

Report title: The Replacement of Cast Iron Street Lighting Columns in Conservation Areas	
Report to: Mark Ash Executive Director: Climate Environment & Customer	
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Date: 05/09/2023	For: Chief Officer Action
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County Divisions affected: Countywide	

1. Purpose of Report

- 1.1 The purpose of this paper is to seek approval for Essex Highways current process when replacing or upgrading decorative cast iron street lighting columns and allow the delivery of a consistent approach across the county in conservation areas.
- 1.2 Approval will help reduce time spent consulting with stakeholders especially where heritage style luminaires are not already in use.
- 1.3 A consistent approach will help Essex Highways provide a high-quality environment for all road users, with all street lighting assets being keeping with the existing street scene.

2 Recommendations

- 2.1 Essex Highways continues with its current practice of replacing damaged or structurally unsound cast iron columns with black steel columns fitted with the appropriate embellishment kit and swan or S shaped brackets.
- 2.2 Make the opportunity of enhancing standard lanterns to decorative one available to stakeholders at their costs.

3 Background and Proposal

- 3.1 Stakeholders such as Colchester Civic Society are keen to preserve cast iron columns in conservation areas, or when columns are replaced incorporate decorative style lanterns.
- 3.2 The replacement of lanterns is on a like for like basis, with the inclusion of LED technology.

3.3 Essex CC street lighting assets include a number, approximately 780, of cast iron columns that were originally installed for gas lighting from around circa 1900 – 1930's.

3.4 Many of these were converted to electric, typically in the 1940's and 1950's. This involved fitting a box on the top of the column, to fit the cut out to isolate and fuse the incoming electrical supply for the lantern. The bracket on top of column then accommodated a standard functional luminaire. Fig 1 adjacent show isolation box and luminaire.



Fig 1 – Isolation box and lantern on cast iron column

3.5 The effect of ground movement, minor damage from vehicles or environmental factors can result in catastrophic failure of these columns or isolation boxes that are brittle in nature.

3.6 Essex Highways are retaining existing cast iron columns where it is practicable to do so and where units do not present an imminent risk of catastrophic failure, we highlight that these cast columns are now reaching the end of their life and will need replacing at some stage.

3.7 We are unable to carry out structural testing on these cast iron columns and verify their residual life.

3.8 There has been an inconsistent approach to the replacement of failed columns with some being replaced by standard style columns of either concrete or steel depending on the when they were replaced and some by columns with embellishment kits.

3.9 Where a cast column is removed in a conservation area it is replaced with the same style column as the rest of the street where possible. This normally comprises of a black steel column installed at the existing mounting height with embellishment kit, swan neck/S shaped bracket and standard luminaire in keeping with the existing street scene. An example of these are shown below.



3.10 Where the isolation box has failed. The distribution network operator (DNO) who owns the supply cable will not allow us to replace the isolation box while maintaining the electricity supply as it does not meet current standards. This means Essex Highways must:

1. Replace the column with one with an embellishment kit and standard lantern for a cost of approximately £1800.00 providing an expected life of the column of around 50 years and luminaire 25 years.

or

1. Install a root box adjacent to the column and amend the column to accept new bracket and column as Fig 6, at a cost of approximately £2,300. However:
 - a. the structural integrity of the column is unknown and the column may require replacing imminently
 - b. when installing a root box, the condition of the root of the column could be found to be unsatisfactory and the column will still need replacing. Some previous attempts have failed as the old DNO cable has “melted” inside the cast iron column and cannot be removed.

3.11 Lantern enhancements, such as the installation of luminaires shown in fig 4 is not currently offered by Essex Highways. The difference between the cost of a standard and heritage style luminaire is approximately £500. However, existing cast iron column boxes may not support decorative style lanterns. To allow their fitting the isolation box must be removed which could then mean that electrical supply cable cannot be able to be reconnected.

3.12 To get a replica of the existing columns would cost around £12,000 -£15,000 per column and is not a viable option.

3.13 Upgrades to individual lights in a street without upgrading the whole street should not be considered. This is to ensure consistency of street scene and maintenance regimes.

3.14 For the installation of root box and adaption of column we recommend requesters pay the cost, £2,300 less £170 for the luminaire and telecell which can be reused.

3.15 Where a heritage lantern is requested on a new column we recommend the requester fund the difference between the price of standard lantern and the heritage unit, approximately £500 per lantern. To maintain a consistent streetscape we would require all lanterns in the street to be upgraded.

4 Links to our Strategic Ambitions

4.1 This report links to the following aims in the Essex Vision

- Strengthen communities through participation
- Develop our County sustainably

4.2 Approving the recommendations in this report will have the following impact on the Council’s ambition to be net carbon neutral by 2030:

4.3 This report links to the following strategic priorities in the emerging Organisational Strategy ‘Everyone’s Essex’:

- A strong, inclusive and sustainable economy
- Health wellbeing and independence for all ages

5 Options

5.1 Essex CC have the following options:

- 1- Essex Highways continue to replace cast iron columns when either the column or isolation box fails following the process detailed above.
- 2- Essex Highways offer the opportunity for stakeholders to compensate for enhance services
 - a. enhancement of luminaires to heritage style in conservation areas on a whole street basis
 - b. Essex Highways try and maintain the cast iron column by installing a root box and adapting the column at requester cost.

6.1 Financial implications

6.1.1 The recommendations offer a cost neutral position for ECC as we recommend additional costs are borne by stakeholders requesting enhancements.

7 Equality and Diversity Considerations

7.1 Lighting levels will not be affected.

I approve the above recommendations set out above for the reasons set out in the report.	Date 21.12.23
Mark Ash Executive Director: Climate Environment & Customer	