205 South Circular) means that the vast majority of the vehicles should have a permit. The pattern of trips through each survey point can then be compared with the count survey data to see if the ratio of large and small operators varies greatly and if so, which different expansion factors would be needed to expand the travel survey data up to the MCC data.

| Latest HGV counts during the weekday LLCS operating period (1997+) | | | | | |
|---|-----|-----|---------------------|-------|-----|
| A501 corridor | | | Other routes | | |
| WestWay | A40 | 256 | The Highway | A1203 | 224 |
| Park Road | A41 | 119 | Commercial Rd | A13 | 202 |
| High Street Islington | A1 | 159 | Brompton Rd | A4 | 84 |
| | | | Bayswater Rd | A402 | 41 |
| Bayswater Rd data from DfT 2002 MCC; the rest from TfL MCC data (1997 or later) | | | | | |

SURVEY APPROACH

After discussions with TfL and the freight organisations, a survey of the A4 (Talgath Road) was undertaken before Easter 2003, partly as a pilot of the methodology and for the information it could yield in respect of Proposal D. This route was easy to define (only one road) and alternative routings could be easily defined on the map. During the course of the survey some 181 HGVs were counted (two-way) during one LLCS night-time operating period, which was thought acceptable for the survey methodology. Certainly, much lower counts would not be likely to provide high enough samples of lorry travel patterns.

From the count data some 100 HGV registrations were collected and these are being checked against LLCS data-bases so that the operator size and perhaps the operator location can be used as a validation item to compare against survey returns.

If the survey provides sufficient detail on travel patterns they would provide information to weight routes that could change if the A4 Exempt network was cut back to the Hammersmith fly-over. One of the noise measurement sites that were completed just before Easter took place on Holland Road which yield both Noise measurements and HGV count information. Given this is the main route potentially affected by the proposed change this will enable a n estimate of the potential noise impacts. Given the nature of residences in the affected area the main output measure would be

distance of residential property affected. It will be possible to split this by whether the route is on the Exempt Network or not.

If the survey proves a valid approach then TRL would propose to undertake the A501 corridor study as a first priority, since this yields very useful information about lorry movements over most of Central London, direct information for the Seven Sister Road extension (proposal H), and information on potential long-distance re-assignment for other extensions into Central London. The proposal for additional surveys covers this proposal. Of the other possible survey corridors, the A13 and A3 extensions are potentially the most useful, especially the latter. However the nature of the A3 corridor is more amorphous than the others and consultation with the local boroughs would need to take place before setting the area extent of the survey corridor.