Local Government Revenue & Budgetary Pressures in Lincolnshire

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Lincolnshire County Council

Background

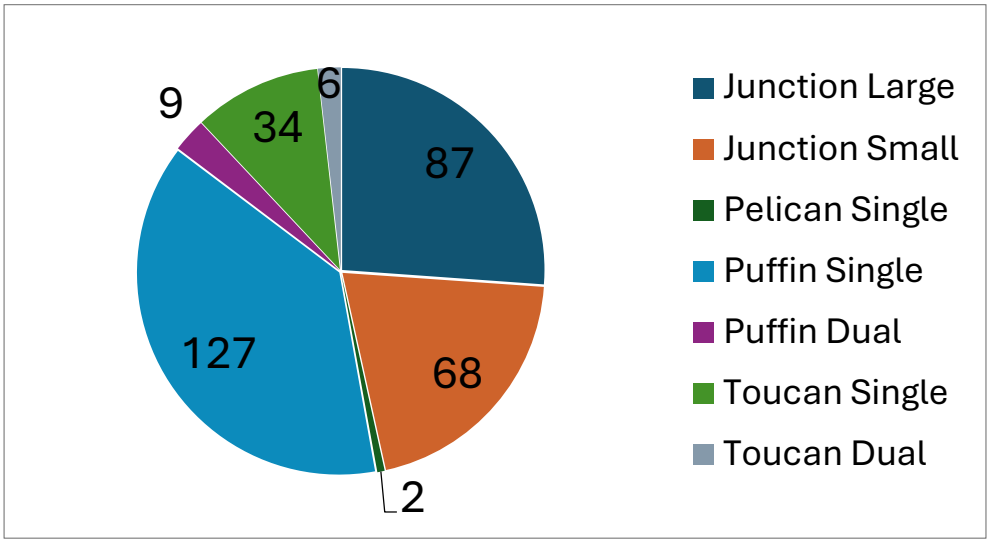
Local Authorities are continuing to feel the squeeze when it comes to budgets, and highways asset services like traffic signals are no exception. Whilst tighter purse strings are applied to our capital refurbishment and maintenance pots, there seems to be no reining back in the use of signals to solve congestion or safety issues, nor indeed for highway improvements brought about by S278s. They are often seen as the easier, cheaper option when compared to say a new roundabout. Indeed we've seen 26 new sites installed in the last 5 years, an 8% growth in our asset whilst our budgets have not increased accordingly.

Like many authorities, Lincolnshire (LCC) has pushed the boundaries of their asset management plans to the very limit in order to save money. LCC call for a 25 year asset life for traffic signals, which does not compare favourably against what the industry calls for (15 years) and what our peers are generally aspiring to (20 years). The aim of the plan, and the budget available to deliver it, is to maintain a "steady state" i.e. not oversee a decline in condition.

So whilst appearing to save money and keeping our signals to an equilibrium in terms of condition and operability, there are many challenges for the signals team to negotiate in order to achieve this. A capital budget of £1.25m and a revenue budget of £1.1m look healthy enough, but are we using those funds wisely and appropriately?

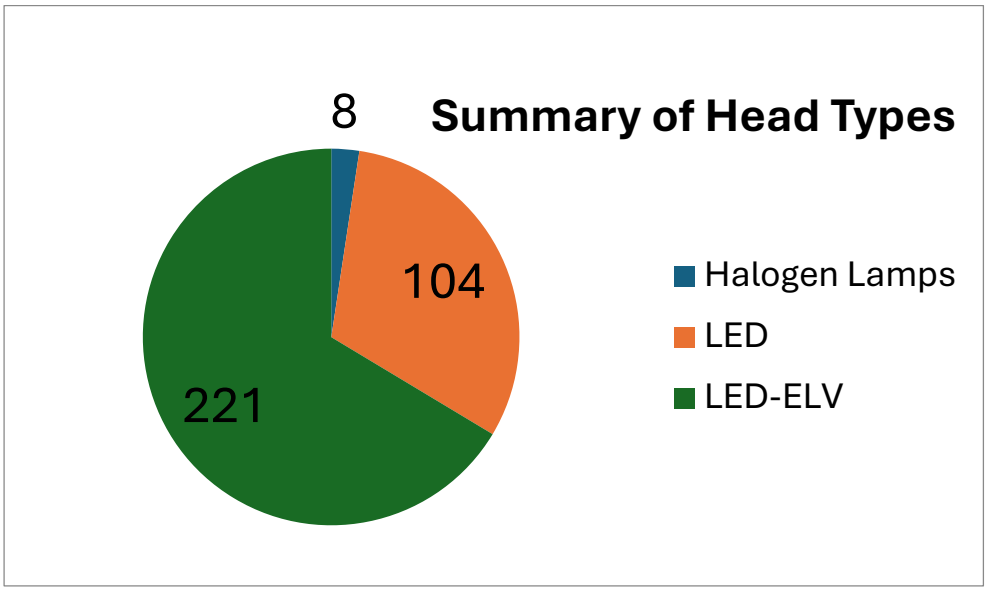
Asset Information

As of August 2026, LCC had 333 sites broken down as follows;

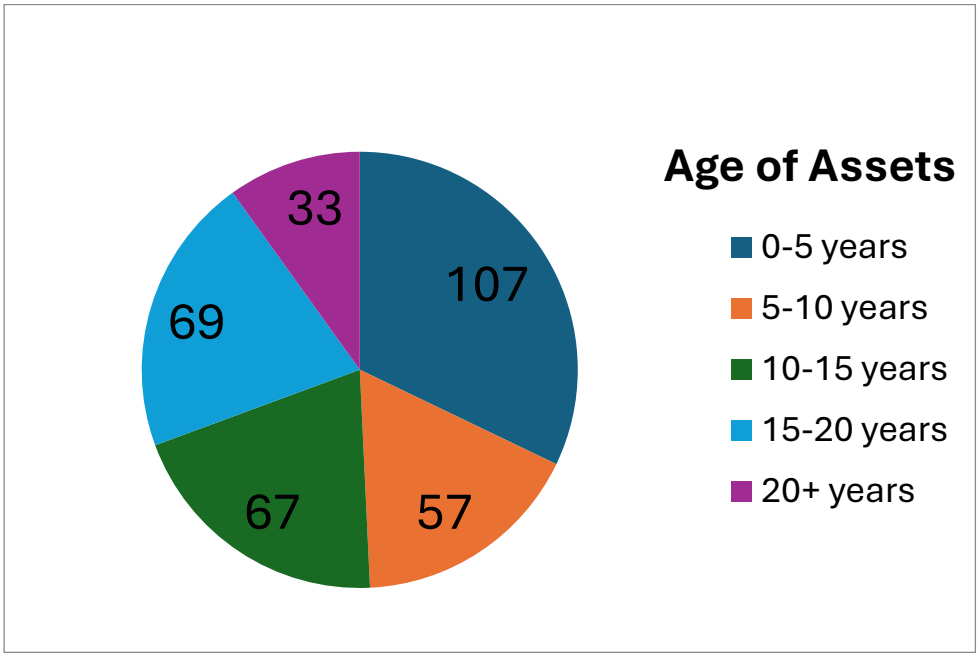


So just under 47% of our assets are junctions, 38% are Puffins and the final 15% is made up of other crossing types.

Obviously, junctions cost a lot more to maintain over their lifespan than crossings and under our current refurbishment regime, anywhere between 2-4 times more to replace once their time is up.



Overall we're in a good place with regards to phasing out our obsolete aspect types. Thanks to a one off injection of £300k funding from the Highways budget and contributions from the DfT's Maintenance Fund & TSOG, we've whittled these down from 62 sites in 2022 to the 8 that are left today. These remaining sites are the not so easy to tackle junctions that require more than a new controller and a cosmetic makeover (far sided peds, tactiles not to standard etc) and will be picked up through the Capital Refurbishment programme.



So on the face of it, the asset age looks to be reasonably healthy, yet a closer look reveals that we have 112 sites above the recommended 15 year asset lifespan. So 34% of LCC's signals are technically obsolete; 10% are above a typical authority's age goal. This illustrates that our current level of investment and methodology will not keep us within even our own 25 year asset life cycle, leading to a managed decline in the condition and operability of LCC's signals.

Challenge 1 – 25 year asset cycle

Controller components, signal poles and street furniture etc were never intended to have a street life of more than 15 years, yet we are expected to prolong their use for 20 years or more. The longer an asset is deployed, the higher the risk of failure and reported faults with the concurrent lowering in availability of spares to keep these sites serviceable.

A classic example is the Ropewalk / University Roundabout in Lincoln that was first installed in 1997. It's controlled by a Peek TRX, has far-sided pedestrian facilities, no intelligent kerbside or on-crossing detection, has widespread collapse issues within its ducting infrastructure and no pole sockets. It is currently under a long overdue refurbishment, but we've had to patch up the site on multiple occasions to try and keep it serviceable. Only last year we ended up having to replace 6 of the poles as they were deemed to be dangerously corroded. As we have 34% of our sites potentially in this condition, this type of sticking plaster approach is becoming a constant drain upon the revenue budget to maintain them and so it has to be asked whether our 25 year policy actually brings the efficiency savings that we're hoping for? We save on capital costs, but our revenue costs increase.

Challenge 2 – "Gold plated" approach to site refurbishment

We've always prided ourselves on the standard of refurbishment we undertake at a site; when we've finished it looks like a brand new installation, both from a signals and civils point of view. This has been partly driven by the expectation from our members and wider public. These photos are before and after shots from a site in Grantham.





So not only were the signals updated, but the whole infrastructure was replaced as a matter of course – tactile paving, inspection chamber lids/frames, ducting replaced if not viable, new pole sockets, footways resurfaced, white lining refreshed etc. It looks great right? But this comes with a hefty price tag, with a typical crossing like this coming in at around £85k. When you consider that the supply and installation of the signal equipment makes up approx £16k of this total, then it's easy to see where the majority of the money is being spent.

The traffic signal budget is set at a level intended to keep the asset condition at a "steady state", yet our forecasts for site age on replacement were showing quite the opposite. A 10 year site refurbishment plan showed that, with the current levels of investment and the approach we'd adopted, sites would on average be 28 years old on removal. We were sleepwalking into a state of decline, whilst convinced that we were doing the right thing.

Sites 2035/2036	installation type	Yr of install	age on date
N513 Gallamore lane (Industrial Estate) Market Rasen	Crossing	2006	29
L511 High Street (Vernon Street) Lincoln	Crossing	2007	28
L526 Wragby Road (Austin Walk) Lincoln	Crossing	2003	32
L542 Cross O'Cliffe Hill (LSST priory School)	Crossing	2007	28
L543 Clasketgate (Flaxengate) Lincoln	Crossing	2008	27
N517 Lea Road (Foxby Hill) Gainsborough	Crossing	2008	27
L001 Lindum Road / Broadgate, Lincoln	Junction with Peds	2008	27
N006 Brandy Wharf Bridge, Waddingham	Junction	2009	26

Challenge 3 – Departmental Pressures

It makes total sense to undertake several projects at once at the same location in order to gain economies of scale, share civils & TM costs and reduce disruption on the network. We'd be rightfully castigated by the local public and press if we went back in a year after a major bridge scheme only to dig the area up again to refurbish our signals.

So cross departmental collaboration is actively encouraged, but this has effects upon the traffic signal programme in 2 ways;

- We pull jobs forward before their proposed refurbishment dates in order to tie in with others. Equipment that still has reasonable life expectancy is replaced before the timescale we set within the asset management plan
- Conversely, we hold off refurbishing a site until the other team's major project is going to hit the ground. This would normally apply to the larger resurfacing or bridge deck waterproofing schemes for example. We're then left nursing a failing site to keep it serviceable until the major project is implemented. A recent example of this would be the Carholme Road / Brayford Way junction that was 28 years old and controlled by a T400; it went off 14 times in 18 months whilst awaiting the major resurfacing project to start.

Challenge 4 – Materials Inflation

Whilst we expect prices for goods and services to rise, the post Covid world seems to be an even more expensive one that could have been anticipated. The inflation indices used to increase pricing for both our Highways & Traffic Signals contracts have lead to an unprecedented rise in costs to LCC, especially around materials. This of course means we are getting a lot less bang for our buck, achieving less with the budget constraints within which we work.

Challenge 5 – Access to the Network

So a utility company comes along and needs to carry out major infrastructure project along a main route into the city centre. They are allowed to implement temporary one-way systems, road closures and all day access to the site in order to achieve their works, at most times of the year.

The replacement of a pedestrian crossing on the same route would not be offered the same courtesies; we'd be expected to wait until a school holiday period, preferably work at night and better still go in at a weekend. All of this adds costs and added complication to the job. Why is it that traffic signals are not classed as critical infrastructure in the same way that other utilities are?

Challenge 6 – Political considerations

As a local authority we, of course, work within a political environment. We serve under elected members and our works are rightly scrutinised and held to account. This can sometimes manifest itself into well intended but inappropriate proposals or even into outright interference with the way in which we work.

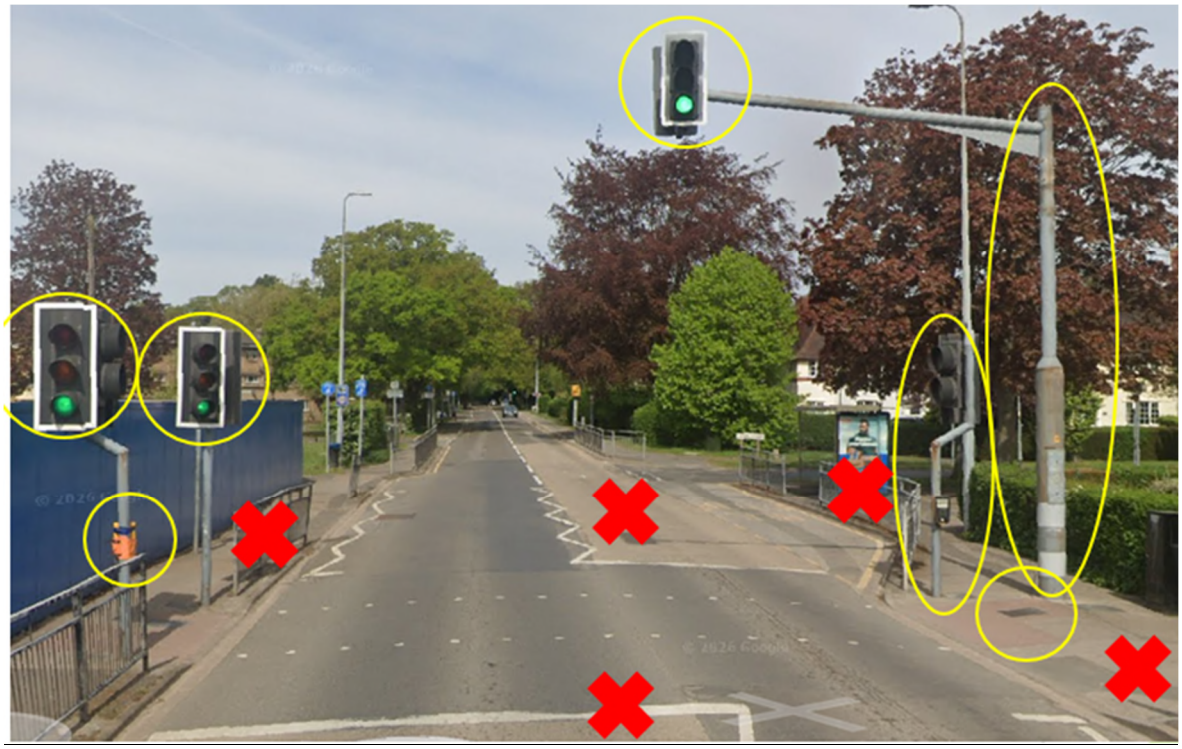
The most common area for such interventions comes through councillor requests for new pedestrian crossings. It is not uncommon for a proposed location to be assessed as not meeting policy, yet pressure is applied in order to push it through to be implemented. Indeed under the old regime in 2023/24, we installed 11 new crossings in Lincolnshire whether they met our policy or not. Some would say they were essential installations to help keep pedestrians safe, others may cynically say that these were being used to curry favour in the run up to local elections. Either way, we now have 11 new sites to look after. Time and again we see that the capital monies are found, yet no thought is given to the longer term maintenance and future replacement costs of these new assets.

A Change of Approach

What exactly is the signals asset?

So it's clear that we cannot afford to go on refurbishing sites in the way that we have been, and need to look again at the way that we do things. What should the traffic signals budget be replacing and what should we be leaving to the other highways assets teams to pick up?

Anything directly linked to the operation of the signals should be our responsibility – controller, heads, cabling, push buttons & nearsides, poles, ducting & chambers etc. We now no longer assess the condition of the carriageway and footway surfaces, only update the tactile paving if it doesn't meet current standards, leave guardrail alone unless it's no longer fit for purpose, leave the crossing studs and don't refresh the carriageway markings unless they have worn away. However, we do invite other highways teams to join us during our works to implement any improvements they wish to make and carry out routine maintenance tasks such as gully jetting etc



By reducing the scope, we lower our costs significantly

This means that the costs are disaggregated back to the teams that should be picking up the costs rather than all coming from the traffic signal budget. This isn't rocket science, yet we have fallen into a way of thinking that was detrimental to the overall operability of the signals asset.

Easy wins

Obsolete controllers with 240v LED heads are a source of concern in terms of running costs, higher fault rates, susceptibility to damage from mains spikes (our 240v equipment have much higher failure rates than 48v) and poor serviceability. Rather than wait for the capital refurbishment programme to pick up these sites, we have decided to undertake a quick “easy win” equipment replacement. This focuses on the old Peek TSP controllers dotted throughout the county, a long obsolete controller for which spares are becoming an issue. As long as the ducting is viable, we can go in and change the minimum of items at a third of the cost of a full refurb as we were doing them.

- Install pole sockets and poles
- Re-cable the site
- New ELV PTC-1 lite controller
- All new signal equipment & detection

A site typically takes 3-4 days to complete so we’re reducing TM costs and network disruption whilst we update our asset. This is £25k well spent.



Tritton Road (Catchwater Drain) Toucan after its “easy win” upgrade

Working Relationships

We have invested more time and patience into our relationships with other LCC teams, as well as the Council Portfolio holder for Highways.

- Better understanding of our equipment and where it is so that they can avoid damaging our infrastructure or we can at least plan for its replacement

- Working closer with the Streetworks & Permitting team so that they have better comprehension of the need to get our signals back working as quickly as we can. We have a 72hr contractual requirement to replace equipment damaged in a RTC and this has now been added to the permitting system allowing us to go in ASAP after the incident. Highlighting the impact of having to work nights or only during school holiday periods.
- Educating our Portfolio holder; not all crossing requests are valid, some won't meet the criteria for a Puffin/Toucan. Encouraging them to "follow the data" in terms of the PV2 values, accident records etc

Better Intelligence

We have updated our Annual Inspection process to be far more detailed in terms of asset condition. Gone is the generic site score based on age, to be replaced by an inventory down to pole/detector level with each item scored individually. This stops the anomaly of a site installed in say 1998 which has had a mid-life controller change, but is still using the same heads, poles, ducting, cable etc

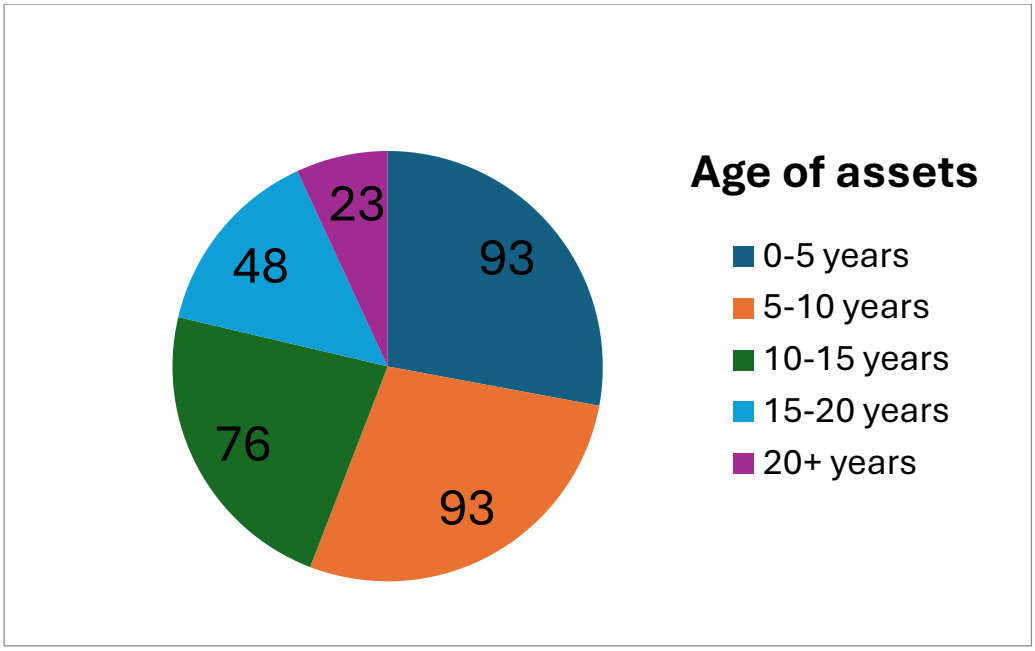
Outcomes

We continue to strive for the 20 year average lifespan on refurbishment (not yet ready for 15 years – one step at a time), and the changes we have made have had a positive impact on the condition of our asset. Factoring in the new approach and our programme of "easy wins", the 2035/36 capital refurbishment programme now looks like this;

Sites 2035/2036	installation type	Yr of install	age on date
N010 Washingborough Railway Bridge	Junction	2012	23
L025 Tritton Road / Morrisons, Lincoln	Junction with Peds	2012	23
W005 Manthorpe Road / Belton Lane	Junction with Peds	2013	22
L018 Newark Road / Brant Road, Lincoln	Junction with Peds	2013	22
E003 Upgate / Newmarket, Louth	Junction with Peds	2013	22
L037 Wragby Road / Tesco, LiNcoln	Junction with Peds	2013	22
E016 langrick Bridge	Junction	2014	21
L019 Newark Road / Rookery lane, Lincoln	Junction with Peds	2013	22
S005 A16 JAW / Mainridge, Boston	Junction with Peds	2014	21

We're down from an average site age of 28 years old to 22 – close but we still need to do more. This will however take an increase in investment to achieve, the merits of which we will have to demonstrate to those that hold the purse strings.

Our overall site age forecast (not factoring in any new installations) now looks like this.



We now have fewer sites in the higher age brackets and a drop from 33% to 21% of sites being >15 years old. Correspondingly, we'll have no Tungsten Halogen lamp sites remaining in a few years' time and an ever higher proportion of ELV installations.

However.....

We now have Local Government Reorganisation taking place that will split the old county area into two unitary authorities. What challenges will this bring? Will we still be looking after all of the sites in the old Lincolnshire, or will they be disaggregated across the two new unitaries? What impacts will this have on budgets and staffing levels? These are questions not just for Lincolnshire but for many local authority colleagues across the country. Time will only tell if this will de-rail us from our goal or provide the impetus we need to get this over the line. Wish us luck!