



BEDFORD
BOROUGH COUNCIL



Engineering Services

illuminated Signage Asset Strategy

December 2021

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1. Introduction

- 1.1 This document explains the lantern types, condition and nature of supply of illuminated signs within the Borough. It then covers inspections guidance and current Council practice before discussing maintenance options, drawing conclusions and making some recommendations for managing the Council's stock.

2. Background

- 2.1 There are several different types of illuminated sign on the Council's network – Warning, Regulatory and Information. These are defined within the Traffic Signs Regulations and General Directions (commonly abbreviated to TSRGD), which sets out the design and conditions of use of official traffic signs that can be lawfully placed on or near roads in Great Britain. However, it has not currently been determined whether all of the illuminated signs on the network actually do need to be lit or not.
- 2.2 Traffic signs play a vital role in directing, informing and controlling road users' behaviour in an effort to make the roads as safe as possible for everyone.

3. Current Council Illuminated Sign Assets

- 3.1 A survey of the Council's highway assets was completed in 2020 and the illuminated sign assets identified are listed in Table 1 below:

Table 1 – Bedford Borough Council Illuminated Sign Asset List	
Total Number of Illuminated Signs	1847
Key Criteria from the Asset Survey	
Number of Signs in Poor Condition (Structural)	84
Number of Signs in Fair/Good Condition (Structural)	1564
Number of Signs in Excellent Condition (Structural)	199
Number of Signs with DNO Electrical Supply	282
Number of Signs with SWA/Private Electrical Supply	1506
Number of signs with Solar/VMS/Other Supply	59
Number of Signs with LED Lantern	396
Number of Signs with PL-L Fluorescent Lantern	1409
Number of Signs with "Other" Light Source	42

- 3.2 The majority of the sign posts are between fair and excellent structural condition, with only around 4% being in poor condition. These 84 sign posts in poor structural condition should be repaired or replaced.
- 3.3 76% of signs are still lit with inefficient PL-L lamps.

4. Inspections

- 4.1 Current guidance on the inspection of illuminated highway signage is found in BS 7671:2018 (the 18th Edition) and the IET Guide to Highway Electrical Street Furniture and ATOMS GN22 Asset Management Toolkit: Minor Structures. An electrical test of every lit sign should be undertaken at a period not exceeding six years. The structural testing can follow a risk based approach, thus increasing this period, but it should be aligned with the electrical testing programme to maximise efficiencies through combining site visits.
- 4.2 The Council does not currently have an inspection programme for lit signs, so they are picked up by the highway inspectors during their cyclic inspections.

5. Discussion

- 5.1 Overall decisions need to be made on how the Council maintains its illuminated signs. This includes a choice between a reactive approach and overall replacement programmes. Consideration should be given to changing electrical supply types and/or lantern types, de-illuminating signs or removing signs.
- 5.2 Investigation has shown that it is not cost effective to change DNO supplies to private supplies, as the cost outlay is not offset in future maintenance. It is also not cost effective to carry out a programme of LED lantern replacements or de-illumination, as the initial cost outlay again heavily outweighs the savings in energy costs. However, LED lantern replacement or de-illumination opportunities should be taken in each case of reactive maintenance. In addition, once the requirement to complete some works to a sign has been identified then all necessary works to it should be considered due to the efficiencies and reduced network disruption associated with minimising the numbers of visits. This could include some/all of structural issues, electrical issues, foundation issues and faded or damaged sign plates.
- 5.3 Replacement of lanterns with solar powered alternatives was investigated, but not found to be cost effective in most scenarios as no significant maintenance savings would result (energy savings would be offset by battery changes). The only exception to this could be signs that are subject to regular knockdowns, when the relatively cost neutral decision could be combined with the improved safety during impact.
- 5.4 It may be possible to de-illuminate or remove some signs, but there are many variables in these decisions. A review of all illuminated sign types on the network against the TSRGD could be completed to understand whether they need to be lit or not. Site assessments could also be completed to establish if any significant changes had occurred (ie. removal of previous hazards, changes to layouts/features, reduction of speed limits, addition/removal of roundabouts etc.), as this may permit sign removal. However, the risk of either de-illuminating or removing any signs needs to be considered carefully because there will be limited accident data to compare to if the sign could have been deemed as preventing them previously. There is also the risk of future changes to the TSRGD.

6. Conclusions

- 6.1 The Council currently owns 1847 illuminated signs and 84 of these are in poor structural condition. 76% of the signs have inefficient PL-L lanterns.
- 6.2 There is currently no inspection programme for any of the signs on the network. This does not comply with current standards.
- 6.3 It is not cost effective to change DNO supplies to private supplies, as the cost outlay is not offset in future maintenance. It is also not cost effective to carry out a programme of LED lantern replacements or de-illumination, as the initial cost outlay heavily outweighs the savings in energy costs. However, some savings could result from this on each occasion of reactive maintenance, along with considering the completion of all necessary works to a sign at that point in time.
- 6.4 Solar powered lanterns may be a worthwhile consideration at sites when regular knockdowns occur because of the improved safety during impact.
- 6.5 It may be possible to de-illuminate or remove some signs, but this is subject to review against the TSRGD and specific site assessments. This needs to be considered carefully because there will be limited accident data to compare to if the sign could have been deemed as preventing them previously. In addition, the TSRGD could change in future.

7. Recommendations

- 7.1 The 84 illuminated signs in poor structural condition should be repaired or replaced. It is estimated that this would cost approximately £50,000.
- 7.2 A compliant inspection programme should be invoked for all illuminated signs. The structural testing programme should be aligned with the electrical testing programme to maximise efficiencies through combining site visits. It is estimated that this would cost approximately £5,000 per year.
- 7.3 Maintenance to illuminated signs should be completed reactively, as this is the most cost effective approach. However, LED lantern replacements or de-illumination and combining all necessary works to a sign should be considered on each occasion of reactive maintenance.
- 7.4 Solar powered lanterns should be installed at regular knockdown sites.
- 7.5 A review of all lit sign types on the network against the TSRGD should be completed to understand whether they need to be lit or not. This will enable swift decisions on de-illumination at each occasion of reactive maintenance. It is estimated that this would cost approximately £1,000.

Appendix A

Current list of Council Illuminated Sign Assets

[\\10.1.1.16\Highways\C6000 - Street Lighting\C6068 Structural and Electrical Testing 2021-22\Illuminated Sign Asset Inventory](#)

Finding out more

If you would like further information about us and our services, please telephone, email or write to us at our address below.

Për Informacion

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Informacja

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Za Informacje

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