Portsmouth CITY COUNCIL

HIGHWAYS ASSET MANAGEMENT STRATEGY

JANUARY 2017

VISION

Portsmouth City Council is committed to delivering a structurally sound, safe, resilient, well maintained and reliable highways network to protect its users, create an accessible city and enable growth.

We are committed to good management of highways infrastructure both now and in the future. This asset management strategy will ensure that standards are met in line with relevant guidance and legislation. The strategy will be developed and updated as necessary to accommodate changes in assets and technological advances and changes in standards.

ASSET MANAGEMENT FRAMEWORK IN PORTSMOUTH

This strategy serves as a basis for the development of detailed asset management planning and its implementation. It sits within the wider asset management framework (shown in figure 1) as one of the key strategic documents in the delivery of highway services.

The asset management decision-making framework is guided by performance goals, an extended time horizon, economics and engineering principles, and considers a broad range of asset types that include physical as well as human resources.

Asset management provides for the economic assessment of alternative improvements and investment strategy with the whole highway network being treated as a single entity. This is fundamentally the 'trade-off' between levels of service and costs, with the aim of providing best value for money in the use of public funds. The PFI contract has been designed with these principles at its core.

The contribution of the local highway network extends far wider than just transport. It is seen as fundamental to the economic, social and environmental 'well-being' of the community, and its management and maintenance must maximise the wider contribution. Therefore, there is a need to preserve and operate the investment in the local highway network for the full benefit of the Portsmouth community and wider sub-region. At the same time the UK public has undergone a change in its view of effective governance, resulting in the increased expectation that all tiers of government will be more accountable and will be managed more like a commercial operation. This strategy supports these changes.

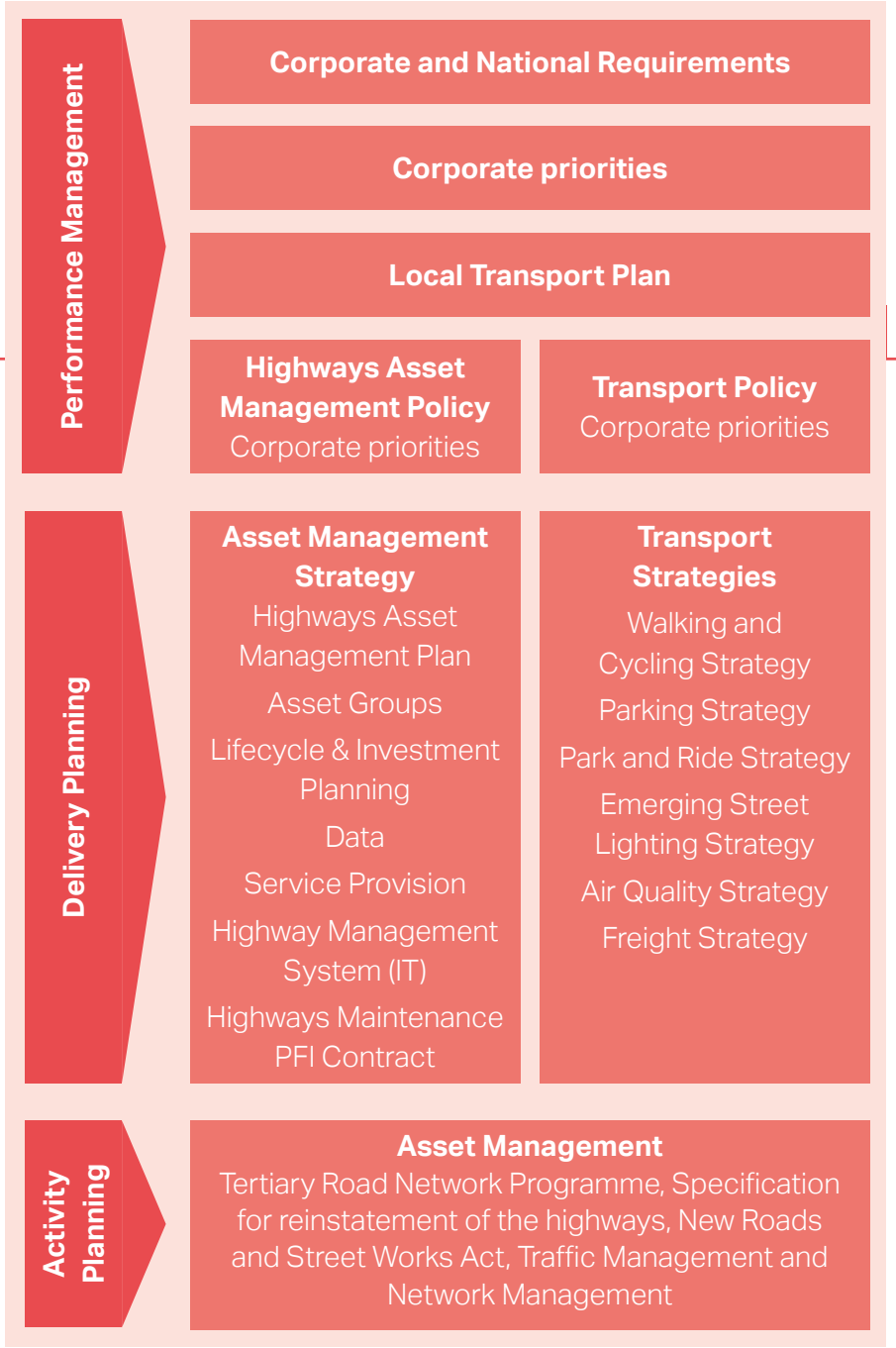


Figure 1 - Asset Management Framework

IMPLEMENTING EFFECTIVE ASSET MANAGEMENT

The application of asset management provides assurance that the service level outcome targets can be consistently sustained over time. Asset management builds on existing processes and tools to form a continuous improvement framework by using levels of service to define needs and expectations, to monitor performance against them and then to identify the most cost effective ways of closing performance gaps.

This process has been embedded in the PFI contract. The service company are working in accordance with the BS ISO 55000 Series and PAS55 Series for Asset Management for the implementation and maintaining asset management best practices to achieve the outcomes.

Figure 2 outlines the key aspects of Portsmouth's asset management approach and the effects of this.

Asset Management approach	Effects
Strategic	Taking a long-term view
Systematic	Looking at processes in a more systematic way
Holistic	Taking a 'service-wide' view covering all assets within the highway
Optimal	Trading off competing demands
Focus on 'Outcomes'	Explicitly considering customer needs and expectations
Management operation	Taking a 'whole life' and 'life cycle' approach
Needs based	Explicitly identifying and documenting needs
Informed decision making	Allocating resources based on assessed need

Figure 2 Approach to Asset Management Planning

HIGHWAYS MAINTENANCE PFI CONTRACT

We have a 25 year Highways Maintenance PFI Contract (PFI contract) from 2005 to 2030 for delivery of inspection, maintenance, life cycle replacement, enhancements and operational services.

As shown in figure 3, the PFI contract is with:

- Ensign Highways Ltd as the service company
- Colas Ltd as the subcontractor, delivering all the maintenance and operational functions.

The PFI contract covers the majority of assets on the city's highways network. Any risk of maintaining the assets within the PFI contract lies with the service company. However, there are also some assets which are not covered by the PFI contract and remain responsibility of Portsmouth City Council – highlighted in figure 5.

The PFI contract was set up with service level outcome targets which would deliver a service level equivalent to the Code of Practice for Maintenance Management current at the time (CSS, 2001). Before awarding the contract the Department for Transport (DfT) employed specialist advisers to review and audit the targets which were then approved by the Council.

The management of the contract is overseen by the Network Board. The board meets quarterly to set the strategic direction for the contract. It also forms part of any dispute procedures under the contract.

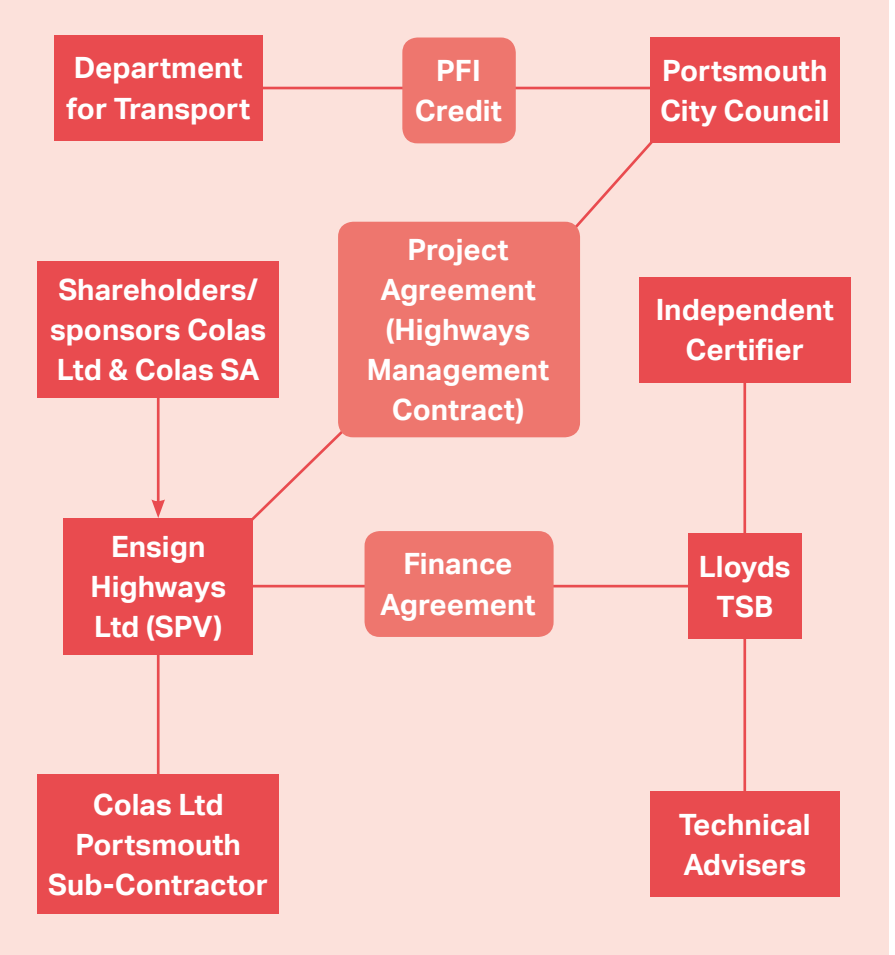


Figure 3. PFI contract governance

AIMS, OBJECTIVES AND OUTCOMES

This strategy brings together Portsmouth's key objectives for implementing an asset management approach and allows progress towards them to be monitored. As such it adopts those already set in the Highways Asset Management Policy, Local Transport Plan, Tertiary Road Network Strategy and PFI contract as outlined below.

HIGHWAYS ASSET MANAGEMENT POLICY

The separate highways asset management policy addresses how highways asset management works towards the council's priorities and the aims of the transport, environment and business support directorate.

LOCAL TRANSPORT PLAN

Portsmouth has a joint Local Transport Plan strategy for South Hampshire with Southampton City Council and Hampshire County Council. In order to deliver the transport vision for South Hampshire, these authorities identified inter-dependent key outcomes that define the policy framework for delivery. Effective highways asset management is essential in delivering these outcomes by enabling travel on the highways network in a safe and efficient manner. Policy D of The Local Transport Plan is: To achieve and sustain a high-quality, resilient and well-maintained highway network for all and specifically addresses the need for good highways asset management.

TERTIARY ROAD NETWORK STRATEGY

The tertiary roads network strategy aims to meet:

- today's need for safe passage, in order to meet statutory requirements
- tomorrow's needs through efficient and affordable sustainable asset management policies

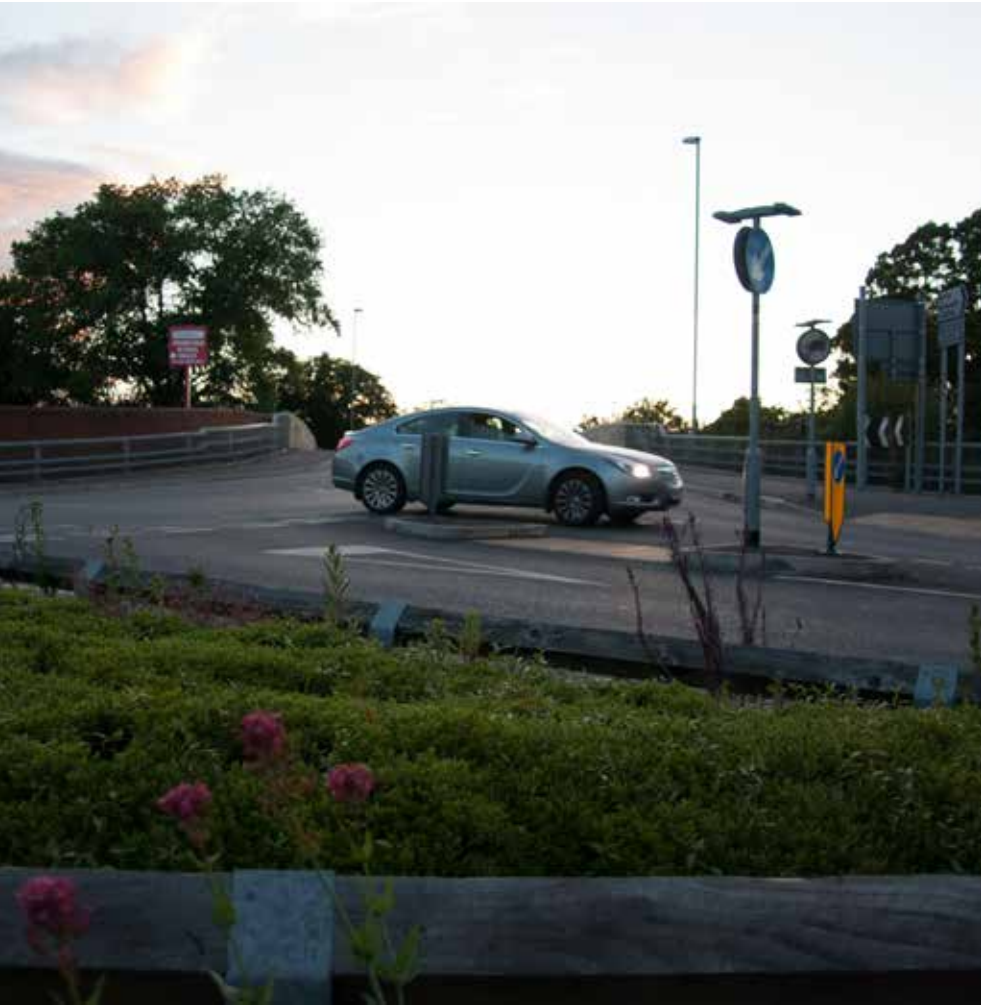
The council and the service company apply the principle of best value asset management in establishing the policy for maintenance of all aspects of the highway infrastructure.

PFI CONTRACT

The PFI contract service delivery priorities and how these are achieved are set out in figure 4.

PFI Contract Outcomes	Customer Satisfaction	Contract Satisfaction	Network Reliability	Assets Maintained	Safe Operations	Sustainable Operations
PFI contract priorities	To **Maximise** the potential of the contract for the Council, Public & Stakeholders. **Excellence** in communication with the Council, Public & Stakeholders. An **Excellent** standard of Customer Service.	**Fence-to-Fence** responsibility of Network **Stewardship**. A **Proactive** rather than reactive approach to the Network.	**Signification & Flexible** resources to respond to unexpected & planned events. **Minimise** delay to traffic as a result of maintenance works.	To **Bring** the City's Road & Footway Network up to a fair to good condition & to **Maintain** them in that condition for the 25 years.	**Health & Safety** adhered to at all times.	**Minimise** the impact of maintenance works on the environment.
PFI contract aims to meet objectives	Stakeholder communication maintained PCC image maintained Public perception / satisfaction maintained	Delivery & quality of services Deliver on time & value for money Deliver right first time Maximised return on spend & savings	Resilient network Reduce congestion Reliable & predictable journey times Improved management of works & incidents	**Whole life** proactive approach Rehabilitate the network for minimal life cycle treatment to maintain Preventative maintenance & investment Save life time & cost of repeated **patch & mend** with **whole life** principles	Maintained in a safe & serviceable condition Reduce accidents & incidents Network safety improved Road user & worker safety improved	Environment respected Deliver economic sustainability Reduce energy consumption Promote innovation & continual improvement
PFI contract measures to meet aims	Stakeholders informed Customer surveys Customer response & feedback Network appearance Community involvement	Compliance with service requirements Non-conformities identified, minimised & resolved Efficiencies & value for money	Mitigate delays Coordinated stakeholders Emergency & contingency response Effect of non-conformities minimised	Inventory data & condition improved &/or maintained Routine inspection & maintenance Non-safety defects responded & rectified promptly Life cycle replacement & capital (LTP) enhancement	Roads in a safe condition Safety defects responded & rectified promptly Accidents & incidents investigated for improvement	Reduce carbon footprint Reduce energy consumption Alternative sources Adaption to climate change Community involvement

Figure 4 PFI contract service delivery priorities



BENEFITS OF ASSET MANAGEMENT

The benefits of asset management enable organisations to achieve their outcomes through effective and efficient management of the assets.

The benefits of asset management include but are not limited to supporting organisation improvement in areas of:

- Management of risk
- Effectiveness and efficiencies
- Financial performance
- Investment decisions
- Services and outcomes
- Demonstrate social responsibility
- Demonstrate continuous improvement
- Demonstrate compliance
- Organisational stability
- Enhance reputation
- Best value endeavours

ASSET GROUPS AND COMPONENTS

The PFI contract is set out on a fence to fence principle. Figure 5 outlines key areas of responsibility through the PFI contract for Ensign Highways to maintain to the standard set out in accordance with the project agreement service performance requirements. Other key areas of responsibility are designated as PCC; however, other contracts may be in place for example for bus shelter maintenance. The assets included are not an exhaustive list and those under responsibility of PCC are appropriately maintained.

Asset component	Maintenance responsibility
Roads	
Carriageway surfacing and marking	PFI contract
Drainage and gullies	PFI contract
Traffic calming	PFI contract
Road studs	PFI contract
Central reservation	PFI contract
Manhole cover	PFI contract
Entrance markings	PCC
Licences and statutory documents	
	PFI contract
Fences and barriers	
Safety fence	PFI contract
Pedestrian guardrail	PFI contract
Footways and cycleways	
Footways - paving	PFI contract
Cycleways	PFI contract
Kerbs	PFI contract
Drainage and gullies	PFI contract
Vehicle crossovers	PCC
Structures	
Bridges, retaining walls, culverts etc.	PFI contract

Asset component	Maintenance responsibility
ITS	
Traffic signals	PFI contract
Urban traffic signal control and systems	PCC
Detector loops	PFI contract
VMS	PCC
Signs and street furniture	
Signs - illuminated, non-illuminated, street name plates	PFI contract
Bins	PFI contract
Bench	PFI contract
Street architecture	PFI contract
Parking meters	PCC
Bollards	PFI contract
Cycle stands	PFI contract
Fountains	PCC
Earthworks and embankments	
Grass	PFI contract
Trees	PFI contract
Shrubs	PFI contract
Weeds	PFI contract
Street cleansing	PFI contract
Planters and boxes	PFI contract
Planting	PFI contract
Hedges	PFI contract
Verges	PFI contract

Asset component	Maintenance responsibility
Weather emergencies	
Depots	PFI contract
Facilities - grit bins	PFI contract
Street lighting	
Lighting columns	PFI contract
Bus shelters and stops	
	PCC
Bus shelter line marking	PFI contract
Car parks	
	PCC
Public transport interchanges	
	PCC
Off-road footpaths	
Public rights of way	PCC/PFI contract
Statutory undertakers	
Plant equipment and private apparatus	Utilities
Sea defences	
Tidal flaps	PCC
Storm gate	PCC

Figure 5

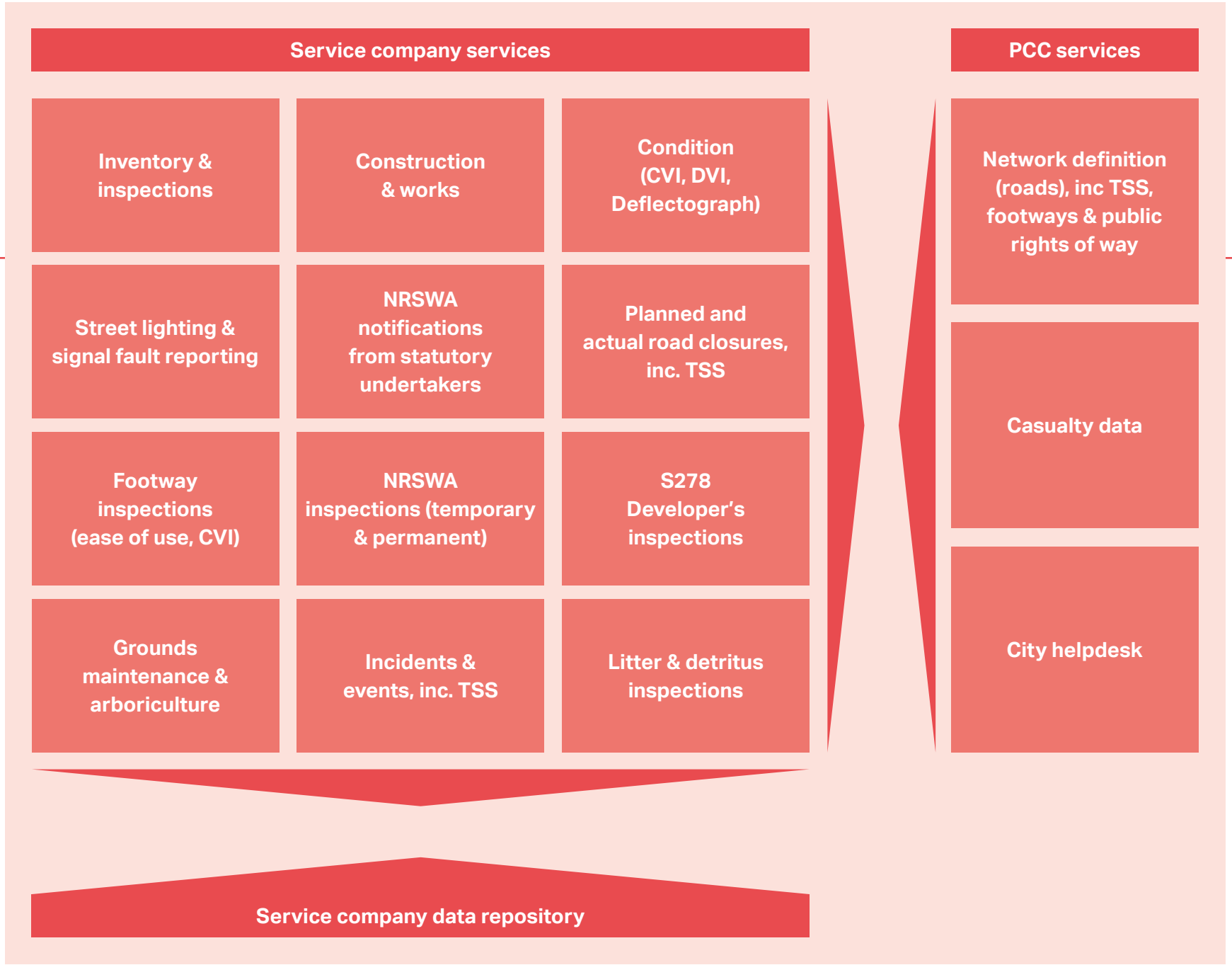

Service company services
PCC services
Inventory & inspections
Construction & works
Condition (CVI, DVI, Deflectograph)
Street lighting & signal fault reporting
NRSWA notifications from statutory undertakers
Planned and actual road closures, inc. TSS
Footway inspections (ease of use, CVI)
NRSWA inspections (temporary & permanent)
S278 Developer's inspections
Grounds maintenance & arboriculture
Incidents & events, inc. TSS
Litter & detritus inspections
Network definition (roads), inc TSS, footways & public rights of way
Casualty data
City helpdesk
Service company data repository

Figure 6

ASSET MANAGEMENT PLANNING

DATA MANAGEMENT AND INFORMATION SYSTEMS

It is recognised that the starting point for effective asset management is a good asset inventory. As there are a number of asset groups which are recorded for highways infrastructure asset management, information is gathered from a number of systems and collated in one repository. This is done using the information technology systems; the service company operate a single data repository containing the asset inventory data.

The relationship between the information technology system services managed by the service company and those managed by Portsmouth City Council are shown in Figure 6 *(page 10)*.

LIFECYCLE AND INVESTMENT PLANNING

With reference to taking the long-term view and management operation through a "whole life" and "lifecycle" approach, the maintenance of the asset will be carried out through the PFI contract.

Through the PFI contract the council has sought a way of achieving the maximum service delivery possible out of the limited highway maintenance funding available.

The road network is divided into three categories; primary, secondary and tertiary networks. Each of these categories has different service performance requirements and are treated differently for asset management purposes. This also allows the council to focus on both transport and highways together as the users of each of the categories differ.

Illustrated in Figure 7 below is a generic asset lifecycle that can be applied to all aspects of the Highway.

These key stages captured in the asset lifecycle involved identifying options for a lifecycle plan.

RISK MANAGEMENT

Effective control and governance of assets is set out in the PFI Contract, the objective of which is to achieve the desired balance of cost, risk and performance.

The nature of the PFI contract is such that all risks associated with asset management are passed to the service company. The council has specified within the contract the service performance requirements that the service company must meet and these are covered by the service payment made to them as contractor.

Through the contracts quality monitoring the council ensures that the service company apply good principles of risk management, such as identifying the service risks, mitigation and management.

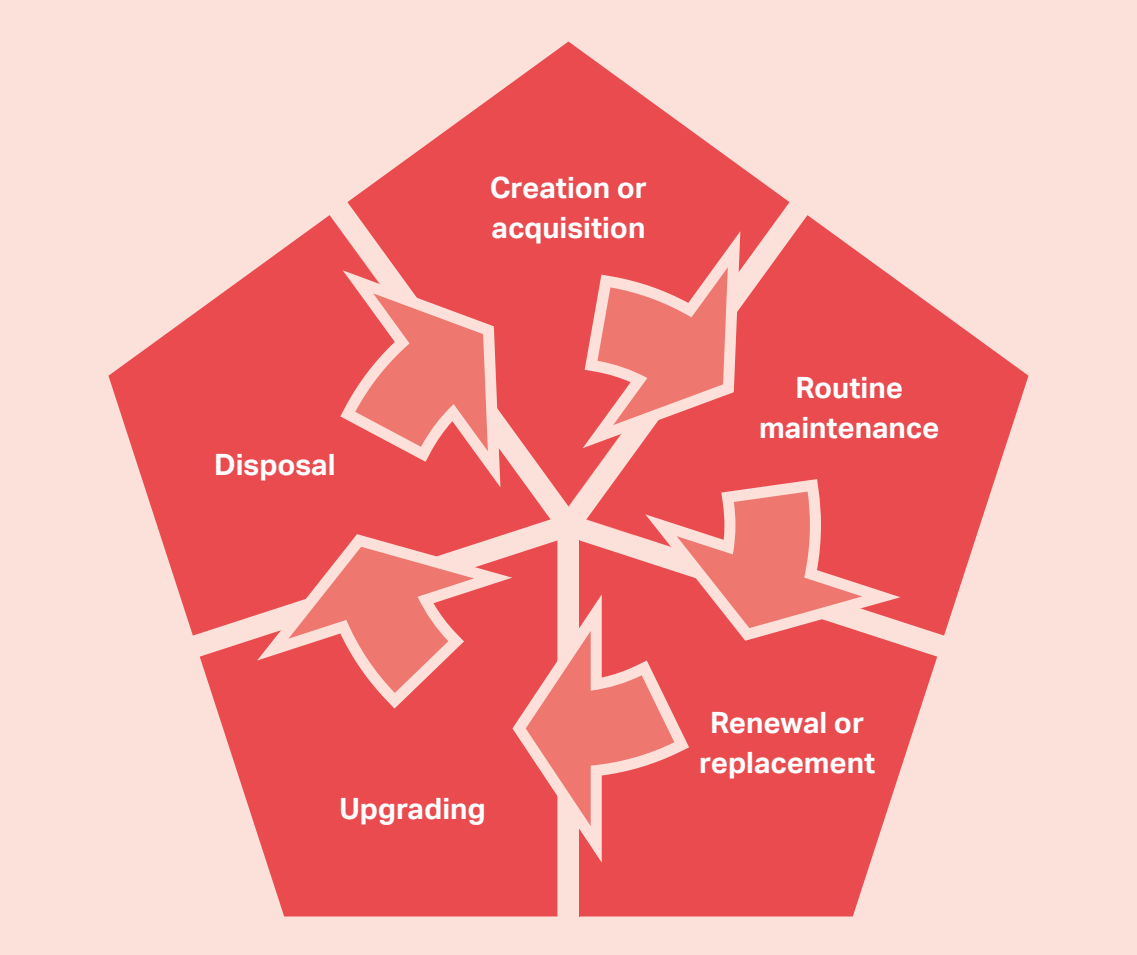


Figure 7 Generic asset lifecycle

PERFORMANCE MONITORING

The asset management performance standards are specified in the PFI contract under Schedule 4 (service performance requirements). The section below and overleaf explains the various mechanisms used during the project agreement to ensure performance is monitored.

Performance Indicator Reports (Monthly Reports)

The performance indicator reports provide results for the council to gauge and assess the performance of our service company. We use the performance indicator results to highlight improvements in the delivery of the contract services as an outcome based performance assessment.

Performance review and plan (annually)

The performance review and plan is developed in workshops, providing a forum for innovation and value for money proposals which enable the council to collaborate with the service company to drive improvements over the following 12 month period. We use this to drive performance across not only asset management but across all areas of the contract services.

Customer satisfaction surveys (monthly and annual surveys)

The customer satisfaction surveys provide results for the council to gauge and assess the perception of performance from our residents. These use survey results are used to highlight where improvements in the delivery of public services can be achieved and where our resources need to be employed.

National Highways and Transport (NHT) public satisfaction survey (annual survey)

The NHT network enables the measurement and comparison of performance and the sharing of best practice on all aspects of highways and transport services. The survey results are used to highlight effectiveness and improvements in the provision of public services as an outcome based performance assessment for our Asset Management Plans (AMP), the Local Transport Plans (LTP) and the Highway Maintenance Efficiency Partnership (HMEP).

Highways PFI Contract Joint (PCC & Service Co.) action plan (annual)

A plan to achieve objectives in the following 12 month period.

Highways PFI Contract best value review and plan (5 Yearly)

A review and plan required to be conducted by PCC in accordance with Section 5 of the 1999 Act.

Highway Infrastructure Asset Management strategy review (annual)

This strategy is reviewed annually, updated and re-published annually as part of our quality and asset management review procedures and commitment to continuous improvements.

DELIVERY MODEL

The delivery of this strategy will be made through the Highways Maintenance PFI agreement with the council's service company, Ensign Highways. The contract required the service company to bring the highways network condition up to a pre-agreed standard during the Core Investment Period (CIP). The standard is measured as Network Condition Index (NCI) after the initial five year CIP the service company are then required to maintain the NCI at or above that level for the remaining period of the contract until 2029. In addition to the initial CIP the service company are required to maintain the network through regular maintenance of a proactive and reactive nature, as well as carrying out lifecycle replacement work.

The service payment that is paid to the service company is fixed which means that the service company are encouraged to carry out the optimum LCR and maintenance work to maintain the asset. It encourages them to carry out the works that offer the best value for money and that cause the minimum amount of disruption to highways users.

The service payment is funded through a mixture of the council's own funds and the PFI credits provided by the Department for Transport. The contract also provides for changes to the network. If there are any additions or omissions to the project network a commuted sum is calculated that provides for the maintenance and lifecycle replacement of these changes. So when any changes to the network are proposed by the council a funding source must also be identified to meet the cost of this commuted sum.

It is the council's policy to not only provide for the commuted sum for the remainder of the contract period but also for maintenance and lifecycle replacement of assets for a 25 year period at the time the capital project is developed. This ensures that the principles of maintaining the highway through best asset management practice are applied to all assets that form the project network.

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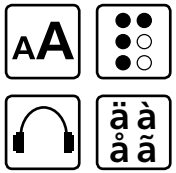

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