

CRL/R/8

**Transport and Works Act 1992
Transport and Works (Inquiries Procedure) Rules 2004**

CROXLEY RAIL LINK ORDER

Mr Rob Snell

Mr Martin Morris

Mr Paul Reid

**Composite Response of Hertfordshire County Council and
London Underground Limited to
Mr K Cinnamond**

9 October 2012

Applicants' response to C/2/1:

Mr Snell:

- 1 In response to Mr Cinnamond's comments about the extent of acquisition of his land and effects upon the value of it:
 - 1.1 London Underground Limited (LUL) require the land to be acquired permanently, to be retained in LUL ownership, in order to provide for the construction of the viaduct, the permanent use of foundations beneath the ground, the supporting structure above the ground, and the over-sailing viaduct. LUL require uninterrupted and unfettered access over the land below and adjacent to the viaduct to inspect, maintain, repair and renew the viaduct and supporting structures.
 - 1.2 In addition, for the purpose of security and safety, London Underground Limited require ownership of the land and the air space above and beneath the viaduct to control any third party activities to ensure there are no hazardous or detrimental operations undertaken on the land that would endanger the foundations below ground, the supporting structure, the viaduct, and the proposed operational railway. Recent examples of fires beneath motorway viaducts illustrate LUL's need for controls over the space beneath the railway viaduct.
 - 1.3 To maintain and manage the railway infrastructure LUL require complete control and permanent ownership of the land to prevent permanent structures being constructed beneath the viaduct that would obstruct LUL operational management of the viaduct.
 - 1.4 London Underground Limited and Hertfordshire County Council have expressed verbally and in writing to Mr Cinnamond that LUL is prepared to lease back part of the acquired land and air space beneath the viaduct to Mr Cinnamond. The Lease to be offered is for a long term of 125 years, limited to use as open storage and parking of vehicles. The terms and conditions of the Lease will protect the railway infrastructure and provide reservations to permit LUL unfettered access to maintain its proposed infrastructure.
 - 1.5 In respect of access to Mr Cinnamond's retained land, the applicants recognise the need to maintain access. To this end, the applicants propose an amendment to the Order to provide for this, whether or not Mr Cinnamond decides to take the leaseback of the land beneath the viaduct. The applicants will not close the existing access until the replacement access is available for use.
 - 1.6 The provisions of the statutory compensation code will address Mr Cinnamond's

concerns relating to any "disproportionate burden" on his freehold title (paragraph 5) in relation to reduction in value of the retained land and "detrimental effect" on his business and property including from noise, vibration or dust (paragraph 11) in relation to any reduction in value due to the construction and subsequent use of the scheme and through any disturbance costs.

Mr Morris:

- 2 In response to Mr Cinnamond's comments about the repositioning of the piers and viaduct:
 - 2.1 The current alignment of the viaduct is the optimum one due to the constraints imposed by the locations of the existing railway corridors and the requirement to meet LU standards. The amount of movement required so that it does not fly over the Cinnamond Access would result in the viaduct alignment not conforming with LU standards, and therefore this is not an option.
 - 2.2 The main criteria in determining the span of the viaduct and the pier locations in the area is the need to clear the A412 Watford Road at a significant skew and it is not feasible to span this road without a pier in the central reservation. Spanning the dual carriageway in a single span would result in a deck depth that is too deep and would result in a clearance to the highway of less than 5.7m, which is not permissible.
 - 2.3 Introducing a longer span in order to avoid the Cinnamond entrance would be impracticable as it would also require the viaduct to be deeper which would lead to a fouling of the clearance required over the A412.
 - 2.4 Having continuous spans of the same length is structurally more efficient and also cheaper to construct.
 - 2.5 Introducing an additional pier in order to avoid the Cinnamond entrance would result in significant additional cost due to the need for an additional foundation and pier.
 - 2.6 Having a viaduct which was of uneven spans and possibly uneven deck depths would also be aesthetically less pleasing.
- 3 In response to Mr Cinnamond's comments about the adequacy of the altered access at the entrance to Cinnamond House I have obtained the attached comments on Mr Robinson's critique of the access from Hertfordshire County Council's highways team.

Mr Reid:

- 4 In response to Mr Cinnamond's comments about noise and vibration during construction and operation:
- 4.1 Potential impacts associated with construction-related noise and vibration arising from the various construction activities required have been considered as part of the environmental assessment and are reported in the Environmental Statement (chapter 13, section 13.5). The approach to identifying potential noise levels and establishing appropriate control measures has been based on the guidance provided in British Standard (BS) 5228, *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*. The BS acknowledges that noise is inevitably associated with built development and emphasises the need to strike a balance between construction-related noise and the adoption of practicable measures which can alleviate noise. Significant emphasis is placed on communication between the promoter and their contractors and people within the communities who will be affected.
- 4.2 The approach to date has necessarily been indicative, pending the decision to grant powers or not and the appointment of a contractor should the powers be granted. Should powers be granted, it will be the responsibility of the contractor to develop the proposals for the construction of the proposed scheme, detailing the method and timing of construction and the type of plant to be used. It will be a requirement of the contract that the contractor, in doing this, takes into account commitments made in the ES concerning the type of plant used and the control of environmental impacts, including construction-related noise, defined in the mitigation proposals described in chapter 13, paragraphs 13.6.1 - 13.6.4 of the ES.
- 4.3 This will involve liaison with the Environmental Health Officers (EHOs) at Watford Borough Council and Three Rivers District Council and the application of the guidance in BS 5228 in the context of the detailed proposals. The agreed measures will be formalised as part of a Control of Pollution Act, Section 61 agreement between the contractor and the local authorities and will form part of the Code of Construction Practice for the contract.
- 4.4 With regard to dust, construction will involve some deposition of dust as a result of earthworks and other construction activity. The extent of this type of activity is not, however, extensive for the proposed scheme as a whole or in the vicinity of the property and will not be prolonged. Notwithstanding this, measures which are commonly adopted on construction sites to ensure that the generation of dust is appropriately controlled have

been identified in chapter 8, paragraph 8.5.3 of the ES and will be implemented should the proposed scheme be implemented.

- 4.5 With regard to noise associated with trains crossing the viaduct, the assessment of train related-noise has indicated predicted levels at the facade of the Cinnamond office building closest to the viaduct will be in the order of 53-55 dBA. The effect in this instance will be that train-related noise currently experienced at the western and northern facades of the building will be displaced to the southern and eastern facades of the building. There will be an increase in the number of trains but not a significant change in the levels or sources of noise associated with the property and site.

Applicants' response to C/3/1:

Mr Morris:

- 1.1 In response to paragraph 3: for clarification the current proposal is an adjustment of the Northern alignment which is slightly south of the original Northern alignment and should not be confused with the original Southern alignment.
- 1.2 In response to Mr Cinnamond's further points about repositioning of the piers, the main aim of keeping the spans at the same spacing is to design the viaduct with a fixed point at the middle and expansion joints at each end where they are accessible. By moving the span in Mr Cinnamond's land closer to the one in the dual carriageway, an additional span would be required with the spacings closer together. This will require additional expansion joints over the dual carriageway and over Mr Cinnamond's land. These expansion joints will be 9 metres up in the air and difficult to maintain. Also, by placing the pier in the position suggested will be an issue for the existing footway/cycleway and sight lines for traffic exiting the roundabout. Another issue is the visual impact of the viaduct which will be affected by Mr Cinnamond's proposals. Costs, whilst a factor, are not the main reason.
- 1.3 In response to the highway access issues raised by Mr Cinnamond, I understood HCC representatives to say that there is a general policy of no new accesses on A Roads, but there can be exceptions. The issue here is that a viable access in the form proposed by HCC precludes consideration of any alternative put forward by Mr Cinnamond. The three stages of design audit (which includes safety considerations) were explained to Mr Cinnamond at the meeting and it was explained that the particular circumstances of any

accident would need to be taken into account in deciding whether any design review would be required.

- 1.4 HCC agreed at the meeting to look at Mr Cinnamond's proposals. Having considered the proposed access onto Watford Road (A412), there are however a number of issues. Such an access would not be as inherently safe as the HCC design taking factors such as visibility and speed of traffic accelerating away from the roundabout, as well as the issues of having to relocate the toucan crossing, a bus stop served by 10 different bus routes (five of which come from Baldwins Lane and could not be safely relocated within this stretch of Watford Road) and access to the Cassiobridge Terrace cottages.

Mr Snell:

- 2 In response to Mr Cinnamond's response on the compulsory acquisition of his property and LUL's offer of a lease back of the land beneath the viaduct:
 - 2.1 As explained at the meeting and in response to C/2/1, LUL require the freehold title of all the land below the viaduct, and adjacent to it, in order to retain the control of the premises to provide unfettered access to LUL to maintain the viaduct structure and to ensure that no hazardous activities are carried out nor dangerous materials stored on the land that would be detrimental to the structure and the operational railway.
 - 2.2 Leases beneath the railway are usually for a short term (allowing LUL the flexibility to respond to changing engineering needs). Long term commercial leases were traditionally granted for a term of 99 years. In this instance, TfL are prepared to offer a long term lease for a period of 125 years (which meets the current norm for long term commercial leases).
 - 2.3 It was requested at the meeting that LUL consider a lease of 999 years, which is an exceptional term. A term of 999 years would not be acceptable to LUL for engineering reasons of replacement and renewal of an operational structure which has a life span of 100 years or so only.

Comments on Mr Robinson's critique on the effect of relocating access to Cinnamond

Mr Robinson's critique raises the following safety issues:-

- i. The concept of "weaving length" on a roundabout was abandoned from the design of roundabouts after the 1975 Highways Agency design standard was superseded in 1993.
- ii. Current good practice for roundabout design is to try and locate the arms of the junction as evenly spaced as possible around the outside of the circulatory carriageway.
- iii. The very close proximity of the existing Cinnamond House access, to the A412 North-Eastbound exit from the roundabout, is more likely to cause issues of confusion about a driver's intention – with the driver of a following vehicle unsure which exit a left turning vehicle intends to use. An HGV stopping suddenly to enter the proposed access location, approximately half way between the Baldwins Lane arm and A412 North-eastern arm of the junction, is less likely to take the driver of a following vehicle by surprise, than for the equivalent situation for the access in the current location.
- iv. The most recent version of the proposed design for this access appears to meet the circulatory carriageway approximately at right angles. It should also be possible to ensure that this layout complies with (or exceeds) the current visibility requirements from, and to, the relocated access onto the roundabout (TD16 – DMRB refers¹) – as the detailed design is developed further.
- v. It is understood that the geometry of the Baldwins Lane arm of the junction is also to be amended as part of the overall works proposed at this roundabout (since the existing entry geometry is poor, with little entry deflection). The overall diameter of the junction would also be reduced in size by moving the northern edge of the circulatory carriageway further south.
- vi. It is understood that swept path analysis has already been used to assess the suitability of the access design for larger vehicles. However, if there may still be problems for an occasional visit of an exceptionally large vehicle, there should be sufficient room (within the overall junction layout) to modify the geometry of the proposed access to accommodate such a vehicle.
- vii. Vehicles circulating around the junction, across the A412 north-western arm of the junction, and not intending to leave at the Baldwins Lane exit, are likely to be, either; U-Turning from the A412 dual carriageway arm, or; leaving from the adjacent play area/scout hut access. These are not likely to be particularly common turning movements. The driver of a vehicle making one of these

manoeuvres is, therefore, more likely to take extra care to correctly identify the exit they wish to take to other drivers.

- viii. Provided sound Safety Engineering principles continue to be applied to the developing design for the overall improvement works to this roundabout, and the proposed layout of this junction continues to be subject to an appropriate safety audit process, the future collision record for this junction is likely to be similar to (or slightly better) than for the current layout.
- ix. Any alternative proposals for access to Cinnamond House, from the north-eastbound carriageway of the A412, would need to be submitted as a new Planning Application to Hertfordshire County Council. Such an application would be subject to normal scrutiny – including an initial safety audit. However, as the A412 route is a busy through route, of more than local importance, the provision of any new access off this route is likely to be in conflict with current Hertfordshire County Council policies on access to the highway. There are also likely to be a number of safety issues raised, should such proposals be put forward for consideration by the Highway Authority. Such safety issues are likely to raise questions that would include:-
- Where would the bus lay-by, removed by the proposed access, be relocated to?
 - How would the new access be safely accommodated within the highway alongside the necessary relocation of the existing Toucan crossing (to be moved as a result of the construction of another pier of the viaduct)?
 - Would the existing vehicular access, between the existing bus lay-by and the start of the cottages alongside the bridge over the canal, be too close to the proposed access?

(¹ TD16/07 “Geometric Design of Roundabouts” – Volume 6 of “The Design Manual for Roads and Bridges” – published by the Highways Agency).

Nick Gough
Highways, Hertfordshire County Council