

**Support to UKTram Activity Group 1
Protection and Diversion of Apparatus**



**Scoping of the
Proposed Works**

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UK Tram Activity Group 1
Protection and Diversion of Utilities

Scoping of the proposed works

Activity group 1 is charged with investigating and reporting on the effects on utility companies' apparatus of constructing and operating light railways.

The primary aim of the work is to provide guidelines for minimising the expense and upheaval resulting from the interaction between the introduction of light rail systems, and the apparatus belonging to utility companies occupying the same land as the light railway.

The work will concentrate on two aspects in particular. Firstly, a group of documents will be produced setting out current best practice in identifying and dealing with conflicts between utilities' apparatus and light railway infrastructure. So far as possible, apparatus should not be moved unless there are overriding safety or access issues that clearly dictate that diversion must be undertaken. Views on appropriate ways of identifying the factors needing to be taken into account when making these decisions will be sought from light rail promoters and operators, and utility companies, through the mechanism of questionnaires and face-to-face interviews, to be undertaken in Phase 1b of the project. An attenuated version of the promoters questionnaire will be developed for issue to chosen European light railway operators. The draft scheme of the questionnaires is set out in Appendix 1.

The second aspect of the work will be to identify a range of possible amendments to the existing statutory framework that would ease the financial burden imposed on light rail promoters under the current legislative arrangement. This will include clarification of certain ambiguities in the law as it stands at present, and modifications aimed at tilting the balance more in favour of light rail promoters and away from the utility companies by persuading them to consider their requirements more critically.

The reports and guidelines to be produced will be:

As the outcome to Phase 1a, a summary of the PTEG report *Diversionary Works for Tramway Promoters*;

As the outcome to Phase 1b, a report collating the findings from the questionnaires and interviews undertaken during that Phase, including a summary of the principle features of risk-based utilities management strategies;

At the start of Phase 2a, an analysis of the outcomes of the Phase 1b activity, followed by the preparation of a set of guidelines to inform promoters and designers of best practice to be followed at different stages of a project;

In Phase 2b, a report on the causes and control of scope creep and cost escalation, based on experiences identified in Phase 1;

Phase 3 of the work will concentrate on the amendments to legislation by making recommendations on options for statutory/regulatory change to improve the efficiency and cost effectiveness of the utilities management process. The outcome will be suggested amendments to the New Roads and Street Works Act 1991 and supporting secondary legislation and codes of practice, the Traffic Management Act 2004 and

supporting secondary legislation, and the Transport and Works Act 1992 and supporting secondary legislation, codes and guidance as appropriate.

This will involve liaison with the Highway Authorities and Utilities Committee (HAUC) and the Department for Transport. If necessary, or considered appropriate, liaison may also be required with the Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly.

Appendix 1

Outline of questionnaires to be prepared for issue to light rail promoters and operators, utility companies and other European light railway operators.

For promoters and operators within the UK:

- Philosophy adopted in deciding whether to divert or leave apparatus;
- Co-operativeness of utility companies in openly discussing and attempting to accommodate the philosophy adopted;
 - Was philosophy modified in any instances through clarification or discussion of utilities' needs or obligations, or by the provision of further information?
- General comments on operation of principles of s.84/143 of NRSWA
 - Did utilities adopt a co-operative approach, where both parties have an equal right to a view on what action should be taken, or did they consider they should make the decision unilaterally?
 - Completeness of provision of information called for by s.84/143 as amplified by Appendix C4 of Diversionary Works Code.
 - Charging for estimates. What information was provided free of charge at C2, C3 and C4 stages:
 - Records (C2)
 - Note of special problems (C2)
 - Preliminary details of the effect of the scheme on the utility's apparatus (C3)
 - Budget estimates (C3)
 - Indication of special requirements (C3)
 - Description of necessary measures based on the detailed scheme (C4)
 - Details of the ages of apparatus (C4)
 - Detailed specification of the required works (C4)
 - Detailed costs estimates including allowances for deferment, betterment (where appropriate) and recovery of materials (C4)
 - Detailed breakdown of overhead charges included in cost estimates (C4)
 - Work durations and a provisional programme (C4)
 - Did the approach differ pre- and post- BT vs Gwynedd County Council (if relevant)?
 - Was information provided in a timely manner (i.e. in a timescale consistent with the complexity of the request, not necessarily within the periods quoted in the Code)?
 - What steps, if any, did utilities take to pinpoint the position and depth of their apparatus?
 - Were utilities willing to discuss proposals for diversion or protection at appropriate intervals during the planning process?
- Experience of promoter's staff in dealing with utilities and expressing a knowledgeable opinion on practicality of leaving apparatus in position
- Who was responsible for generating and maintaining the project programme?
- Any supervision role? What was the extent of the role and the powers given to supervisors? Was the role acceptable to or agreed with the street authority and the utilities?
- Agreement of division of costs
- Experience of disruptions to tram services or maintenance periods due to need to maintain or repair apparatus;

- Mean time between requests to take possession of the tracks;
- Operation of s.93 of NRSWA;
- Encapsulation of utilities within tramway infrastructure-
 - Cast into track slab (either as designed or specially thickened)
 - Run between underside of track slab and crown of trackside ducts
 - Cast into foundations of overhead line support poles.
 - Other;

For utility companies:

- Reliability data;
- Opinions of the meaning and operation of s.84/143 and the Diversionary Works Code, and attitude to provision of all information requested
 - Confirming positions of apparatus (Appendix C2)
 - Provision of C3 estimates and note of special requirements
 - Description of necessary measures and provision of C4 cost estimates based on the detailed scheme, including details of ages of apparatus, allowances for deferment, betterment and credit for recovered apparatus, detailed specification, breakdown of overheads to be applied to direct costs, anticipated durations of work stages and provisional programme.
- Any differentiation between promoters having been granted powers, and those seeking them
- Approach to requests to leave apparatus in place close to the tracks
 - Feasibility of leaving apparatus beneath or close to tracks if agreement can be reached for the operation of the tramway to be halted while maintenance or repair is undertaken.
 - Inherent dangers in leaving apparatus beneath track slab
 - Responsibility for bearing of additional costs associated with supervised operation, and possible destruction and repair of track slab
 - Concerns about compensation claims for failure of apparatus close to or beneath tracks.
 - Ability to assess risks associated with leaving apparatus beneath or close to tracks
- Costs
- View of the process of identifying the measures necessary. Is it a co-operative process or one that can only be properly treated as a unilateral decision of the utility?
- Master programme: who is best placed to manage the overall project of diverting utilities' apparatus?
- Experience of repair and maintenance of apparatus in the presence of light railways
 - Operation of s.93 of NRSWA. Has it provided a satisfactory mechanism? Is it considered to be operated fairly in the common interests of light railway operator, utility and general public
- Significance of s.82 (*Liability for damage or loss caused*) when identifying apparatus to be moved or protected
- Significance of s.65 (*Safety measures*) and code of practice *Safety at street works and road works* when identifying apparatus to be moved or protected

For light railway operators outside the UK:

- Do utility companies have automatic rights to place their apparatus in highway?
- Is there overarching legislation governing the placing of apparatus (both utilities and light railway) in highway?
- Is the relationship between utilities and light railways governed by national or local (i.e. specific to the railway) legislation?
- Who is empowered to identify the actions needing to be taken to protect utilities' apparatus? Is this a joint exercise?
- To what extent is the decision on what apparatus needs to be moved decided by an assessment of the risk of the apparatus failing? Are there publicly available statistics on the rates of failure of different types of apparatus?
- Who pays for the diversion and protection of apparatus? If the cost is shared, how is the proportion borne by each party calculated?
- Is there an allowance made to the railway authority because of the provision of new apparatus for old? How is the benefit to the utility company calculated?
- Is it more normal to move all apparatus clear of the tramway, or to seek to leave apparatus within the tramway when it is considered safe to do so?
- What is the procedure when apparatus beneath the tracks needs to be repaired or extended by a new connection?
 - The railway stops operating while the work is carried out on the utility's apparatus;
 - No work is allowed on the apparatus during railway operational hours;
 - Work is carried out on the apparatus between the passage of trams, with trams operating at reduced speeds as necessary.
- What procedures are adopted when utility companies require to work in the vicinity of the railway?
- What provisions are made for compensation to be paid to either the utility for inefficient working on apparatus, or to the railway operator for delays to or cessation of services.
- Do circumstances ever arise where railway infrastructure must be destroyed and rebuilt to allow work on utilities' apparatus? If so, who carries out the work of demolition and renewal, and who is responsible for meeting the costs?
- Is the trackform designed to allow for ease of access to apparatus?

Recipients of questionnaires are to be agreed by members of Activity 1 Team.