

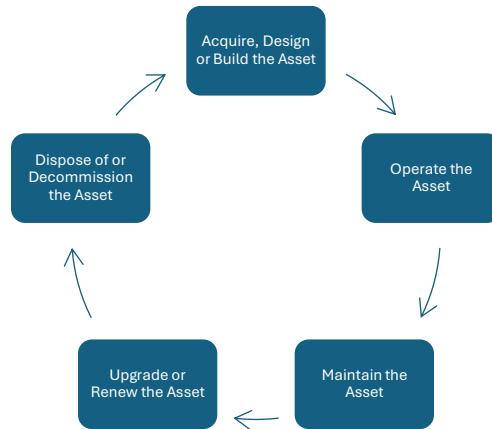
6. Life Cycle Plans

6.1. Overview

Life cycle planning covers the phases involved in ownership of an asset, or group of assets. These are:

- Creation/Acquisition
- Operations and Maintenance
- Renewal, Replacement or Upgrade
- Disposal or Decommission

Different assets and elements of assets have different life expectancies, and the key to good asset management is balancing the level of investment required to get the most use out of each asset, set against the limits of available funding and the importance of each asset to the network.



The Cycle:

- **Creation/Acquisition of Assets:** The County Council typically acquires new highway assets from developments, specifying standards and ensuring compliance before assuming ownership.
- **Operations and Maintenance:** Routine maintenance activities, funded by revenue, include reactive tasks (e.g., pothole repair) and cyclical tasks (e.g., gully emptying). Over two-thirds of the annual revenue budget is allocated to these activities.
- **Renewal or Replacement:** Structural maintenance, funded by capital expenditure, involves replacing assets at the end of their useful life (e.g., resurfacing roads, repairing drainage systems). Approximately £30-35m is spent annually on these activities.
- **Upgrading:** Activities that enhance asset functionality, such as strengthening bridges or upgrading signals/lighting.
- **Disposal/Decommissioning:** Rarely done due to the nature of highways assets. The council evaluates the need for assets nearing the end of their life and may choose not to replace certain items, like damaged road signs, to reduce clutter.

6.2. Current Process in Gloucestershire

Life Cycle Plans: Asset life cycle planning involves managing an asset's entire life span from acquisition to disposal. It focuses on maximising asset performance, minimising costs, and ensuring timely interventions for maintenance and upgrades based on data-driven insights.

Current Practices: Key asset plans (carriageways, footways, bridges, highway lighting) mainly document existing practices, detailing strategy, planning, identification, and prioritisation of maintenance works. These processes are robust and incorporate best practices from other authorities and acclaimed local methods.

Evolving Plans: Some asset plans, like footways, are less developed and will evolve as the TAMP is updated, balancing the cost of condition data collection with the benefits of detailed plans.

Maintenance: Is carried out and funded in several different ways:

- Capital maintenance – renews the asset to a good condition, is based on network intelligence and needs led. E.g. resurfacing a road, replacing bridge bearings or installing a new drainage system.
- Revenue maintenance – preserves the current life of the asset as long as possible through a programme of preventative, cyclical, and/or reactive maintenance. e.g. drain cleaning, grass cutting, or pothole repairs/patching.

Challenges: Common challenges in asset life cycle planning include accurate forecasting of asset performance and lifespan, balancing maintenance costs with budget constraints, and adapting to technological advancements. Additionally, aligning asset management strategies with organisational goals and navigating regulatory compliance requirements can be complex.

Appendix 2 contains the lifecycle plans for each of our asset groups.