

Highway Asset Management Framework



Contents

Executive Summary	4
Relationship of Strategic Highway Documents	5
1. Asset Management Context	7
2. Investment Strategy	11
3. Information and Data Management	15
4. Communication Strategy	23
5. Performance Management	28
6. Risk Management	31
7. Network Hierarchy	37
8. Resilient Network	43
9. Levels of Service	47
10. Service Standards	49
11. Competencies	51

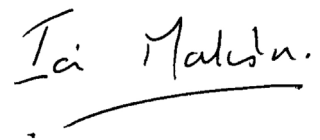
Executive Summary

The Department for Transport commissioned and worked with the UK Roads Liaison Group (UKRLG) to carry out a root and branch review of the codes of practice in place. The ultimate aim was to enable local authorities to maintain their highways and infrastructure in the most effective and efficient way. This resulted in the publication of Well-managed Highway Infrastructure, A Code of Practice 2016. Local Authorities must formally adopt its recommendations by October 2018.

South Tyneside Council has adopted the recommendations of the Well Managed Highway Infrastructure Code of Practice 2016. This code is designed to promote the adoption of an integrated approach to highway infrastructure management. It provides guidance to enable each authority to develop its approach, taking into account local priorities, needs and affordability. One of the code's 36 recommendations is to develop a suite of documents including a Highway Asset Management Framework (HAMF). The relationship of the strategic highway documents is illustrated overleaf. (Figure 1)

The purpose of this document is to provide the overarching framework for highway asset management in South Tyneside. The Highway Asset Management Framework (HAMF) document includes all activities and processes that are necessary to develop, document, implement and continually improve asset management. It will be used to plan and deliver the best outcomes within the resources available.

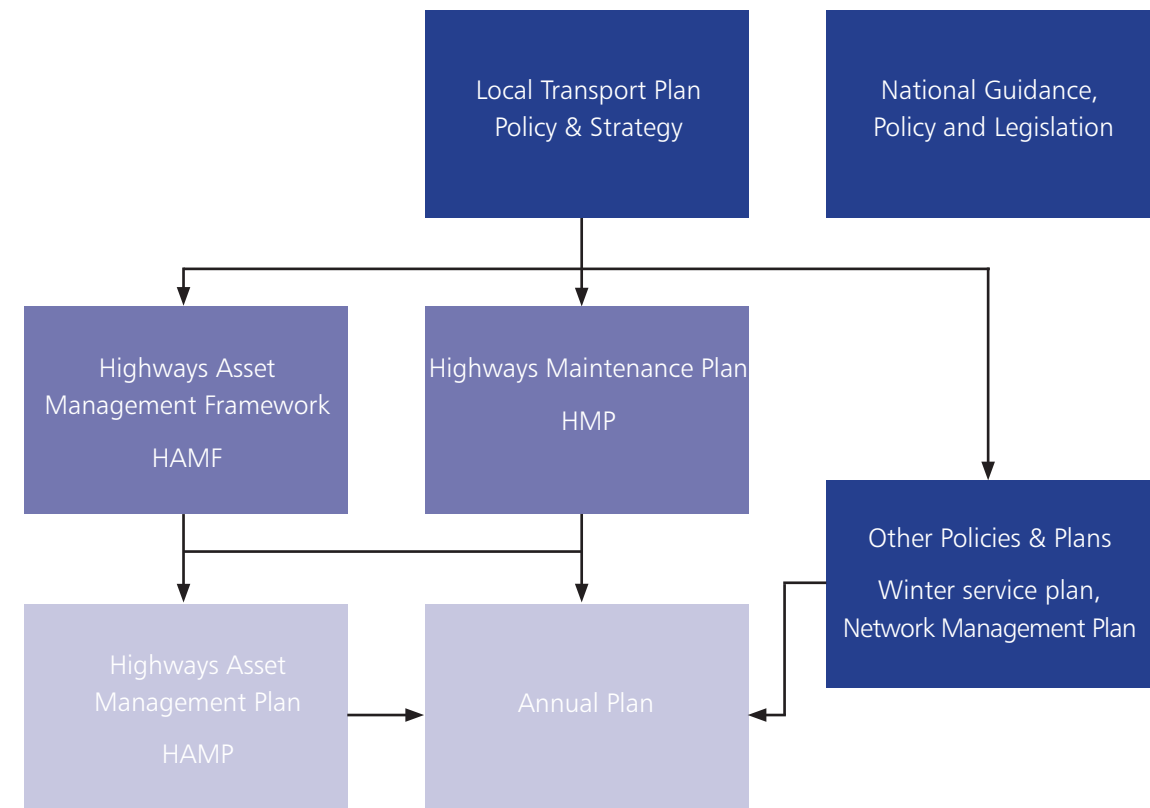
South Tyneside Council's Strategy is to make the borough an outstanding place to live, invest and bring up families. Future jobs and homes need to be supported by an improved and more resilient infrastructure. The Council is committed to continue to invest in its highways and infrastructure asset and keep on delivering efficiencies through the implementation of asset management principles.



Councillor Iain Malcolm
Leader of the Council

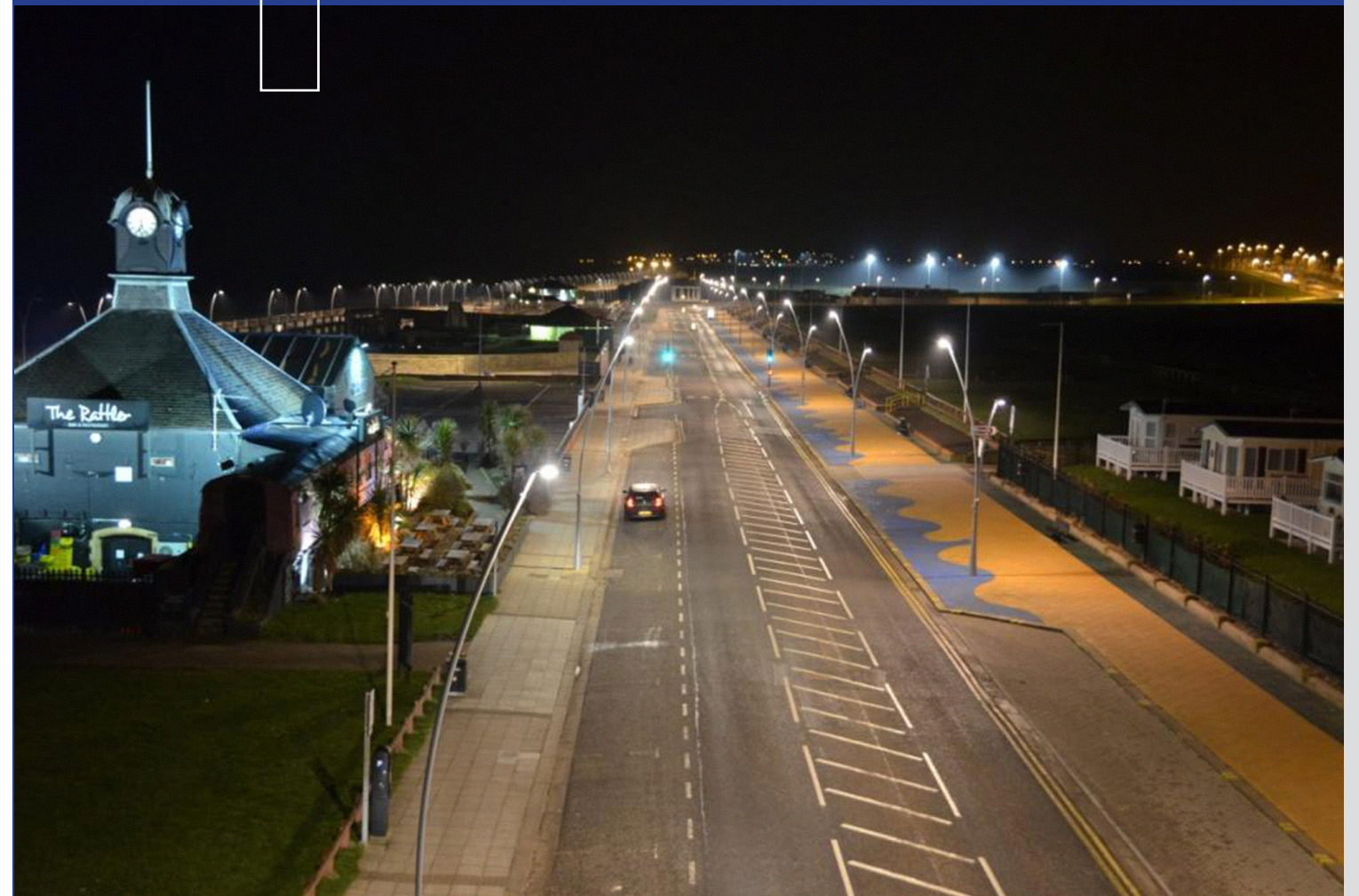
Figure 1:

Relationship of Strategic Highway Documents





Asset Management Context



1. Asset Management Context

The delivery of highway asset management is not a standalone activity. Its delivery is linked with the Council's policies and service delivery and supports the interface with all stakeholders.

The following diagram illustrates the importance of the highway infrastructure, the setting of national and local transport policy, stakeholder communication requirement and the legal and financial constraints

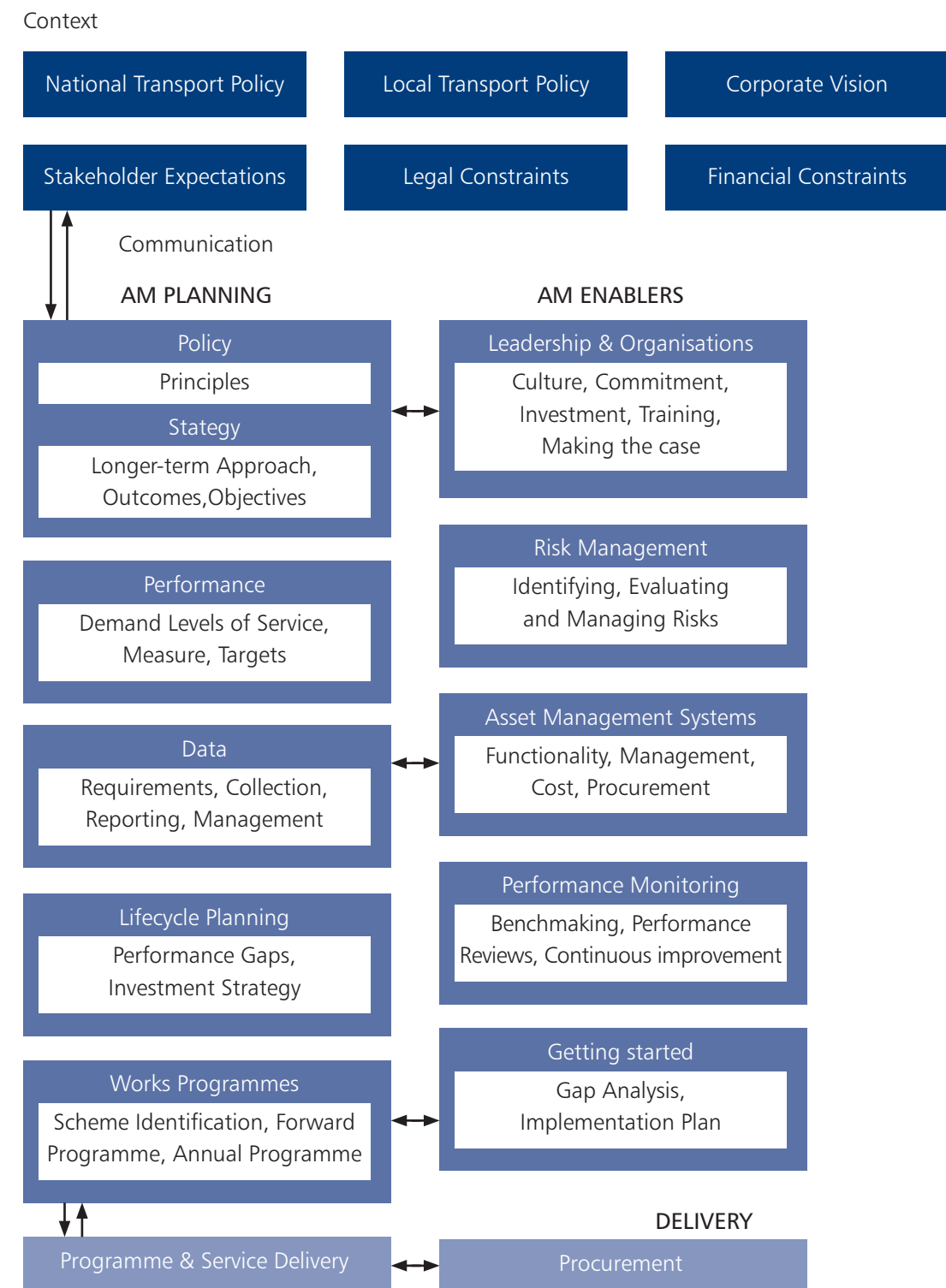


Figure 2



Investment Strategy



2. Investment Strategy

The Council is committed to continue to invest in the highway infrastructure.

The relative investment between the asset groups will be decided annually and will be dependent on the overall budget allocation and priorities that may change with time.

It is recognised that prevention is better than cure; however the level of investment in planned maintenance may not be sufficient to maintain a stable condition and prevent an increase in reactive repair costs. Budgets for reactive repair are to be given priority, as they are safety related and are expected to be sufficient to enable current reactive repair standards to be met in terms of the type of defect repair and the response time to carry out the repairs.

Highways and infrastructure maintenance is currently funded from the following sources:

- **Local Transport Plan (LTP).** This is the annual capital block funding received from the Government. Over the life of the current Parliament, the level of funding received by each Highway Authority will be determined by a 'needs based' funding formula plus an 'incentive based' formula. The incentive formula has been introduced to encourage and reward the adoption of efficiency and highway asset management best practice.
- **Revenue.** The annual revenue funding is determined by the Government's Relative Needs Formula and the Council Tax settlement.
- **Other adhoc allocations.** Other sources of funding can be allocated either internally or externally – for example Council Capital and revenue funding and DfT Challenge Fund.

Asset Maintenance Options

Four possible maintenance options will be considered to determine the appropriate level of investment to provide a network that meets the needs of South Tyneside's highway users:

Do nothing – the impact on the network condition if we were to undertake no planned maintenance. This option would lead to a significant deterioration in highway condition. In the long term this would result in considerable investment in major remedial works as the assets reach critical condition.

Current budget – the LTP & revenue allocation. The effect on the asset condition if the current level of funding was to be maintained would lead to a backlog of maintenance work. The assets will continue to deteriorate at a faster rate than we can maintain them. In essence, the Council will manage the decline of the network.

Steady state. The level of funding required in order to maintain the asset in their current condition will be calculated annually. Internal funding bids will be submitted to supplement the LTP funding allocated.

Condition improvement. The level of funding required to improve the network will be calculated annually. The long term benefits of such an approach include a reduced requirement for reactive maintenance and a reduction in level of third party claims as the overall condition of the network improves.

Carriageways

The budget required to maintain the carriageways in their current condition is in excess of that currently available. The budgets available for roads, in the short term, are insufficient to deliver a steady state. The strategy is to manage an acceptable rate of deterioration whilst targeting investment at roads in most need of treatment presenting the highest risk to road users. The Resilient Network forms the highest priority for maintenance.

Road Category	Strategy	
A Roads	↘	Managed deterioration
B Roads	↘	Managed deterioration
C Roads	↘	Managed deterioration
Unclassified	↘	Managed deterioration

Figure 3

The bulk of funding for carriageway maintenance comes from the external Department for Transport LTP and Incentive Fund.

Internal council capital funding for carriageways is provided on a year by year basis resulting from capital bids.

Footways

The budget required to maintain the footway asset in its current condition exceeds that of the budget available. The strategy is to manage an acceptable level of deterioration. The flags to flexible programme targets footways in each ward most in need of treatment. There is minimal revenue funding for improvement works. The major source of footway improvement funding is by Council capital investment.

	Strategy	
Footways	↘	Managed deterioration

Figure 4

Structures

The budget required to maintain highways structures in their current condition is in excess of that currently available. The strategy is to manage an acceptable level of deterioration and manage risk.

A small revenue budget is available for reactive maintenance to address immediate hazards and to carry out repairs for minor deterioration.


Theme	Strategy
Refurbishment	 Maintain the stock in a safe and serviceable condition by managing the deterioration and minimising risk

Figure 5

Any major works identified as being required are funded via specific capital bids on a scheme by scheme basis.

3 Information and Data Management



South Tyneside Council is committed to embedding the following principles in the production of its data in accordance with its Code of Corporate Governance:

- Fit for purpose
- Collected, maintained and used ethically and legally
- Readily checkable and able to withstand organisational changes
- Clearly required
- Regularly monitored
- Cost effective to produce
- Clearly presented

South Tyneside Council has engaged with Ginger Lehman as part of the wider Tyne and Wear group to collect and process the data on its behalf. They will ensure that they:

- Collect and submit data accurately
- Produce accurate and reliable data
- Have management oversight of data quality processes
- Challenge data before reporting
- Reports data with confidence
- Scrutinise data
- Assess third party data

Objectives of Asset Data Management

This strategy relates to all highways assets including carriageways, footways and structures/bridges. The Council holds a considerable store of asset data in various IT systems; some specifically designed asset management software and some 'off the shelf' IT solutions. This data is used to support highway asset management and the delivery of services across the borough. It is acknowledged that reliable and robust data is essential to support investment decisions. The council will continue to review, maintain and enhance the asset data that we hold to ensure that pertinent information is available to support long term decision making.

Data is the most essential component of its Highway's Asset Management plan and the following points illustrate the objectives from its asset data:

- Provides the data required to support the Council's approach to asset management
- Describes the asset and its performance
- Provide the basis for informed decision making
- Provides information to set service standards
- Facilitate communications with its stakeholders
- Inform assessment and management of risk
- Supports the management of South Tyneside's statutory requirements
- Supports continuous improvement of the Council

Details of the annual network condition survey are contained within the Life Cycle Planning (LCP) section of the Highways Asset Management Plan. The data captured is used to inform the future maintenance programmes and facilitate LCP to ensure the right treatment at the right time to extend the life of the asset.

The annual condition surveys results are used to inform lifecycle planning.

Asset Data

Asset data comprises information on what physical highway infrastructure assets the Council – as highways authority for South Tyneside – is responsible for and includes number, location, condition and financial value. To enable the Council to apply effective asset management planning and informed decision-making, it relies on this data being available, appropriate, reliable and accurate.

Inventory Register

An asset register is the repository for all data associated with the asset including location and condition. An asset register is considered to be a 'single source of truth'. They are used to support maintenance management and the management of defects as part of the asset management system.

South Tyneside Council's preferred option is to hold the data for the assets it is directly responsible for in a single integrated asset management system, namely Horizons. This assists the officers to manage the highway asset and deliver vital information in various formats which is easily understood to inform important decisions regarding service levels and delivery.

Collection of Data

Data is collected for two reasons. Firstly to serve the needs of the Council so as to provide up to date, accurate and reliable data to inform the Council's operational decisions; and secondly to co-ordinate the required data gathering to ensure that decisions are informed by current, appropriate and reliable data.

The table below illustrates the annual network level surveys to be completed. The data captured will be used to inform the forward maintenance programmes, monitor the effectiveness of the skid resistance of its carriageways and facilitate life cycle planning to ensure the right treatment is implemented at the right time to extend the life of the asset.

Type of Survey	Carriageway surveyed	Percentage coverage
Course Visual Inspection (CVI)	Unclassified Roads (U road) flexible	33% per year
DVI	Unclassified Concrete	33% per year
SCANNER (machine measurement surveys)	A (both directions), B and C	50% per year
SCRIM (Skid resistance deficiency survey)	A, B and C	100% per year
Structures- Principal inspections	Bridges and structures	When identified as required during at general inspection
Structures – general inspections	Bridges and structures	In accordance with programme

Figure 6

The annual condition surveys allow trend analysis to be used to confirm original decisions or allow for changes as a result of the changing network condition and inform lifecycle planning.

Detailed below is the highways asset for which South Tyneside Council has direct responsibility:

Asset group	Description
Adopted Carriageway	Carriageways on the adopted highway network including back lanes
Adopted footways	All adopted public footways on the highway network
*Bridges and other highway structures	All highway structures including road bridges, footbridges, retaining walls greater than 1.5m, engineered slopes and culverts greater than 0.9m
Highway Drainage	All highway drainage items including carriageways and footways gullies, culverts less than 0.9m, grilles, channels and pipes
Public Rights Of Way (PROW)	Bridleways, public footpaths and cycle routes
Street Furniture	Includes all vehicle restraint barriers, pedestrian guard rails, non illuminated bollards, seats and grit bins
Traffic Calming	Chicanes, speed humps / cushions, vehicle activated signs and tables
Road Markings	Includes all yellow line markings, white longitudinal markings, hatched markings, mini roundabouts, transverse and special markings
Trees and Greenspaces	All highways trees, verges, hedges, flower beds, shrub beds and planters
Highway Land	All adopted highway land

Figure 7

*inspected and managed by external consultant on behalf of STC

The following table outlines the highways assets for which the Council has responsibility but does not directly control. They are maintained through a PFI contract or under Service Level Agreement:

Asset Group	Description	Maintenance Responsibility
Street Lighting	All highways lighting columns, illuminated signs, non illuminated signs and illuminated bollards	Full inventory and condition maintained as part of PFI
Traffic signals	Includes traffic signal installations, signalised junctions, pedestrian light controlled crossings and school crossing patrol flashers	Held and maintained by Regional Traffic Signals Group

Figure 8

Data Storage

Data for each asset is held electronically on the systems in the table below:

	Carriageways	Footways	Structures	Street Lighting *PFI	Green Space
Asset Register	* Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers
Safety Inspections	Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers
Condition survey	Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers
Routine Reactive Maintenance	Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers
Cyclic Maintenance	Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers
Planned Maintenance	Yotta Software	Yotta Software	Bridgestation	Mayrise at Balfour Beatty	Excel Spreadsheets Internal Servers

	Carriageways	Footways	Structures	Street Lighting *PFI	Green Space
Customer Contacts	Customer Contact Centre	Customer Contact Centre	Customer Contact Centre	Customer Contact Centre	Customer Contact Centre
3rd Party Claims	Figtree (Sunderland CC) STC data base on network	Figtree (Sunderland CC) STC data base on network	Figtree (Sunderland CC) STC data base on network	Figtree (Sunderland CC) STC data base on network	Figtree (Sunderland CC) STC data base on network
Finance	Oracle	Oracle	Oracle	Oracle	Oracle
Winter Maintenance	GIS Winter maintenance folder on Internal Servers	GIS Winter maintenance folder on Internal Servers	N/A	N/A	N/A

Figure 9

*Yotta Software – Mayrise/ Horizons/ Alloy

Risk Based Approach to Data Collection

Where the cost of data collection outweighs the benefit to the Council and/or may not be affordable, a risk based approach to the collection of the data may be considered. In doing so, the Council will consider each asset group separately. Consideration will be given to:

- Any historic concerns over existing performance
- How it supports statutory requirements
- Reputational consequence of network disruption, reduction in serviceability
- Critical parts of the network
- Safety of the network
- The critical nature of the asset in supporting the function of the network
- If it is on the resilient network

Data Owners

The responsibility for the management of the data relating to each asset group has been allocated as follows. It is that person's responsibility to ensure that the data relating to that asset group is updated, verified, validated and reviewed.

Asset Group	Person Responsible for Asset Data
Carriageways Footways Drainage Structures Street Furniture Winter Maintenance	Highways and Infrastructure Manager
Street lighting	PFI Contract Monitoring Officer
Traffic Signals Traffic Counts Accident Data	Road Safety Manager
Green Space	
Trees	Corporate Lead Area Management

Figure 10

Disposing of Data

The data owner is responsible for archiving or the disposal of out of date data. Any disposal should be in accordance with the corporate data management strategy.

Corporate Data and Management and Access to Information

The governance and access to information is documented on the council's website in terms of Freedom of Information Requests, Data Protection, Council Data and Information, Research and Statistics and Fees and Charges. Further details can be accessed via the following link <https://www.southtyneside.gov.uk/article/38568/Access-to-information>

New Data Protection Laws

The General Data Protection Regulation (GDPR) came into force in May 2018. The Data Protection Act 1998 has also been replaced by the Data Protection Act 2018, bringing the GDPR into UK legislation. These new legal frameworks are the most significant overhaul of data protection legislation in 20 years. GDPR also strengthens the rights individuals have. More information is available at Information Commissioner's Office: Individual Rights.

The Council has updated its privacy notice in accordance with the new legislation.

4 Communication Strategy



Communication Aims and Objectives

South Tyneside Council has agreed communications principles and standards, as set out in its Corporate Communications Guidelines for officers. In order to fulfil these it is essential to work with all partners to ensure that communications to external audiences and internal audience are managed in a professional manner, and achieve the standards required.



Figure 11

Means of Evaluation

The success of activities within the communications plan can be measured in the following ways:

- Media monitoring via coverage by tone of positive/neutral/negative
- Number of interactions via internal online channels
- Number of responses via surveys
- Number of hits on South Tyneside Council website
- Number of attendees to consultation events

Principles of Good Communication

- All communications to carry the key messages across all of the Council's internal and external communication channels
- All key stakeholders and audiences will be kept informed of work on the network
- Use a variety of existing databases and communications channels, including social media, to communicate with all media, residents, communities, voluntary and other public sector partners, stakeholders and businesses
- Use plain English, avoiding technical and engineering terms to residents
- Safeguard and maintain the reputation of the Council
- Demonstrate our ethical duty to be open and transparent

Community

Ensure community members acquire the right information first time – whatever the issue, by providing an efficient and effective service and the right level of information. Through doing this perception will improve and the public will appreciate our service and what we do. The more informed residents are the more satisfied they are with the council services.

Inform	Inform and consult	Inform, consult and collaborate	Evaluate and lessons learnt
24 hour access to information	Customer relationship management	Community Area Forum	Annual National Highways and Transportation Survey
South Tyneside Council Website and Facebook page	Information updates Promote the Council's key messages	Council and committee meetings - South Tyneside Council	NHT Survey Key Findings Survey Results
Home - South Tyneside Council	Targeted communication and alerts (letters etc.)	Tailored communication plans and early engagement	Customer satisfaction surveys
Public engagement events	Contact centre	Consultation events	Annual report
Publishing works programme	Contact us - South Tyneside Council		
Maintaining our roads and footpaths - South Tyneside Council	Advance noticing signs Works feedback		
Cyclical work information	Lessons learnt		
Publishing asset management policies/strategy	Transport improvements Engaging with vulnerable and hard to reach groups		
Customer communication strategy published	Accessibility - South Tyneside Council		
Road works schedules			
Latest roadworks - South Tyneside Council			

Figure 12

Councillors

Our elected members are our community champions. They can provide first hand feedback from within the communities and provide customer insight to shape and deliver our services.

We will work with councillors to keep them informed when programming planned works.

Inform	Inform and consult	Inform, consult and collaborate	Evaluate and lessons learnt
South Tyneside Council website	Presentations Promote the Council's key messages	Early engagement Consultation events	Promote achievements Annual NHT satisfaction survey
Briefings	Cabinet	Council Meetings, Agendas and minutes	Annual Report
Works programme published	Scrutiny committee		

Figure 13

Colleagues, Partners and Our Supply Chain

Ensure South Tyneside Council workforce are informed and feel confident about promoting works and managing customer expectations. Ensure employees are skilled and knowledgeable and are proud of the service they provide. How they represent the Council will leave a lasting impression on the customer. When meeting customers face-to-face employees will adhere to the Council's customer services standards as outlined in our Customer Service Charter.

Inform	Inform and consult	Inform, consult and collaborate	Evaluate and lessons learnt
South Tyneside Council website	Promote the Council's key messages	Meetings Tool Box Talks	Publish asset management achievements
Intranet		One to Ones	
South Tyneside Council Intranet - Home Page		Appraisals	
Works programme published		Team meetings Coordination meeting	
		Collaborate with neighbouring authorities through NEHA	

Figure 14

Media

Work with and engage the media to provide them accurate, timely information to enable them to deliver accurate information to our customers.

Inform	Inform and consult	Inform, consult and collaborate	Evaluate and lessons learnt
Briefings South Tyneside Council Website Works programme published Road works schedule	Promote the Council's key messages	Public relations	Work together on issues Promote achievements

5 Performance Management



5. Performance Management

Performance Measures that we will use to monitor progression towards the targets that we have set for service delivery. The targets will be reviewed annually to take account of changes to legislation, corporate aims and objectives and changes to the level of funding available.

Performance Measure	Definition	National or Local set criteria	Target
SDL 130-01 For "A" category roads allowable % of Red Category	Principal road % where maintenance should be considered	National	5%
SDL 130-02 For "B" and "C" category roads allowable % of Red Category	Non-principal classified roads % where maintenance should be considered	National	8%
STC 224b For "U" category roads allowable % of Red Category	Unclassified road % in need of maintenance	Local	10%
FNS Headline Indicator	Condition levels 3 & 4	Local	45%
STC PI01	Category 1 highway defects. % made safe within 24 hours	Local	100%
STC PI02	% of residents satisfied with condition of highways (NHT)	Local	35%

Figure 16

6 Risk Management Strategy



6 - Risk Management Strategy

The management of current and future risks associated with our highway assets is embedded within our approach to asset management. Strategic and operational risks are included as appropriate mitigation measures.

The approach and content has been developed through joint working with Newcastle, Sunderland, Gateshead and North Tyneside Councils with the intention of ensuring consistency within the neighbouring authorities.

As the highway authority for South Tyneside we are required to manage a variety of risks at all levels within our organisation. The likelihood and consequences of these risks can be used to inform and support the approach to asset management and inform key decisions on the following:

- Maintenance hierarchies
- All highway assets within the scope of the Highway Management Plan
- Inspection frequency
- Levels of service
- Service standards
- Performance
- Investment decisions
- Implementation of works programmes

A risk can be defined as an uncertain event, which should it occur will have an effect on the desired performance of an asset or series of assets, levels of service and delivery of services. It consists of a combination of the likelihood of a perceived threat or opportunity occurring and the magnitude of its impact on the objectives where:

- Threat is used to describe an uncertain event that could have a negative impact on the levels of service; and
- Opportunity is used to describe an uncertain event that could have a favourable impact on the levels of service.

The most commonly understood risks affecting the highway service relate to safety. However, there are a wide range of other risks and their identification and evaluation is a crucial part of the asset management process. Risks may include:

- Safety;
- Reputation;
- Asset loss or damage;
- Service reduction or failure;
- Operational;
- Environmental;
- Financial; and
- Contractual.

Our understanding and management of risk is fundamental to effective asset management and the approach we have adopted for the management of risk is shown in the risk management process below. ISO 31000: 2009 Risk Management Principles and Guidelines sets out the principles of risk management and the organisational framework and process required to develop and implement a risk based approach. The risk based process described within ISO 31000 is illustrated in figure no 17 below.

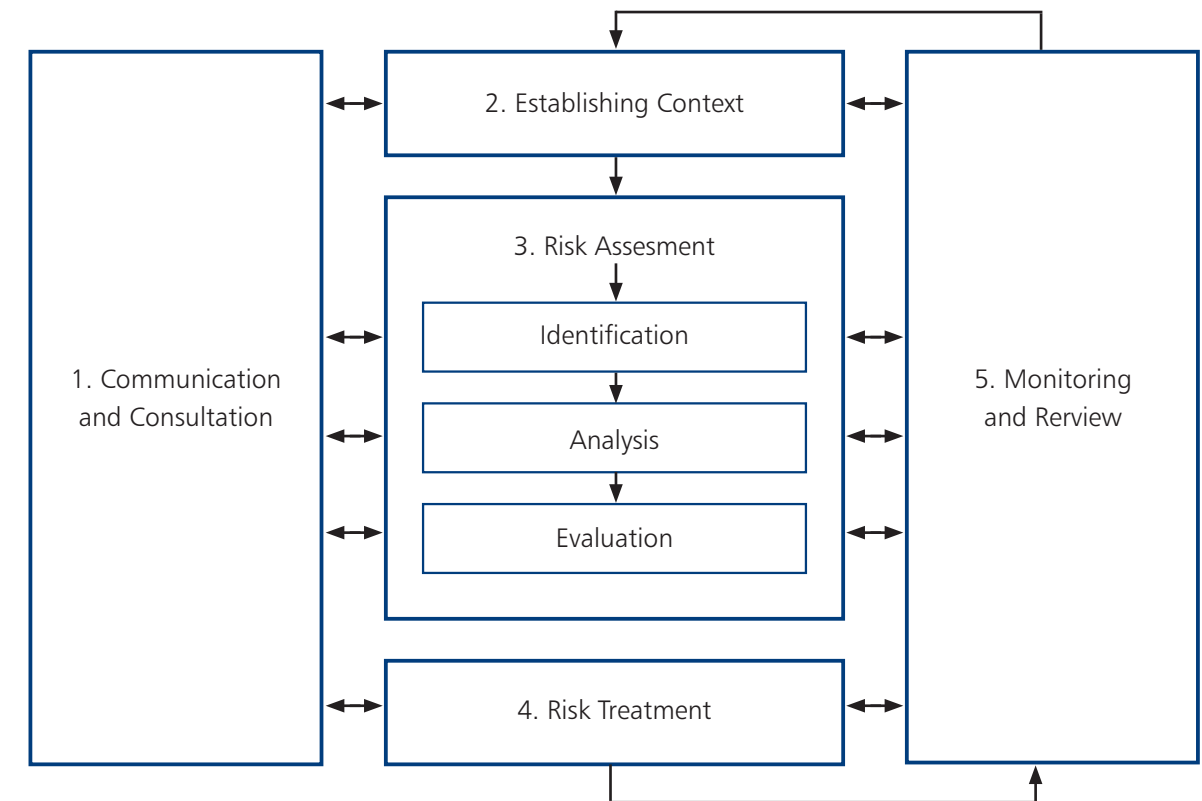


Figure 17

The illustration set out five essential 'activities' that are required to manage risk.

Our approach to risk management

In South Tyneside we intend to apply the concept of ISO: 31000 to the management of the strategic and operational risks that impact highway asset management.

Our risk is managed at several levels using a consistent risk framework that enables the comparison of risks across all services. This may include risks seen as:

- **Corporate** – High level risks that effect the whole authority. Such risks include corporate reputation, civil defence, emergencies; business continuity, health and safety, climate change, political and legal and financial risk. Risk strategy and management of these risks is usually undertaken by the senior decision makers and is beyond the scope of this Guidance;
- **Strategic** – Risks affecting the management of the highways infrastructure should be considered throughout at strategic level. This Section focuses on this risk; and
- **Operational** – Risk should also be managed when undertaking operational activities.

We intend to refer to recent published guidelines by the Institute of Highway Engineers (IHE), Well Managed Highway Liability Risk. In October 2016, the UK Road Liaison Group (UKELG) published a Code of Practice on Well-managed Highway Infrastructure. The recently published guidance is intended to support and be considered as supplementary advice, therefore the two documents will be read in conjunction.

Communications and Consultation

Communication and consultation may be carried out with relevant stakeholders, consistent with the corporate approach to risk.

Identifying Critical Assets

The identification of our critical assets is essential for helping us to achieve our vision to provide a transport system and highway network that supports South Tyneside Council's "Better Transport" Strategy:

- South Tyneside's transport infrastructure will drive and sustain a buoyant and resilient local and regional economy
- Our residents will be fully connected to jobs, local services, training, our town and village centres and each other
- South Tyneside's businesses will be fully connected to employees, customers, trade routes, supply chains and each other

Our critical assets will be identified separately and assessed in greater detail as part of the identification of the resilient network.

Criticality can be assessed by applying broad assumptions about the implications of failure. For example the non-availability of a major structure would have a significant impact on the local or possibly the national economy or assuming that higher trafficked roads have a larger consequence of failure than lower trafficked roads. By adopting this approach, simple criteria can be defined to assess the loss of service. For example, loss of use of a road will;

- Affect the ability to safely connect people
- Affect the local economy and
- Businesses within the region.

Evaluating the risks

Our risk assessment involves determining the likelihood and consequence of an event. The risk assessment will allow us to identify the risks to be analysed in a systematic approach to highlight which risks are the most severe and which are unacceptably high. We can then determine our level of exposure to the risk and the actions necessary to minimise that risk.

We describe the overall risk as **Risk = Likelihood x Consequence**

Likelihood

Likelihood is the chance of an event happening; for example, a failure (asset as well as organisational) or service reduction. It can be measured objectively, subjectively, qualitatively or quantitatively. It can be described using general or mathematical terms such as frequency or probability. Issues to be considered include:

- Changes in policy and funding;
- Current and historic performance (severity and extent) of the asset;
- Severity of the environment, rate of deterioration and/or current age of the asset;
- Asset type, material type, mode of failure, extent of failure, etc;
- Exposure to incidents of all types;
- Vulnerability to climate change; and
- Quality of asset management approach and systems.

The likelihood of physical failure of an asset is related to the current condition of the asset, hence the importance of realistic and accurate condition assessment. The likelihood of natural and external events is determined less easily but scientific studies are usually available. The likelihood of other events, such as poor work practices or planning issues can be difficult to ascertain.

Consequence

Consequence is the outcome of an event, such as increased journey times, isolation of local communities or a drop in public perception of the service provided. It can have positive or negative effects and can be expressed qualitatively or quantitatively. The consequences associated with an event leading to failure or service reduction may include:

Safety – including fatalities and personal injuries;

Disruption – impact on journey times, economy and road users

Cost – increased costs due to bringing forward or delaying work, repair costs, fines or litigation costs and loss of income or income potential;

Environment – environmental impacts, such as air quality by pollution caused through traffic delay or contamination from spillages, the sensitivity of the route/area, climate change etc;

Reputation – public confidence in the delivery of the highway service

The table below illustrates the qualitative matrix approach which will be considered when evaluating risks in South Tyneside.

Likelihood of event occurring	Consequence of event occurring				
	Negligible	Low	Medium	High	Severe
Negligible	1	2	3	4	5
Very Low	2	4	6	8	10
Low	3	6	9	12	15
Medium	4	8	12	16	20
High	5	10	15	20	25
Key to Risk					
Low		Medium		High	

Figure 18

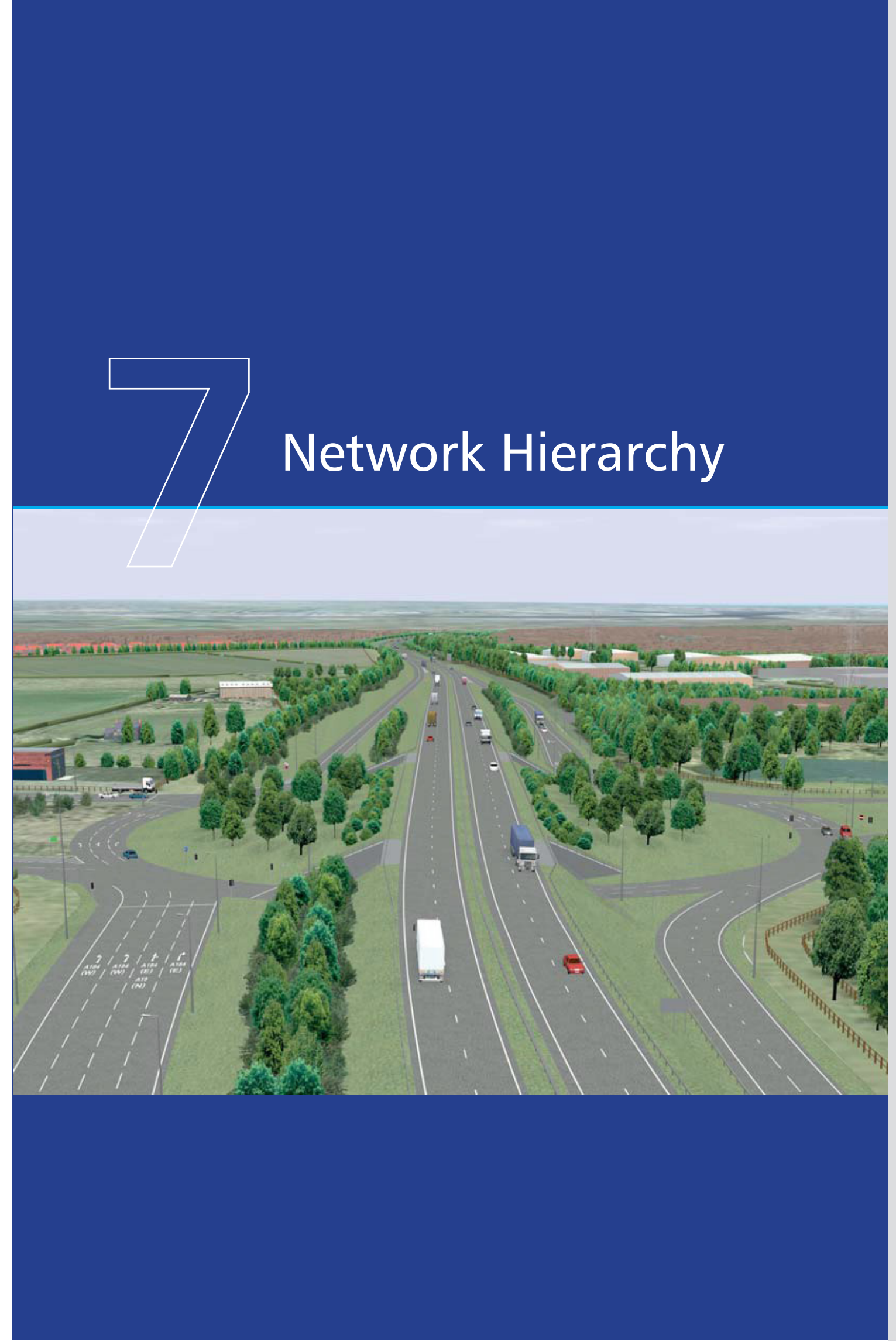
Managing the risks

The issuing of the revised Codes of Practice, Well-managed Highways in October 2016, dictates that all highway authorities should adopt a risk management approach to managing their highway infrastructure assets.

Risks and their management will be documented in the 'Highway Management Plan'. This is currently being developed in line with the Department for Transport's deadline date for delivery of the risk based approach to managing infrastructure assets of September 2018. The 'Highway Management Plan' will be available via the website once completed.

Document owner

This owner responsible for the content, updating and annual review of this document is the relevant head of service for asset management. The outcome and findings from the annual review will be reported in the HAMP Annual Information Report.



7. Network Hierarchy

A network hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy. It is important that the hierarchy adopted reflects the needs, priorities and actual use of each road in the network. These may be determined by importance, (i.e. a route leading to a major hospital), environmental, (i.e. rural, urban, busy shopping streets etc.), or non-vehicular traffic factors (i.e. pedestrian usage). Footway priorities may sometimes conflict with carriageway priorities and as a consequence it is necessary to have separate carriageway and footway hierarchies (see 2.2 and 2.5). For clarity we have limited the number of defined hierarchies for both roads and footways to the number of inspection frequencies.

The following tables have been developed by South Tyneside Council in line with the recommendations of Well Managed Highway Infrastructure 2016 (WmHi).

Maintenance hierarchy	Category	Characteristics	Frequency
C1	Strategic Local Highway Route	Routes to provide strategic links to the wider region with little frontage access or pedestrian traffic.	12 Times per year driven
C2	Main Distributor	Key arterial routes serving major employment and residential areas within the borough.	12 Times per year driven
C3	Secondary Distributor and Link Roads	Urban routes carrying bus, HGV and local traffic with front access and frequent junctions. All remaining through routes which have not been classified as strategic or main distributor.	12 Times per year driven
C4	Estate and minor roads linking to secondary distributor	Roads which do not fall into the above categories will be captured in this maintenance hierarchy. These are primarily residential roads	Yearly walked

Figure 19

It should be noted that the routine programmed inspections have been realigned to correspond with events held in the borough.

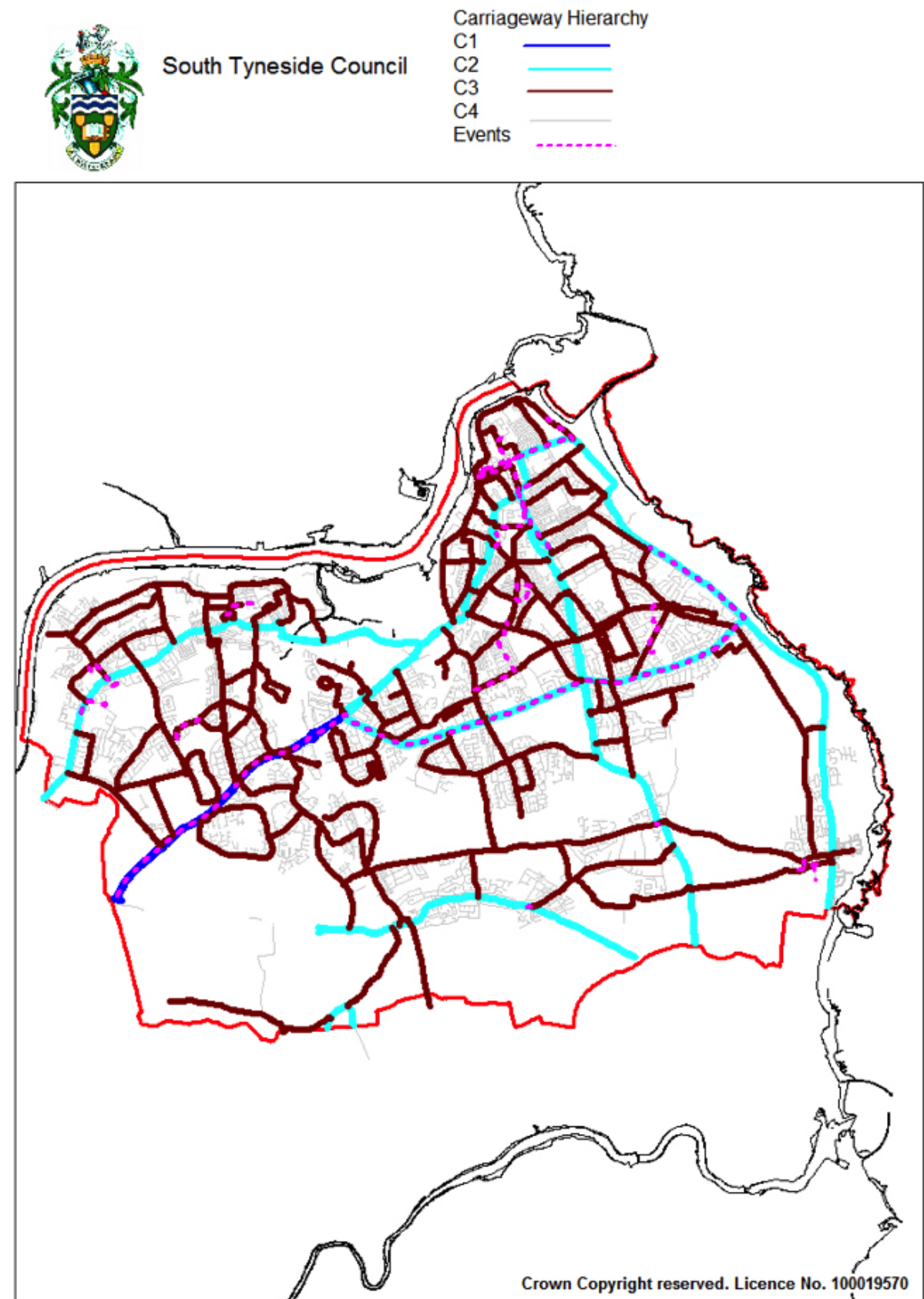


Figure 20

Footway Hierarchy

Footway maintenance hierarchy, as with carriageway hierarchy, will not necessarily be determined by road classification but by usage. Local factors such as the proximity of schools or other establishments attracting higher than normal numbers of pedestrians to the area, are taken into account. The four maintenance categories for footways are described in the table below, which include South Tyneside street names for clarity:

Maintenance hierarchy	Category	Characteristics	Frequency
F1	Strategic Local Highway Route	Busy or very busy urban shopping areas and main pedestrian routes. e.g. Major shopping areas such as King Street, The Nook etc.	12 Times per year driven
F2	Secondary Walking Routes	Medium usage routes through local areas feeding directly into prestige and primary routes Local shopping centres etc. (generally over 10 shops) and larger amenities Routes leading to schools with over 500 pupils.	4 times per year
F3	Link Footways	Linking local access footways generally feeding into secondary walking routes. Generally less than 10 shops and/or local amenities. Routes leading to schools with less than 500 pupils.	2 times per year
F4	Local Access and Minor Footways	Footways associated with low usage, estate roads to the main routes. May include isolated shops and amenities They are generally residential / estate roads.	Yearly

Figure 21

It should be noted that any of the above maintenance hierarchies may be subject to seasonal or special events i.e. access to football stadiums, national sporting events and may require additional ad hoc inspections.

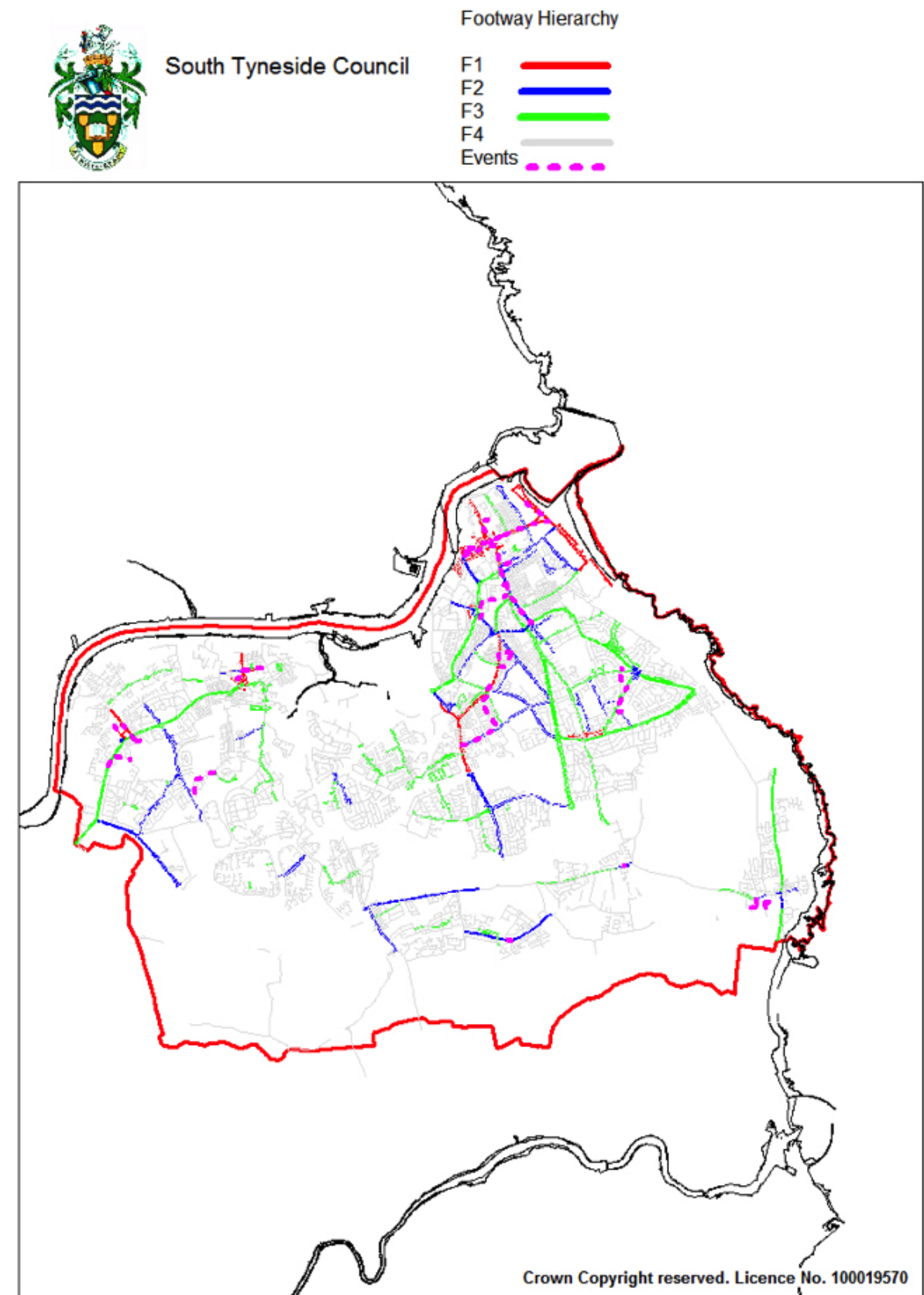


Figure 22



Resilient Network



8. Resilient Network

Back ground information

A review was commissioned by the Secretary of State for Transport in response to the extreme weather during the winter of 2013/14. It was conducted by a panel of experts and sought evidence across the transport community.

It was an independent study of all modes of transport and their ability to function in a wide range of extreme weather events. The results were published in the Transport Resilience Review 2014.

A recommendation of the review was that a Resilient Network should be identified. This also ties into Recommendation 2 of the Well Managed Highways Infrastructure Code of Practice 2016 due to be implemented in October 2018.

A resilient network is such that priority should be given through maintenance and other measures to maintain economic activity and access to key services during extreme weather.

Development of the Resilient Network

As part of the Code of Practice works, South Tyneside Council has undertaken a review of its network including its key, major and primary route networks to develop a new carriageway hierarchy.

A draft resilient network was identified and this was shared with various internal departments and external organisations such as the Traffic Manager, the Resilience Officer and local bus companies. The draft was reviewed incorporating their feedback.

We have shared the resilient network with our neighbouring authorities and are in the process of finalising a resilient network for Tyne and Wear.

South Tyneside's resilient network will be available to view on our website. It is our intention to carry out an annual review and we welcome feedback from our stakeholders and partners.

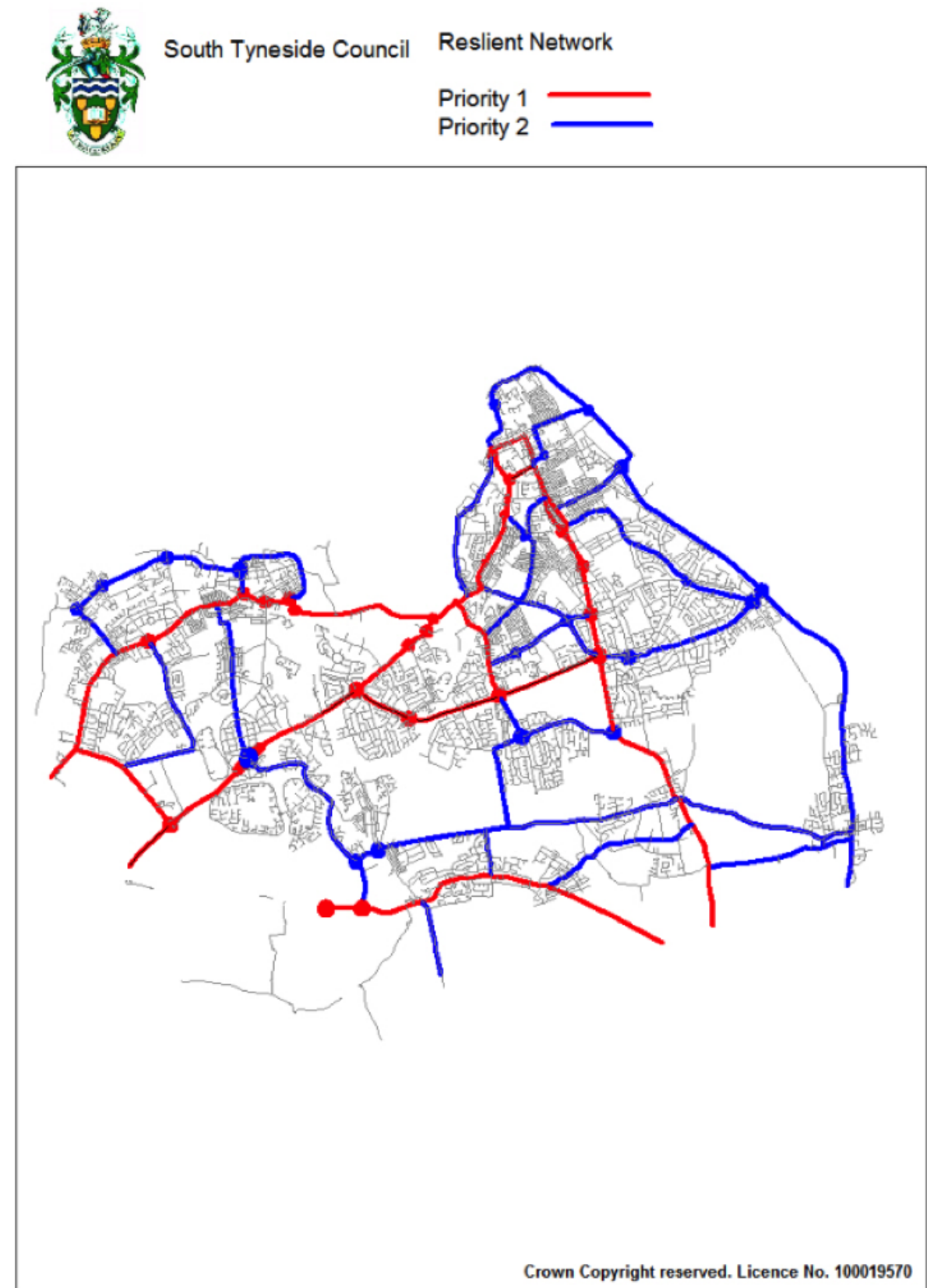


Figure 23

Critical Infrastructure

Critical infrastructure is considered to be those assets where failure would result in significant impact to the local and potentially the national economy.

They form a crucial part of the highway network and may include assets such as bridges and tunnels. There are many potential risks and threats to the function of critical infrastructure such as climate change, including impacts from flooding, rising temperature, changing sea levels, high winds and drought.

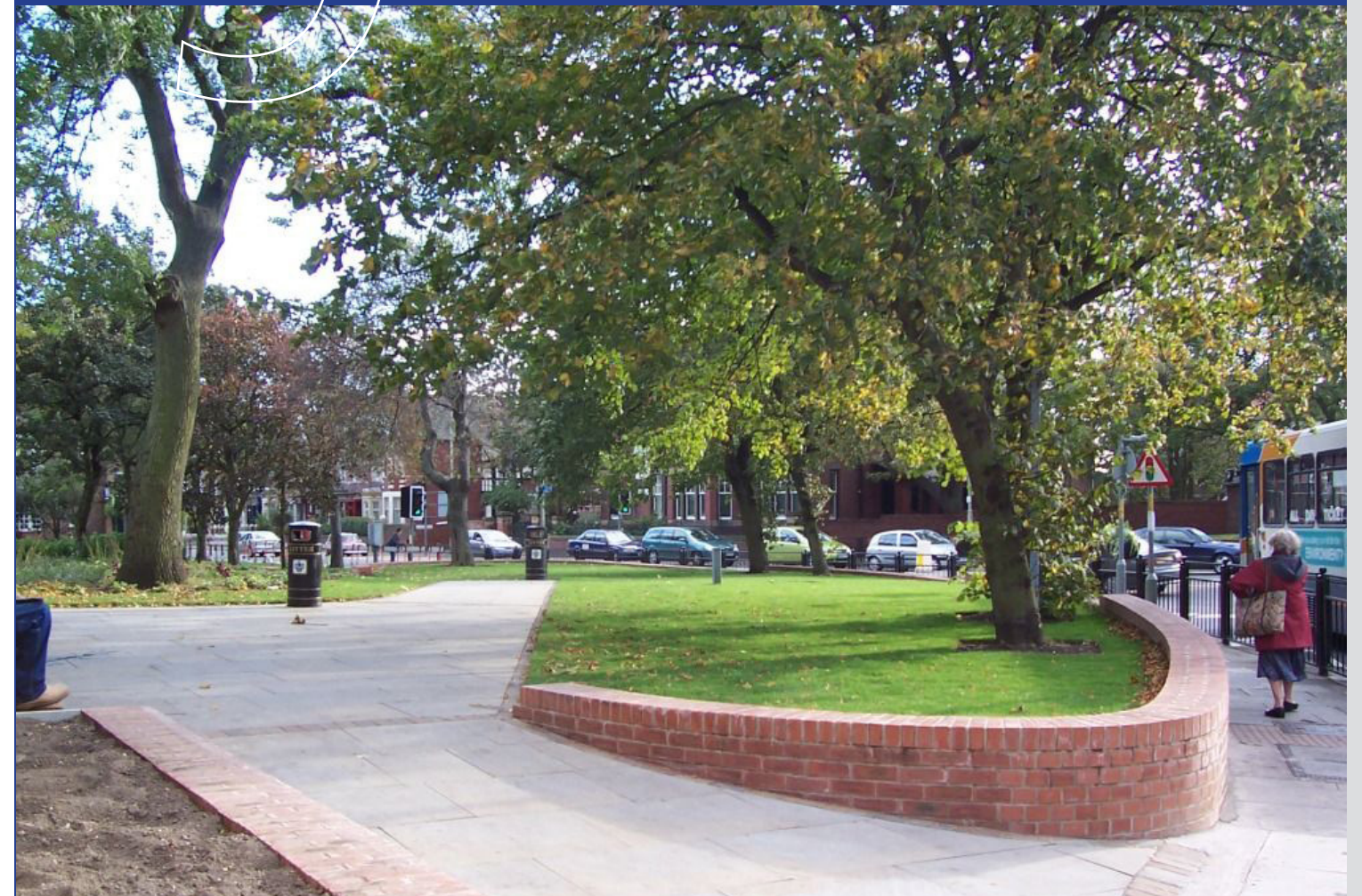
The council should ensure that there is adequate management of the critical asset, including appropriate investment to ensure that the assets are sufficiently resilient to cope with potential threats.

South Tyneside Council has identified the critical infrastructure on its network and has considered its position within its individual asset group. It has been considered appropriate to treat them in a different way to non-critical assets and to elevate the critical infrastructure to a higher category and/or deal with them in isolation.

Details of the critical infrastructure are included within the HAMP.



Levels of Service



9. Levels of Service

Our level of services are mindful of the code of practice (CoP) and Well-managed Highway Infrastructure guidance to enable the needs of our customers to be met, our statutory requirements to be delivered and our maintenance hierarchy to meet the economic requirements of South Tyneside.

Key Principle	Aim	Performance Measure
Safety	We will endeavour to ensure we provide a safe highway network.	Third party claims repudiation rate
		Completion of Highway Safety Inspections
		Response to CAT E and CAT 1 safety defects
Serviceability	Ensure availability.	NHT Public Satisfaction Survey
	Achieve integrity	Condition surveys
	Maintain reliability	NHT Public Satisfaction Survey
	Improve / enhance condition	Programmed maintenance
Sustainability	Minimise whole life costs	Lifecycle plans
	Minimise Environmental impact	Ensure compliance with ISO 14001 Environmental Management within supply chain
	Maximise community value	To deliver best value in the management of our highway assets
Accessibility	To minimise congestion of our highway network and provide accessibility to all our customers.	NHT Public Satisfaction Survey
Customer Service	We will endeavour to communicate and inform our customers on how we manage our highway assets.	Corporate feedbacks Contractor satisfaction surveys

Figure 24

10 Service Standards



10. Service Standards

Highways Asset Management is intended to enable better decision making by providing robust technical data from surveys and assessing this against the needs and aspirations of customers.

The service standards are derived from condition surveys and engineering analysis.

This information can be used to:

- Monitor the overall condition of the asset
- Monitor the asset's year on year performance
- Compare progress against previous years

South Tyneside undertakes a combination of walked and driven inspections. The information gathered is processed by Horizons and this is translated into a plan detailing the current condition of the asset. Details are included in the tables below.

Footway

Colour Code	Condition	UKPMS description
Green	Good	As new
Yellow	Early Life	Aesthetically impaired
Orange	Mid Life	Functionally impaired
Red	Late Life	Structurally unsound

Figure 25

Carriageway

Colour Code	Condition	UKPMS description
Green	Good	Generally good
Orange	Mid Life	Plan investigation
Red	Late Life	Plan maintenance

Figure 26

The setting of service standards is required to:

- Support planned maintenance
- Achieve a reduction in maintenance backlogs
- Reduction in year on year investment required to deal with natural annual deterioration of the asset
- Make best available use of resources
- Ensure transparency and accountability

We will consider the options open to us and consult with stakeholders, so that we can clearly demonstrate the costs and benefits associated with each option and steer the right course between aspiration and affordability.

11 Competencies



11. Competencies

To ensure our officers are competent in the principles and practices of asset management, the Council has developed a professional competency framework. This document identifies and provides competences expected of a prescribed role.

The Incentive Fund, introduced by the Department for Transport, requires a competency framework to be developed to attain level 3 – maximum funding for South Tyneside.

Additionally, the codes of practice (Well-managed Highway Infrastructure document, recommendation 15) states that appropriate competencies should be identified for asset management and where necessary training provided.

To ensure appropriate level of competence, the training and development needs of all officers will be established and reviewed annually, including health and safety and appropriate vocational qualifications. We will endeavour to provide training where appropriate.

We believe that by developing and enhancing our officers, this will assist in the implementation and delivery of asset management practices to manage all our highway infrastructure assets.

The approach and content of the competencies framework has been developed through joint working with our neighbouring authorities. This joint approach is intended to ensure a consistent approach.

For more information about South Tyneside Council:

 www.southtyneside.gov.uk

 0191 427 1717

If you know someone who needs this information in a different format, for example large print, Braille or a different language, please call Marketing and Communications on 0191 424 7385.



South Tyneside Council