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31 August 2012

Dear Mr Etherington

**Croxley Rail Link Transport and Works Act Order
Ref: OBJ65**

I refer to your letter of 11 July 2012 addressed to the Secretary of State for Transport, lodging an objection to the proposed Croxley Rail Link. Please find below our response in addressing the concerns you have highlighted with respect to the proposed emergency escape access over the Holm Oak Park development car park.

At our meeting on 26 July 2012 you further iterated your concerns with respect to this emergency escape and we hope that the following explanation addresses those concerns.

Security

The access gate will be secured by an electromagnetic lock which will only be opened by activation of the emergency alarm on the station except for inspections (see below). It will also be covered by lighting and CCTV.

Although the details are yet to be finalised, it is likely that a second fence will be installed on the railway property, with the only alteration to the existing fence line being the creation of the gate. The specification of this new fence will be chosen taking into account the environment either side of the fence line and the history of trespass or vandalism in the area.

Station staff will carry out daily inspections of the emergency access to ensure that it is clear. This should not require them to enter the Holm Oak Park Estate other than to check the gate opens.

Together with the fact that line side fencing will be improved along the whole of the railway corridor, so preventing trespass onto the track, London Underground Limited (LUL) consider that all these measures will improve rather than detract from security.

Alternatives

The following alternatives have been assessed and discounted for reasons outlined below:-

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a) Continue walkway to Tolpits Lane:- This would extend the walking distance to a place of ultimate safety (the public highway) by nearly 200 m. This walkway would have to be a lit footpath, fenced so as to prevent passengers gaining access to the track, as the railway will still be open during any evacuation. This is likely to mean further works, including additional tree removal, would be required along the embankment and would be considerably more expensive to construct and maintain.

b) Exit onto Harwood's Recreational area:- It is unlikely that the emergency services would consider this area a place of safety in that in bad weather it would be muddy and slippery or indeed covered with snow. In addition once in this area passengers would not be able to make their way to a public highway to continue their journey and should a passenger be injured there is no readily available access for an ambulance. In order to address these issues it would be necessary to provide an area of hard standing and an access road to it all at considerable cost. This area is also designated public open space so any area lost in providing the above facilities would need to be replaced with alternative land.

c) Exit via Kelmscott Close: - Without acquiring somebody's garden there does not appear to be any route from the railway boundary to the public highway. It would be more difficult to justify the compulsory acquisition of such private land than the compulsory acquisition of rights over a communal access.

Loss of tree planting and amenity

The construction of the proposed emergency access will not in itself require the removal of much of the tree planting which has become established along the cutting slopes of the disused rail corridor.

It will, however, be necessary to remove the majority of the existing tree and scrub planting which is established on the cutting slopes where the proposed link passes immediately south of Holm Oak Park. This requirement arises because current design standards adopted by LUL for engineered embankment and cutting slopes necessitate the installation of low retaining walls at the toe of the existing cutting slopes and the re-grading of the slopes to meet the standards. It is anticipated, however, that it will be possible to safeguard the high evergreen hedge which follows the boundary between the parking areas serving the properties and the railway land at the top of the cutting slope. The removal of the tree and scrub planting beyond the hedge will open views over the cutting towards the housing to the south side of the rail corridor. They are views which are currently substantially closed and filtered during the summer months by the existing tree and scrub planting and which are more open but remain filtered when the trees have shed their leaves in the winter.

The proposals for the link recognise the importance of the existing tree planting as part of the local townscape and as a component in views for members of the local community. The cutting slopes will accordingly be replanted once the engineering works in this location are completed such that the break which will initially be formed

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in the planting will be filled in as the planting establishes and begins to mature over a period of some 10-15 years following planting.

Noise

The assessment reported in the Environment Statement as part of the Transport and Works Act Order (TWAO) recognises that trains providing the service on the proposed link will increase environmental noise for residents at Holm Oak Park.

The assessment has, however, demonstrated that the predicted environmental noise throughout the new and existing sections of the proposed link, taking into account the predicted contribution that these events will be likely to make, will not result in levels which are stipulated in the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 as being levels at which provision should be made for noise insulation.

Notwithstanding this, LUL has been reviewing concerns relative to train-related noise where the construction of new lines is being proposed and has recently published guidelines which recommend that consideration should be given to the provision of mitigation where it is predicted that the introduction of trains on a new line is likely to result in an increase in noise levels of 5 decibels or more.

The method adopted for the assessment of train-related noise has been the Department for Transport's Calculation of Rail Noise (CRN).

In the case of properties at Holm Oak Park, the predicted increase in noise levels is in the order of 2-3 decibels.

Station Public Address Announcements

The station public address will be designed and operated in compliance with LUL's Manual of Good Practice for Public Address Systems – Noise Management (G-148) Please refer to the enclosed manual extracts, particularly sections 3.2.3 to 3.2.6 which describes measures that can be taken to reduce frequency, length and times of announcements and sections 3.4.22 and 3.4.23 which describe measures that can be included in the design.

Usage

The requirement for this secondary means of escape comes from the Regulatory Reform Act (Fire Safety) Order 2005 which in Article 14 (1) (c) states that:-

“the number, distribution and dimensions of emergency routes and exits must be adequate having regard to the use, equipment and dimensions of the premises and the maximum number of persons who may be present there at any one time;”

Although this does not specifically state that two means of escape routes are required it is common practice in new build that an alternative route is provided in case the primary means of escape is unavailable and LUL's standards state:-“The maximum distance from any point on the platform to a means of escape or normal entry or exit routes shall be 45m (i.e. the maximum distance between entry or exits

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shall be 90m).” Without this secondary means of escape this requirement would be significantly exceeded.

The access gate is only intended to be used in the event of an emergency on the station.

There are a number of scenarios which are described below that must be considered when considering emergency escape provisions.

a) Fire in Ticket Hall – In this scenario where there is an incident in the ticket hall that prevents passenger exiting the station through the ticket hall then this emergency access will be used to evacuate those waiting on the northbound platform, which is estimated to be only approximately 100 passengers at any one time in the morning peak. Trains should be non-stopping in this scenario and therefore no additional passengers would be evacuated at the station.

b) Train on Fire in Platform – In this scenario it will be necessary to evacuate not only those passengers on the platform but also those on the train which could be as much as 1200 passengers on a crush loaded train. However the number of passengers is more likely to be in the order of 600 in the morning peak and also experience suggests that the majority of these passengers will wish to exit the station through the normal means (e.g. the ticket hall) and that only a few will decide to use this emergency exit. The exception to this would be if the section of train that was on fire was immediately adjacent to the exit off the platform to the ticket hall.

In the event of an emergency it is expected that many of those passengers that use this emergency exit and gain access onto the Holm Park Estate will make their own way to the public highway and disperse. On conclusion of the incident station staff will check that there is no one still waiting in the Holm Park Estate and if safe to do so will allow them back onto the station.

It should be emphasised that this emergency exit is not intended to be used by the emergency services that would normally arrive at the rendezvous point which will be located outside the main station entrance. However we cannot guarantee that the emergency services wouldn't use this emergency exit if it was the most appropriate location to access the incident.

We have carried out an analysis of incidents at stations on the Metropolitan Line north of North Harrow over the last four years and although there were 28 only one of them was an incident whereby a secondary means of escape would have been used had it been available and even then it was such that the number of passengers evacuating would only have been the platform load and not passengers from a train.

We trust that the response above goes some way to addressing your concerns and our meeting on 26 July 2012 was helpful.

We hope that this will provide you with the reassurance to write to the Secretary of State to withdraw your objection to the Croxley Rail Link scheme.

Yours sincerely,

Tom Duckmanton
Project Manager
For and on behalf of Croxley Rail Link

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Manual of Good Practice



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Public Address Systems - Noise Management

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A Manual of Good Practice is defined as:

A document which provides guidance on how to apply, interpret or achieve the requirements of engineering standards.

Authorised by: _____	Date: _____
Approved by: _____	Date: _____
Custodian: _____	Date: _____

See Document History For Details



3.2 Message Strategy

- 3.2.1** Message sequences and frequencies on trains and stations should comply with S&SD standards and the latest guidance published by S&SD.
- 3.2.2** Where compliance with S&SD requirements could result in complaints or noise abatements the station GSM or Train Operations Manager should raise this concern with the relevant S&SD manager and the SQED environment manager for resolution.
- 3.2.3** At noise affected sites consideration should be given to reducing the total number of PA broadcasts made to adjacent residential properties, these comprise of:
- a)** Local Live PA (Platform or Station Control);
 - b)** Local Pre-recorded or automated (Station Digital Voice Announcer);
 - c)** Live Train PA (Train Operator);
 - d)** Automated train (Digital Voice Announcer);
 - e)** Mind the Gap (Train and or Station Digital Voice Announcer);
 - f)** Long Line PA Live (Service Control Centre);
 - g)** Long Line PA Recorded (Service Control Centre);
 - h)** Background Music (at some stations).
- 3.2.4** At noise affected sites where customers can be informed locally regarding service information, consideration should be given to inhibiting the Long Line PA.
- 3.2.5** At noise affected sites PA Pre-announcement chimes should be inhibited.
- 3.2.6** At noise affected sites all non-emergency PA messages should be inhibited as a minimum for weekdays between 2300 and 0700 and where possible reduced between 1900 and 2300 or other times as required by local conditions. Similar restrictions should be considered as required for weekends and public Bank holidays.

3.3 Operational

- 3.3.1** Station staff and train operators where practicable should be encouraged to use the DVA (Digital Voice Announcer) to make routine or repetitive announcements to customers to ensure that broadcasts are made with consistent clarity and loudness to avoid PA amplifiers being overdriven, potentially leading to noise complaints.
- 3.3.2** Group Station and Train Operation Managers (GSM's and TOM's) should consider upgrading Legacy train and station PA systems to include automated DVA's for announcement of routine messages with consistent loudness and clarity.
- 3.3.3** The Group Station Manager (GSM) should ensure station staff required to operate the PA equipment in the course of their duties have been adequately trained and are proficient in the correct operation of their station PA equipment.
- 3.3.4** PA announcements to zones fitted with Ambient Noise Sensors (ANS) should (where possible) be made when the ambient noise level has settled from the peak level i.e. not whilst the train is approaching or leaving the platforms. This is to prevent the ANS lifting the broadcast levels 10dB higher than the sampled background noise.
- 3.3.5** At noise affected sites train PA announcements should be avoided when train doors are open. ANS controlled train PA should be avoided during high ambient noise levels.
- 3.3.6** Where practicable train operators should ensure PA message duplication between train and station broadcasts are avoided.



- c) The ANS tracking characteristic should correspond to A-Weighted sound;
- d) Out of band sound frequencies within the input range of the ANS but capable of causing incorrect A-weighted noise reference levels should be filtered or prevented from interfering with PA system volume levels.

3.4.22 For noise affected sites and for non-emergency broadcasts where automatic noise sensors are used, the PA broadcast volume should not exceed 10dB above ambient noise levels or lower limit if clause 3.4.23 applies.

3.4.23 Where setting the PA system to broadcast 10dB above ambient noise levels causes unacceptable noise spillage into neighbouring properties, the following measures should be considered after consultation with and approval from LU ED:

- a) Reduce differential between broadcast and ambient noise levels down to a minimum level of 6 dB;
- b) For a given noise affected zone deactivate the ANS controlling the volume for that zone and manually preset the sound pressure levels to an acceptable value;
- c) For noise affected zones deactivate or time-limit the operation for the whole or part of the speaker chain(s) operating adjacent to residential properties;
- d) Review of sound system design including speaker type, speaker height, speaker position, number of speakers, speaker directivity, system equalisation and sound attenuation with a view to reduce noise spillage;
- e) Consider use of Noise barriers, sound absorbent material to increase attenuation of PA noise where practicable and justified by Cost-benefit analysis.

3.4.24 Manually Fixed PA system SPL levels should be a temporary arrangement (agreed with LU ED) and should be set to not less than 65 dB (A) for surface sites and 75dB (A) for sub-surface sites. A tolerance of +/- 3 dB (A) to these settings is permissible. NB. These values are based on audibility criteria recommended in BS 5839-8 (15.4.1) and BS EN 60849 (Annex C.2).

3.4.25 PA Performance degradation that occurs for manually set systems should be assessed and appropriately risk mitigated as required.

3.4.26 Where due to noise constraints one or more of the measures in 3.4.23 are considered for implementation any consequential deterioration in PA intelligibility and or audibility that may occur should be assessed. The InfraCo should carry out this assessment and present it to LU for review. If approved LU should regularise any non-conformance through appropriate risk mitigations and inform the InfraCo to proceed with the agreed noise reduction measures.

4 Responsibilities

The Standards Manager shall be responsible for directing the production and control of manuals of good practice in accordance with 5-001.

Systems Engineers shall be responsible for ensuring that the texts of manuals of good practice are technically correct, clearly stated and comply with engineering standards.

The Environment Manager shall be responsible for maintaining a list of noise related issues including complaints and formal notices E.g. Section 60, 61, 80. The Environmental manager shall advise on environmental noise guidelines.

The Telecommunications Engineer shall provide guidance on technical issues with the PA system.