

HIGHWAY MAINTENANCE PLAN



Highways Management



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1.0 Introduction

Torbay has a network of 522.5 kilometers of highway. However, the revenue and capital budget for highway maintenance work in the 2007/08 financial year was only £2,389,500 which is substantially less than in recent years. In actual fact, this amount correlates to the minimum figure needed to arrest deterioration and does not give the opportunity to show an overall improvement in the condition of a highway. Despite this, the current Local Transport Plan (LTP2) set targeted condition improvements based on an expectation that 'indicative funding' would allow an investment into restoring areas of the network. The funding provided by the Department for Transport did not materialize and therefore Torbay is in danger of underachieving on published targets in this area. In addition, the highway network is vital to the people of Torbay as it is used in everyday life both by the public and businesses. The importance of the network is highlighted by the disruption to daily life caused when extremes of weather affect its smooth operation or brought into focus when essential, sometimes non highway, long term maintenance works create a great deal of adverse publicity to the Council.

To ensure that the network functions efficiently throughout the year, highway maintenance is undertaken on the various components of the highway which include carriageways, footways, verges, drainage systems, structures, lighting, signs and road markings. There is increasing pressure on those managing highway maintenance as they attempt to mitigate the effects of damage caused by increased traffic flows, heavier and larger vehicles and expanded operations by public utilities. These difficulties being compounded as budgets are decreasing in real terms.

In July 2005 an updated national Code of Practice for Maintenance Management was published titled 'Well maintained Highways'.

An extract from this document states: 'The highway network is a most highly valued physical asset, both in financial and community terms, for which public authorities are responsible. Effective stewardship and asset management is crucially important both to users and the community'.

The recommendations of the Code have been considered in the updating of Torbay's previous Highway Maintenance Plan that was published in 2002. This revised document will be a key part of the proposed Transport Asset Management Plan that is being developed as a strategy upon which Torbay Council's version of the Code can be further developed.

This Highway Maintenance Plan, which has been developed and updated in accordance with the principles of the Code and adapted for local circumstances, forms the Council's policy for the delivery of the highway maintenance service. Importantly, the Plan not only specifies the standards of the service to be expected, but also identifies where future developments of the service are required to meet the full recommendations of the Code. Clearly, there will be additional costs to implement such development but this will have to be matched to future funding levels. This Plan, therefore, will be reviewed on a regular basis to update proposed developments in the service, and to establish the level of delivery within the available budget.

Foreword from the Portfolio Holder

I am very pleased to be able to introduce Torbay Council's latest Highway Maintenance Plan which sets out our strategies, policies and practices aimed at maintaining an efficient and effective network. The document is a substantial update of the original 2002 version and partially reflects the changes Highway Engineers have been obliged to adopt in managing the network whilst struggling with tight budgets and lack of investment in this most important of all assets to the community.

It also gives details of the framework within which Highway Maintenance is carried out and as such is an invaluable working document for use by elected members and officers of the Council.

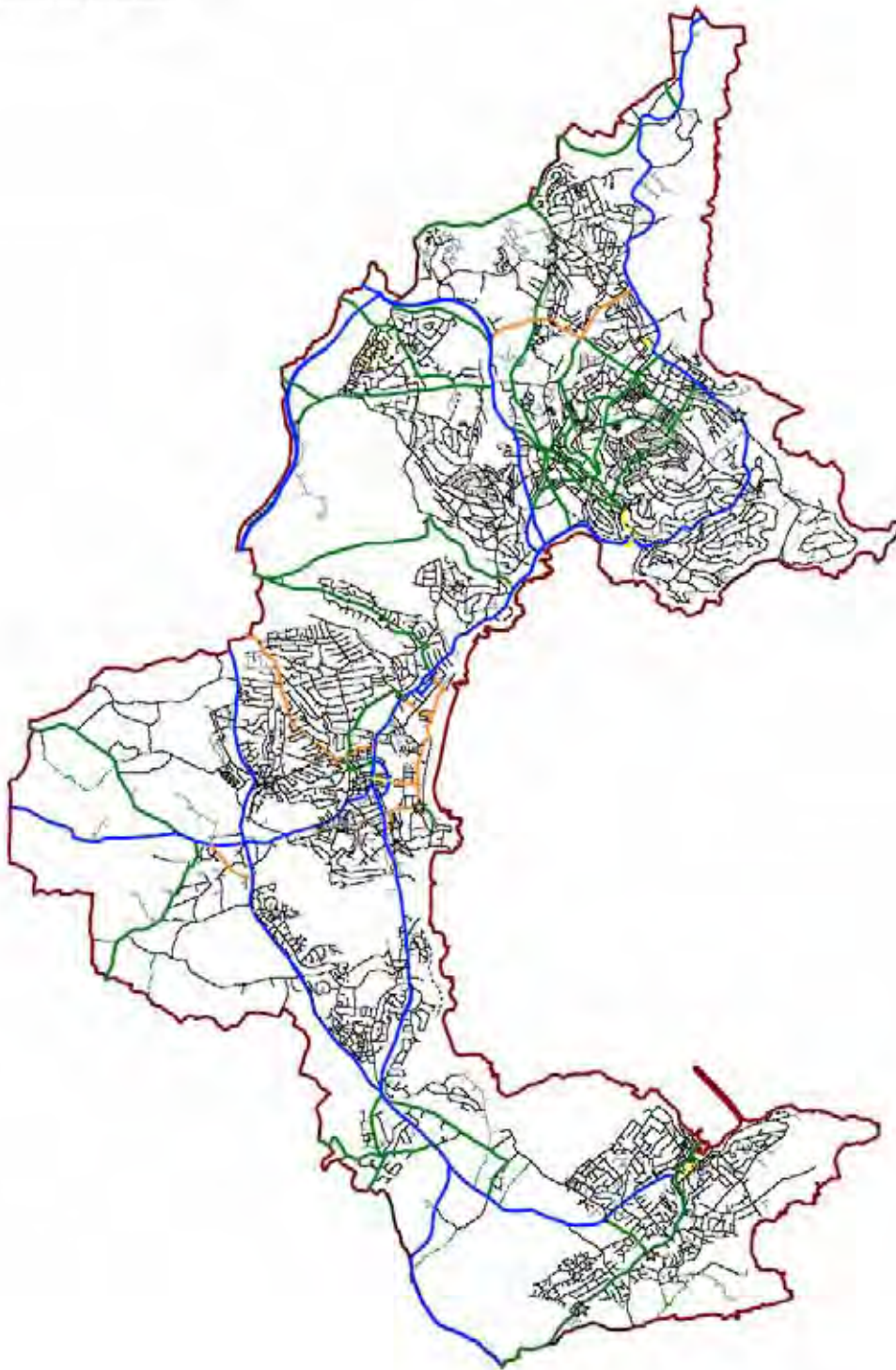
Torbay's highway assets, which are used by all residents, businesses and visitors to the area, provide a vital contribution to the economic health of the community and reflect the quality of the environment. Ensuring the ongoing safety of all users of this network is a very high priority for this council.

I am sure that the information included will aid decision making in this complex area so that the interests and needs of the community are best served and the highway service is at the highest possible level.






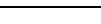


Councillor Chris Lewis, Portfolio Holder.

Fig 1 Torbay's Highway Network



Key

	'A' class roads	
	'B' class roads	
	'C' class roads	
	Unclassified roads	
	Private roads	
	Green Lanes	

2.0 The Code of Practice for Maintenance Management

2.1 Objectives of the Code of Practice

In July 2005 "Well maintained Highways: A Code of Practice for Maintenance Management " (the Code) was published. This superseded the previous version of the code which was considered and adopted by Torbay Council, with local variations in November 2002.

The purpose of the revised Code of Practice is to encourage best practice in highway maintenance, with emphasis on the principles of asset management and the new statutory duty of network management. The previous code was firmly based on encouraging the use of sound management systems and defining minimum standards for maintenance practice within, what was then, a relatively stable procurement regime. This is now evolving through asset management into a more holistic stewardship of the highway, embracing both its operational role and its wider contribution to the community.

The new code recognises the need for local flexibility implied by the need to focus on the needs of users and the community. It encourages authorities to respond enthusiastically and creatively to the challenges posed by sustainability and the need for continuous improvement.

The objectives of the code are:

- To encourage the development, adoption and regular review of policies for highway maintenance, consistent with the wider principles of integrated transport, sustainability and Best Value.
- To encourage a focus on the needs of users and the community, and their active involvement in the development and review of policies, priorities and programmes.
- To encourage harmonisation of highway maintenance practice and standards where this is consistent with users expectations, whilst retaining reasonable diversity consistent with local choice.
- To encourage the adoption of an efficient and consistent approach in the collection, processing and recording of highway inventory, highway condition and status information for the purpose of both local and national needs assessment, management and performance monitoring.
- To encourage the adoption and regular review of a risk management regime in the determination of local technical and operational standards, rectification of defects arising from safety and serviceability inspections and investment priorities.

In addition two new objectives have been included

- To encourage the adoption of asset management planning as a means of demonstrating value for money in the delivery of highway maintenance;
- To encourage continuing innovation in the procurement of highway maintenance contracts, whilst complying with high standards of corporate governance.

The code has been used as the benchmark against which to develop and review local highway maintenance policy and, where necessary, to identify the nature and extent of local variations.

2.2 Context for this Code of Practice

Suggested recommendations of the code are explicitly not mandatory on authorities. The key principle of Best Value requires authorities to involve users in the design and delivery of services but also implies that authorities should have reasonable discretion to respond to such involvement.

In addition to this, authorities also have certain legal obligations with which they must comply, and which will, on occasion, be the subject of claims or legal action by those seeking to establish noncompliance by authorities. It is recognised that in such cases, the Code of Practice may be a relevant consideration. It is therefore essential that where authorities elect, in the light of local circumstances, to adopt policies, procedures or standards differing from those suggested by the code, these are identified together with the reasoning for such differences. This is particularly important in the light of recent instances of the use of corporate manslaughter charges in highway maintenance cases and the government's proposals to strengthen legislation in this area.

Authorities now have a statutory duty for network management requiring them to achieve, so far as may be reasonably practicable, having regard to their other obligations, policies and objectives, the expeditious movement of traffic on their road network. This includes enhanced powers of coordination, regulation and direction for all road and street works including those by their own authority. Although this duty is not specifically dealt with in this plan, highway maintenance will need to facilitate and support the authority in its network management role.

The Code is also based upon the principle that highway maintenance should be managed in accordance with the principles of best value and continuous improvement, as an important component of a more broadly based Highways Asset Management Plan (HAMP). The term TAMP has been used in the guidance to take account of wider assets related to the transport system (such as depots and bus facilities) owned by transport authorities, in addition to the highway network. For the purpose of this Plan, TAMP will be used throughout although initially the highway considerations and the condition of the infrastructure will form the basis for a developing plan.

Bearing in mind the established legal obligations referred to above, the code recognises that authorities should already have adopted reasonably consistent and well defined approaches in addressing the safety objective. Practice in addressing the issues of serviceability and sustainability, where statutory obligations are less well defined, is more variable and the code reflects this, but suggests that practice is reviewed and refined locally in the light of individual circumstances including user involvement.

Finally the code is based upon the assumption that available funding for highway maintenance will provide some flexibility for authorities to pursue a regime of assessment and rational planning of programmes and priorities. However where this is not the case statutory obligations for network safety will need to take precedence.

2.3 Publication, Adoption and Incorporation of Highway Maintenance Policy and Strategy

This Highway Maintenance Plan, together with the Highway Safety Inspections Code of Practice 2005 and the soon to follow initial version of the Transport Asset Management Plan, together will provide the basis for the standard of maintenance and inspection on Torbay's road network.

Statements made in LTP2 are still relevant but at the time of writing are not achievable. The Council will need to decide whether or not to pursue such aspirations or to remain at a standstill level, pending further investment nationally into the highway network.

Principles, policies, priorities and programmes for highway maintenance should be formally approved and adopted by authorities after consultation, published and incorporated into the Highway Asset Management Plan, the approval and adoption process should involve the authority's Executive and be explicit, transparent and inclusive.



3.0 Legal Framework

3.1 Duty of Care for Highway Maintenance

Much of highway maintenance activity is based upon statutory powers and duties contained in legislation and precedents developed over time, as a result of claims and legal proceedings.

The issue of risk management has grown in importance since the 2001 edition of the Code, both in assessing the implications of investment decisions for asset management purposes and also in determining appropriate responses to highway deficiencies. It is crucially important that all those involved in highway maintenance, including Members of authorities, have a clear understanding of their powers and duties, their implications, and the procedures used to manage and mitigate risk. Even in the absence of specific duties and powers, authorities have a general duty of care to users and the community to maintain the highway in a condition fit for its purpose. This principle should be applied to all decisions affecting policy, priority, programming and implementation of highway maintenance works.

3.2 The Management of Risk

The management of highway maintenance, including the establishment of regimes for inspection, setting standards for condition, determining priorities and programmes for effective asset management, and procuring the service should all be undertaken against a clear and comprehensive understanding and assessment of the risks and consequences involved.

The most commonly understood risks affecting the service relate to the safety of the network and accident, injury or health risks to users and employees. The principles and practice involved in managing these crucially important risks are dealt with in detail by the Code of Practice and have been developed in this Highway Maintenance Plan.

There are however a wide range of other risks relating to the other two key objectives of highway maintenance, serviceability and sustainability. These risks include:

- Asset loss or damage
- Service failure or reduction
- Operational
- Environmental
- Financial
- Contractual
- Reputation

3.3 Health and Safety

The importance of health and safety has been heightened since the 2001 edition of the Code. In addition to The Health and Safety at Work Act 1974, The Management of Health and Safety at Work Regulations 1992 and Construction (Design and Management) Regulations 1994, which require authorities to carry out work in a safe manner and establish arrangements for the management of construction works, the Government has brought forward new legislation to make it easier to prosecute charges for corporate manslaughter. There have been a number of examples of the use of corporate manslaughter charges in cases involving highway maintenance and this is causing understandable concern.

All employees, elected members, contractors and agents for the authority involved in the procurement or delivery of highway maintenance services should understand the extent, nature and policy background of the authority's legal liabilities and risks for highway maintenance. It is strongly recommended that authorities adopt the principles and policies in the various codes of practice and the asset valuation guidance. Any variations in policies and practice from those in the codes should be derived following a risk assessment. In all cases, the approval and adoption process should involve the authority's Executive and be explicit, transparent and inclusive.

3.4 Powers and Duties for Highway Maintenance

In addition to a general Duty of Care, there are a number of specific pieces of legislation which provide the basis for powers and duties relating to Highway Maintenance. The main legislation is given below.

The Highways Act 1980, sets out the main duties of highway authorities in England and Wales. In particular Section 41 imposes a duty to maintain highways maintainable at public expense, and almost all claims against authorities relating to highway functions arise from the alleged breach of this Section. Section 58 provides for a defence against action relating to alleged failure to maintain on grounds that the authority has taken such care as in all the circumstances was reasonably required to secure that the part of the highway in question was not dangerous for traffic.

The Traffic Management Act 2004 introduces in England a number of provisions including:

- Highways Agency Traffic Officers;
- local authority duty for network management;
- permits for work on the highway;
- increased control of utility works;
- increased civil enforcement of traffic offences.

The most important feature of the Act is Section 16(1) which establishes a new duty for local traffic authorities 'to manage their road network' with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and the following objectives:

- securing the expeditious movement of traffic on the authority's road network;
- facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.

Section 31 of the Act specifically states that the term 'traffic' includes pedestrians, so the duty requires the authority to consider all highway users.

A most important issue for highway maintenance planning and programming is that authorities are expected to operate the Act evenhandedly, leading by example and applying conditions and enforcement activity equally to their own and utilities works.

The act changes significantly the provision of the New Roads and Street Works Act 1991 (NRSWA) but much of the guidance may still be valid.

A brief synopsis of the NRSWA provisions which remain valid being: -

1. Undertakers have a statutory right to install apparatus in the highway.
2. There is a requirement for highway authorities to coordinate the works in the highway and a requirement for utilities to cooperate in this respect.
3. The highway authority has a right to carry out inspections on all works entailed.

3.5 Related Powers and Duties

Powers contained in the Highways Act 1980, relating specifically to highway maintenance, sit within a much broader legislative framework specifying powers, duties and standards for the wider network management function. These include:

- Road Traffic Regulation Act 1984, and the Traffic Signs Regulations and General Directions 2002
- Road Traffic Act 1988 which provides a duty for highway authorities to promote road safety, including a requirement to undertake accident studies and take such measures as appear appropriate to prevent such accidents occurring. It also requires authorities, in constructing new roads, to take such measures as appear appropriate to reduce the possibilities of such accidents when the roads come into use
- Road Traffic Reduction Act 1997, an Act to require local authorities to prepare reports relating to the levels of road traffic in their areas; and for related purposes.
- The Local Authorities (Transport Charges) Regulations 1998, as applicable to RTRA 1984 and other legislation, provide a power for the traffic authority to impose a charge for a number of its functions
- The Transport Act 2000, under which a local traffic authority may designate any road as a quiet lane or a home zone. The Act also provides for the Secretary of State to review the operation of rural roads and consider whether (and if so how) the law should be amended to facilitate the introduction of rural road hierarchies.
- The Transport Act 2000 also introduces a power for authorities to charge Utilities for the occupation of road space during works.

The functions of the highway, street and traffic authority are required to comply with an increasing range of legislation regulating the environmental affects of their operations, including:

- Wildlife and Countryside Act 1981 provides a framework of legislation relating to environmental and countryside issues with which highway maintenance operations must comply
- The Environmental Protection Act 1990 provides the statutory basis for other environmental issues, in particular waste management, with which highway maintenance operations must comply. It also deals with the requirement to keep the highway clear of litter and refuse, which for local roads is not a duty for the highway authority
- The Noxious Weeds Act 1959 places a responsibility on the highway authority to take action to inhibit the growth and spread of injurious weeds growing within the highway. Weed spraying operations are also regulated by the Environment Agency and also by the Health and Safety Commission Code of Practice
- Rights of Way Act 1990, an Act to amend the law relating to rights of way and the disturbance and restoration of the surface of land over which rights of way pass; to keep the line of rights of way clear of crops; to enable local authorities to act in connection therewith; and for connected purposes.
- Countryside and Rights of Way Act 2000, which introduced a new duty for authorities to prepare Rights of Way Improvement Plans (ROWIPs) involving assessments of needs, opportunities and accessibility of local rights of way.
- Railways and Transport Safety Act 2003, an Act to make provision about railways, including tramways; to make provision about transport safety; and for connected purposes.

- Clean Neighbourhoods and Environment Act 2005, an Act to make provision for the gating of certain minor highways; to make provision in relation to vehicles parked on roads that are exposed for sale or being repaired; to make provision in relation to abandoned vehicles and the removal and disposal of vehicles; to make provision relating to litter and refuse, graffiti, fly-posting and the display of advertisements; to make provision relating to the transportation, collection, disposal and management of waste; to make provision relating to the control of dogs and to amend the law relating to stray dogs; to make provision in relation to noise; to provide for the Commission for Architecture and the Built Environment and for the making of grants relating to the quality of the built environment; to amend the law relating to abandoned shopping and luggage trolleys; to amend the law relating to statutory nuisances; and for connected purposes.
- Ragwort Act 2003, an Act to amend the Weeds Act 1959 in relation to ragwort; and for connected purposes.

There is also a recent framework of legislation not specifically related to highways, street and traffic functions, but dealing with wider community issues with which the services are involved. These include:

- Disability Discrimination Act 1995 which requires employers and suppliers of goods and services to address discrimination against disabled people
- Criminal Justice and Public Order Act 1994, an Act to make further provision in relation to criminal justice (including employment in the prison service); to amend or extend the criminal law and powers for preventing crime and enforcing that law; to amend the Video Recordings Act 1984; and for purposes connected with those purposes.
- Human Rights Act 1998, an Act to give further effect to rights and freedoms guaranteed under the European Convention on Human Rights; to make provision with respect to holders of certain judicial offices who become judges of the European Court of Human Rights; and for connected purposes.
- Freedom of Information Act 2000, an Act to make provision for the disclosure of information held by public authorities or by persons providing services for them and to amend the Data Protection Act 1998 and the Public Records Act 1958; and for connected purposes.
- Data Protection Act 1998, an Act to make new provision for the regulation of the processing of information relating to individuals, including the obtaining, holding, use or disclosure of such information.
- Local Government Act 2000, an Act to make provision with respect to the functions and procedures of local authorities and provision with respect to local authority elections; to make provision with respect to grants and housing benefit in respect of certain welfare services; to amend section 29 of the Children Act 1989; and for connected purposes.
- Road Death Investigation Manual, which asserts that "The statement of investigation standard requires that all incidents will be treated as 'UNLAWFUL KILLINGS' until the contrary is proved". This often has the effect in necessitating lengthy road closures whilst gathering evidence.

3.6 Duty of Best Value

The Local Government Act 1999 provides for the general duty of Best Value. This is applied and developing slightly differently in the various parts of the UK towards a more comprehensive performance improvement regime. In England the main aspects are as follows:

- statutory basis Local Government Act 1999;
- evolved into Comprehensive Performance Assessment;
- statutory inspection by Audit Commission;
- flexible cycle of service reviews and inspections;
- defined statutory framework of National Indicators.

3.7 Gershon

Sir Peter Gershon was commissioned in 2003 by central government to undertake an independent review to assess how the public sector could exploit opportunities for efficiency savings, so that resources could be released for frontline public service delivery.

The resulting 2004 National Procurement Strategy and Efficiency review (Gershon) requires government at both national and local level to achieve compound efficiencies of 2.5% per annum. At least 50% of these savings must be cashable:

- 'Cashable' efficiency gains are where the same standard of service can be maintained but at a lower cost or with fewer resources.
- 'Noncashable' gains do not necessarily lead to lower costs, but lead to an improved standard of service for the resources used.

Gershon will have a significant impact on the service that we provide over the coming years and regular review of working practices and service delivery will be essential to this process.



4.0 Strategy and Hierarchy

4.1 Principles and Objectives of Highway Maintenance Strategy

Highway maintenance strategy should be based on a systematic logical approach in accordance with the principles of best value and continuous improvement, and should be an important component of a more broadly based Transport Asset Management Plan (TAMP). The focus of maintenance management should be primarily on the infrastructure itself and the focus of the TAMP primarily on the service provided by the infrastructure.

There is a fundamental relationship between this document (Highway Maintenance Plan) and the TAMP which effectively means that they sit side by side and feed directly into each other. Both documents require regular updating and are 'live' in that sense. In addition these documents feed into the Highway Management Business Plan and have offshoots including the Highway Safety Inspections Code of Practice and the Winter Service & Emergency Plan. This collection of documents produced and maintained by the Highways Group, also takes account of National Policy and Guidance such as the 'Ten Year Plan for Transport' and 'The Future of Transport' and in turn feeds into Council Corporate Plans such as the 'Community Plan' and the 'Local Transport Plan'.

However, maintenance strategy should be aimed at optimising the maintenance contribution to the service provided by the infrastructure. The principles of highway maintenance strategy should therefore be;

- to deliver the statutory obligations of the authority;
- to be responsive to the needs of users and the community;
- to contribute to effective highway asset management and maintain the asset value;

- to support effective delivery of the statutory network management duty;
- to support and add value to local transport objectives;
- to support and add value to wider corporate policy objectives.

These principles should underpin the following core objectives for the maintenance strategy:

Network Safety

complying with statutory obligations
Meeting users' needs for safety

Network Serviceability

Ensuring availability
Achieving integrity
Maintaining reliability
Enhancing condition

Network Sustainability

- Minimising cost over time
- Maximising value to the community
- Maximising environmental contribution

The new code of practice also introduces a new overall objective

- Customer service delivering satisfaction, providing effective consultation and communication, providing efficient enquiry and complaints management

This objective applies to the service as a whole as users may not be able to distinguish between maintenance, network management and improvement works.

These objectives together with risk management, needs based budgeting and competitive service delivery; provide the basis for highway maintenance strategy.

4.2 Public Expectation

As the length of the highway network, and the volume of traffic using it, has increased, so has public expectation of the level of service to be delivered.

The Best Value initiative formalised this expectation by identifying particular areas of activity against which Highway Authorities must publish target standards of service and the degree of success achieved in meeting these standards. This has served to heighten public expectation and increase awareness of the responsibilities of Highway Authorities. Torbay Council will seek to introduce several initiatives aimed to improve response to public concern, particularly in sensitive areas of operations, and to provide information on action being taken.

To assist us with understanding the requirements of our customers and their level of satisfaction with the existing highway maintenance service it is necessary to consult regularly with users of the highway network including residents of Torbay. The main tool for consultation adopted was the Viewpoint Panel with a questionnaire being prepared and issued to them during the later half of 2004. (Viewpoint 10). This exercise complemented a similar one undertaken in 2001 but future consultation is expected to be undertaken on behalf of a Benchmarking Club covering most authorities within the South West region and twenty other authorities nationally. This wider coverage will allow a greater range of comparisons with peer groups but also keep us in touch with the aspirations of residents of Torbay.



The above photograph shows a carriageway in sound condition, with low volumes of traffic present, no parking issues and tidy grass areas. This is what the public tell us they would like to see.

4.3 Enquiry System

The Highways & Engineering Division receives numerous enquiries from the public. Highway defects and similar enquiries are logged on a computer database 'Mayrise' and referred to the relevant section of the Division for attention. The alleged defect is inspected and considered and appropriate action determined based on a priority rating. Where appropriate the complainant is advised of the action taken. Progress in dealing with complaints is monitored and pursued to a conclusion. When the matter has been addressed the database is updated to record the action taken. On an annual basis the enquiries received will be analysed in order to identify trends in public concern and the speed of response to these enquiries. Currently in excess of 90% of reported defects are inspected within 24 hours but urgent reports are inspected sooner.

4.4 24 Hour Emergency Cover

The Council provides a 24 hour emergency contact service through the provision of a continually manned control centre located at the Contracting Division's depot facility at Aspen Way, Paignton. In respect of highway maintenance, the control centre co-ordinates weather related operations and provides an immediate and coordinated response to deal with hazards on the highway.

On receipt of a call reporting an emergency situation a call log is produced to record initial and any further action in respect of particular incidents. Depending on the nature of the incident the control centre staff will either contact the emergency services or forward the report to a member of the Highways Group for investigation and appropriate action. Non emergency defects are then logged onto the 'Mayrise' computer database and any required remedial work is assessed and issued in the normal manner, depending on the priority rating determined.

4.5 Roadworks Reports

Public frustration often stems from delays caused by roadworks. In order to provide the public with information on where disruption to journeys can be expected a weekly roadworks report is circulated to the Emergency Services, public transport providers, major motoring organisations, local radio, press and is also published on the Council's web site using a digital mapping interface.

The weekly roadworks report gives brief details of work being undertaken on all routes where traffic management is being employed. Additional publicity is provided where severe traffic delays are anticipated.



Things have moved on since this photograph of a streetscene in Edinburgh was taken, but motorists still dislike delays created by streetworks on behalf of statutory undertakers. The coordination of such works involves a large amount of the highway team's workload.

4.6 Components of Highway Maintenance Strategy

The foundations on which the Highway Maintenance Plan has been developed are:

- A detailed inventory of relevant components of the asset
- A defined hierarchy for all elements of the network
- A robust framework of levels of service linked to the core objectives of the Code.
- A robust framework of policies and objectives for the service

These are provided in Torbay by the provision of a number of management systems comprising of:

- Pavement Management System (PMS) and Routine Management System (RMS) (Mayrise) which are used for the management of Network Hierarchy, Highway Inventory, Road Condition Surveys, and Inspections. These are used for the provision of data for needs based budgeting and provision of Best Value Performance Indicators.
- Geographical Information System (GIS) (MapInfo) which is used for the management of map based data sets. Some of these data sets being collected and recorded on a module of the 'Mayrise' software suite.
- Robust accounting procedures which provides effective management of finance and procurement (FIMS).
- A framework of policies and objectives which are to be displayed on the departmental intranet and which will be further developed in light of the recommendations contained in the Code and this Highway Maintenance Plan



An example of a map showing the historic extent of the highway network. The information on these maps has long since been transferred to the council's digital mapping system but the originals still can be useful for reference purposes.

4.7 Strategy Coordination

The key principles of highway maintenance require that it should support the overall strategy for highway network management and integrated transport. In this context it should, for example, have regard to strategies for the promotion of walking, cycling and public transport use and seek to add value or advance these strategies where appropriate. Hence the need to maintain a comprehensive set of documents feeding into all strategic layers as discussed in 4.1 above.

4.8 Designing for Maintenance

Although much maintenance activity is undertaken on the existing highway infrastructure, new and improved highway schemes and features form an increasing proportion of the network over time. It is key to the delivery of Best Value therefore that the implications for future maintenance are a prime consideration in the design and implementation of such schemes. This is not to say that creativity, or the use of high quality expensive materials should be inhibited, for example, in heavily used centres they may be both appropriate and offer low maintenance. On the other hand it may also be more appropriate to use environmentally sensitive materials in certain locations despite the possibility of higher future maintenance costs. Careful consideration of maintenance implications at the design stage can provide an effective outcome, without increasing costs or introducing practical difficulties. As a matter of course any new schemes that are built partly on a public highway and which are valued in excess of £50,000 will be subjected to a 'maintenance audit'.

4.9 Highway Maintenance Management Systems

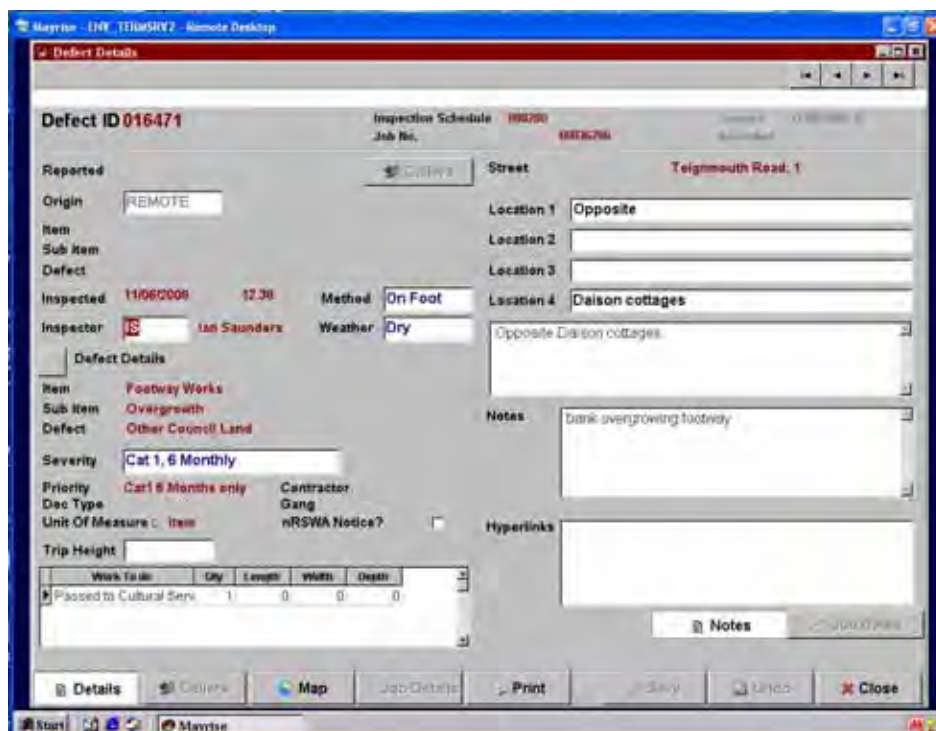
A number of specialist management systems and applications are utilised in the overall management of highway maintenance. These presently comprise of:

- SWM Street Works Manager (Mayrise)
- GIS Geographical Information System (MapInfo)
- PMS Pavement Management System (WDM PMS)
- RMS Routine Management System (Mayrise)
- AMS Accident Manager System (Accsmap)
- SMS Structures Manager (Atkins Database 2004)
- LMS Lighting Manager System (Mayrise)
- Traffic Database (Parkmap)

Although currently there is no overall maintenance management system, these, together with other specialist applications, provide the means to collate data and analytically model the needs and options to prioritise maintenance programmes and strategies.

Detailed limits of the highway network are primarily held on Torbay's GIS and are reproduced in the PMS for the analysis and storage of condition data. A limited inventory and highway condition database is currently held within the Council's PMS and this will be further developed as part of the highway asset management process.

The overall management system also includes specialist applications which are used for the analysis of technical data and specialist modelling procedures such as those used in the production of National Indicators (NI's) and previously Best Value Performance Indicators (BVPIs). As the changeover between these two sets of parameters is incomplete and the indicator set has been substantially reduced, some references to BVPIs may still remain in use throughout this document.



This is a sample screen from our 'Mayrise' highways management system

4.10 Network Inventory

A detailed highway inventory is an essential prerequisite of establishing a cost effective and adequate maintenance regime. An inventory survey was undertaken several years ago of the entire network but it is anticipated that further data collection will be required for certain highway features. This information will be held on a specialised computer database which will allow maintenance personnel convenient access to information on any aspect of the network. This will be of use when preparing budgets or letting contracts for maintenance work.

It is important that development of the computer system, and allocation of staff resources to this task, also continues if the potential benefits are to be fully realised.

The best inventory log that we currently have is reproduced below, but the collection of inventory data is continuing on an ongoing basis.

Highway Inventory

Road Classification	Road Type	Road Length	Record Date
A Class	Dual Carriageway, Rural	2.2km	Feb. 2009
A Class	Single Carriageway, Rural	5.7km	Feb. 2009
A Class	Dual Carriageway, Urban	5.0km	Feb. 2009
A Class	Single Carriageway, Urban	32.3km	Feb. 2009
B Class	Single Carriageway, Urban	8.4km	Feb. 2009
C Class	Single Carriageway, Rural	5.5km	Feb. 2009
C Class	Single Carriageway, Urban	44.4km	Feb. 2009
Unclassified	Single Carriageway, Rural	27.2km	Feb. 2009
Unclassified	Single Carriageway, Urban	391.8km	Feb. 2009
Unsurfaced Road		10km	Feb. 2009
Pedestrianised streets		1.4km	Feb. 2009
Footways		817km	Sep. 2009
Green Lanes		10km	Feb. 2009
Bridleways		2km	Feb. 2009
Dedicated Cycle Ways		0.7km	Feb. 2009
Public Footpaths		76.4km	Feb. 2009

Item Description	Quantity	Record Date
Adshel shelters	53No.	March 2000
Belisha beacons	63No.	Sept. 2000
Buddle Holes	152No.	Feb. 2008
Bus shelters	69No.	March 2000
Ditches cleaned	2,151m	Feb. 2008
Finger posts	68No.	Oct. 1996
Grass verges, rural	51,300m ²	Dec. 1996
Grass verges, urban	387,740m ²	Dec. 1996
Grit/salt bins	126No.	Sept. 2007
Gullies	21,893.	Feb. 2008
Highway bridges	36No.	Sept. 2000
Highway hedges	7,934m	May. 2008
Highway seats	542No.	Oct. 1996
Highway shrubbery	15,575m ²	Dec. 1996

Highway trees	6,150No.	Jan. 2007
Ice detection station	1No.	Aug. 2009
Illuminated bollards	545No.	Feb. 2009
Illuminated signs	1,661No.	Feb. 2009
Level crossings	2No.	Sept. 2000
Non-illuminated signs	8,231No.	Oct. 1996
Open channels cleaned	585m	Feb. 2000
Pelican crossings	17No.	Oct. 2008
Public shelters	3No.	March 2006
Puffin crossings	20No.	Oct. 2008
Red light violation sites	4No.	Sept. 2008
Refuge beacons	62No.	Feb. 2009
School flashing lights	95No.	Feb. 2009
Screens cleaned	19No.	Feb. 2007
Signal controlled junctions	53No.	Oct. 2008
Speed camera sites	5No.	Sept. 2007
Street lights	14,460No.	Feb. 2009
Street name plates	3,484No.	Oct. 1996
Variable message signs	22No.	Sept. 2007
Zebra crossings	27No.	April 2007

4.11 New Development

The road network is added to by new highway schemes and by new developments, which ultimately place increased demands on highway budgets.

New developments are carefully controlled and the highways element is specified in detail to ensure that the need for future maintenance is minimised and can be easily undertaken.

New developments are usually governed by agreements between the Council and developers under Section 38 or Section 278 of the Highways Act 1980.

Exceptionally, where a significant increase in the volume of heavy construction vehicles is generated by a development an agreement will be entered into under Section 59 of the Highways Act 1980. This will allow the Council to claim “extraordinary expenses” from the developer in respect of increased maintenance costs resulting from the additional heavy traffic.



4.12 Network Hierarchy

The concept of a road maintenance hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy. This hierarchy should reflect the needs, priorities and actual use of each road in the network and will be used as the main tool in determining policy priorities. Maintenance standards, targets and performance objectives will link to the hierarchy. It is also crucial to asset management in establishing levels of service and to the new statutory network management role for developing coordination and regulating occupation.

The Council has developed a process for defining the hierarchy for Carriageways, Footways and Cycleways in accordance with the Code of Practice. This has initially been based upon traffic flows for roads, and defined priorities for footways and cycleways. In addition, a further assessment has been undertaken to consider the type of road, the role of the route in a local context, and a consideration of functional factors that may influence how the road is managed.

The highway network in Torbay consists of 522.5km of highway maintainable at public expense. There is a distinct difference between those roads in the rural areas of the Borough and those in the urban areas, and in order to address the maintenance needs of each classification of road, the principle provided in Section 58 of the Highways Act is applied. This states that standards of maintenance should be "appropriate for a highway of that character and use by such traffic".

In practice this is achieved through the network hierarchy which identifies Priority Routes and sub-divides all classifications into urban and rural.

As a result, the current hierarchy is detailed in the following tables.

4.13 Carriageway Hierarchy

Category	Hierarchy Description	Type of Road General Description	Detailed Description
1	Motorway	N/A	N/A
2	Strategic Route	Principal 'A' roads between Primary Destinations.	Routes for fast moving through traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
3a	Main Distributor	Major Urban Network and Inter-Primary Links. Short – medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety
3b	Secondary Distributor	Classified Road (B and C class) and unclassified urban bus routes (>100 bus journeys daily) carrying local traffic with frontage access and frequent junctions	In rural areas these roads link the HGV generators to the Strategic and Main Distributor Network. In built up areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On street parking is generally unrestricted except for safety reasons

4a	Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions.	These roads link to the distributor roads. They are of varying width and not always capable of carrying two way traffic. In urban areas they are residential or industrial interconnecting roads with 30mph speed limits random pedestrian movements and uncontrolled parking
4b	Local Access Road	Roads serving limited numbers of properties carrying only access traffic	These roads provide access to individual properties and land. They are often only single lane width and unsuitable for HGV. In urban areas they are often residential loop roads or cul-de-sac
5	Track – Highway Authority Green Lane		Unmetaled track not serving properties.

4.14 Footway Hierarchy

Footways are considered separately from carriageways and a programme of reconstruction and resurfacing has been implemented to improve the overall condition of footways. There is a need for continued improvement and a footway hierarchy as locally modified from the Code of Practice for Maintenance Management is as follows.

Category No	Category Name	Brief Description
1	Primary Walking Route	Main shopping centres, heavily pedestrianised footways or pedestrian areas. Footways adjacent to hospitals, major tourist attractions or adjacent to facilities for the disabled.
2	Secondary Walking Route	Busy urban streets, other shopping areas or tourist attractions. Some conservational/environmental scheme areas not included in category 1. Areas adjacent to schools, colleges, libraries and other public service premises not included in category 1.
3	Link Footway	Residential areas, industrial areas or busy village/rural. Linking footways not included in category 1 and cycleways remote from carriageway.
4	Local Access Footway	Footways associated with low usage and little used rural.

5.0 Inspection, Assessment and Monitoring

5.1 Importance of Inspection, Assessment and Recording Regime

The establishment of an effective regime of inspection, assessment and monitoring is the most crucial component of an effective highway maintenance strategy, incorporating network safety and serviceability. An approved robust inspection regime also forms part of an authority's defence against third party liability claims.

The Inspection, assessment and recording regime should provide the basic information for addressing the key objectives of highway maintenance strategy:

- Network Safety
- Network Serviceability
- Network Sustainability

It will also provide the basic condition data for the development of programmes for maintenance as part of the Highway Asset Management Plan. All elements of the inspection and assessment regime should be applied systematically and consistently, in accordance with the principles of Quality Assurance. This is particularly important in the case of network safety, where information may be crucial in respect of legal proceedings. It is important to recognise, however, that all information recorded, even if not primarily intended for network safety purposes, may have consequential implications for safety and may therefore be relevant to legal proceedings. It is also important to recognise that, following the introduction of the Freedom of Information Act 2000, all records are potentially available for public inspection and reference.

The Council has developed an inspection regime which complies with the requirements of the code of practice and this is detailed in the Highway Inspection Manual 2004.



A highway inspector's van parked in the vicinity of a typical defect during a routine inspection visit.

5.2 Categories of Inspection

- Safety Inspections

The purpose of safety inspections is to identify defects likely to be hazardous or cause serious inconvenience to users of the highway network or the communities served, including defects requiring urgent attention. They are undertaken to meet the key objective of Network Safety. Recommended frequencies of inspection compared to the 2005 Code of Practice are as shown in the table below. Torbay Council has increased the frequency of the local access road inspections to be able to closely monitor the overall condition of these and to better be able to add them to planned works as required. In addition there are some minor agricultural lanes in the area which fall outside of the experience of normal highways and which are referred to in our maintenance hierarchy as 'Green Lanes' these are inspected at least annually but more typically if timing permits these also are treated to a six monthly cycle. In a similar manner the frequency of inspection of little used rural footways are usually incorporated into the six monthly inspection routes, to be able to keep on top of repairs to safety defects.

Carriageway – Driven Inspection			
Maintenance Category		Torbay Council Frequency	2005 COP Frequency
2	Strategic Routes	1 Month	1 Month
3a	Main Distributor	1 Month	1 Month
3b	Secondary Distributor	1 Month	1 Month
4a	Link Roads	3 Month	3 Month
4b	Local Access Roads	6 Month	Annual
5	Highway Authority Green Lanes	Annual	

Footway – Walked Inspection			
Footway Category		Torbay Council Frequency	2005 COP Frequency
1	Main shopping centres. Heavily pedestrianised footways Pedestrian Areas Adjacent to hospitals Adjacent to major tourist attractions Adjacent to facilities for the disabled	1 Month	1 Month
2	Busy urban. Other shopping areas. Other tourist attractions. Conservation/environmental scheme not included in category 1. Adjacent to schools, colleges, libraries and other public service premises not included in category 1	3 Month	3 Month
3	Residential areas. Industrial areas. Busy village/rural. Linking footways not included in category 1. Cycleways remote from carriageway.	6 Month	6 Month
4	Little used rural.	6 Month	Annual

- Service Inspections

Service inspections comprise a more detailed inspection which could be tailored to identify issues that may have an effect on the reliability, quality, comfort and ease of use of the road network. The service inspection is intended to meet the key objective of Network Serviceability. These are not conducted on any regular planned basis but are demand led in accordance with the findings of the safety inspection regime and in reaction to excessive reactive works costs at a location. Typically these inspections will occur annually as an aid to finally identifying schemes.

- Condition Assessment

The purpose of condition assessment is to address the key objective of Network Sustainability and to ensure that value for money is achieved when undertaking structural maintenance work. This requires information on the nature and severity of deterioration in order to determine the timing and nature of the most appropriate treatment. To achieve this road condition surveys are undertaken which include:

- Visual inspections

- Detailed Visual Inspection (DVI)

- Coarse Visual Inspection (CVI)

- Skidding surveys

- Sideways Force Coefficient Routine Investigation Machine (SCRIM)

- Pendulum or Griptester

- Structural surveys

- Deflectograph

- Surface Condition Assessment for the National Network of Roads (SCANNER)

Data from the service, specialist and condition surveys is input into the Pavement Management System and is used to identify and prioritise maintenance works.



The vehicles illustrated above are all used on our highway network by our contractor WDM, who generate and provide the datasets used in our UKPMS software package.

5.3 Defect Definitions

The defect definitions that follow are all related to defects which require action to be taken, but the time scale of the works will be dependent upon the category of the footway / carriageway being inspected. These definitions will be subject to review as experience and procedures change in the light of development of these working documents.

Areas of the highway requiring repair will currently be considered for action dependent upon two main criteria: -

- The frequency of inspection being undertaken
- The dimension of the type of defect being considered.

For highways inspected on a 1 month or 3 monthly basis, defects identified at or above the appropriate intervention level will be issued as 'Urgent' and will require some action to be taken, be it immediate, temporary or permanent work within a 24 hour period. The adopted method of working in fact means that a maximum of 32 hours may elapse (although 24 hours will be the mean repair time) between the inspection of the safety defect and completion of temporary or permanent repair. Defects not at or above the intervention level but, in the estimation of the inspector, the area is likely to become dangerous between the date of the current inspection and the date of the next cyclic Highway Inspection, works will be issued as Category 2. These works will be issued within 1 working day of the inspection, for completion by the contractor within 28 days of the issue of the instruction.

Defects at or above the intervention identified on routes that are inspected on a 6 monthly basis will be issued as Cat 1 Six Month within 1 working day of the inspection, with repairs being completed within 28 days of the issue of the instruction. Where the inspector feels that there is immediate danger, through the risk assessment of the defect, action can be taken in accordance with the higher frequency category of inspection, as stated above.

Programmed Works refers to areas where the defect is not likely to exceed the appropriate intervention level before the next cyclic inspection but in the estimation of the inspector, the area is in need of general maintenance. Works will be entered into the Maintenance Management system and retained for comparison with the results of other management surveys in deciding where to allocate funding for major planned footway renewal programmes. This will in general, be undertaken on an annual basis.

Immediate works will be required in exceptional circumstances where it would take too long to arrange a permanent / interim repair and the danger to the public is such that the inspector feels it unacceptable to wait. These will require Chapter 8 equipment to be imported to site to protect the affected area whilst longer term repairs / action is arranged and will be issued as 'Emergency'.

Areas identified for repair on Highway Authority Green Lanes will be issued to Operational Services for repair within 28 days. Where the existing surface of such a lane is un-metalled, the repairs will be affected with appropriate unbound materials.

6.0 Condition Standards and Investigatory Levels

6.1 Relevance of Condition Standards & Investigatory Levels

As indicated in Section 5, each aspect of the maintenance regime needs to be founded on the key objectives of:

- Network Safety complying with statutory obligations
Meeting users needs
- Network Serviceability ensuring availability
Achieving integrity
Maintaining reliability
Enhancing quality
- Network Sustainability minimising cost over time
Maximising value to the community
Maximising environmental contribution

The new code of practice also introduces a new overall objective of;

- Customer service, delivering satisfaction, providing effective consultation and communication providing efficient enquiry and complaints management

This objective applies to the service as a whole as users may not be able to distinguish between maintenance, network management and improvement works.

Each element of the highway network will contribute differently to the objective of customer satisfaction and possibly within different timescales. For example good surface condition or signing will have an immediate positive effect whilst the effect of good quality drainage will probably be imperceptible for most of the time. Generally the level of customer satisfaction is more relevant when applied to the whole of the network and is therefore not dealt with by this maintenance plan under each of the individual elements.

Every aspect of highway maintenance for each element of the network has the potential to contribute towards the core objectives of safety, serviceability and sustainability. For example the contribution to the safety objective of the carriageway surface is affected by;

- The actual condition of the surface
- The response time for reacting to inspections and user concerns
- The quality of management and service delivery
- The effectiveness of the materials and treatments used.

In addition to this each objective can be affected to a different extent by several different highway maintenance operations. For example:

- Network availability can be affected by winter maintenance operations, NRSWA regulatory activity, deficiency of drainage systems and by careful planning of maintenance schemes in general;
- Network integrity can be assisted by consistent, joined up and effective temporary

signing, by ensuring consistent standards of maintenance on cycle routes between segregated and non-segregated sections, and providing consistent accessibility standards, for example through the use of dropped kerbs on key pedestrian routes especially those used by disabled people, older people, or those using prams

- Environmental contributions can be made through verge management plans, reducing sign clutter, use of recycled products or the provision of noise reducing surfacing.
- Heritage contributions can be made through careful selection of materials and the preservation and enhancement of particular elements or features of the highway.

There are several types of maintenance that contribute to the core objectives and by intervening at the optimum time, with for example, a low cost surface dressing treatment, expensive reconstruction work can be substantially delayed. A discussion of the various descriptive types of maintenance levels is as follows:-

- **Reactive maintenance**

Reactive maintenance is undertaken in response to inspections, complaints or emergencies. The action taken may vary depending upon the nature of the defect.

1. All assets sign and barrier off making it safe for safety purpose
2. All assets provide initial temporary repair for safety purposes
3. All assets provide permanent repair for safety purposes

Routine maintenance

Routine maintenance is that maintenance which is carried out on a regular basis such as gully emptying, grass cutting and rural maintenance. It also includes minor works which are carried out in response to user complaints and as a result of inspections and includes;

1. Carriageways footways and cycleways – minor works and patching
2. Drainage systems – cleansing and repair
3. Embankments and cuttings – stability
4. Landscaped areas and trees – management
5. Verges – grass cutting
6. Fences and barriers – tensioning and repair
7. Traffic signs and bollards – cleansing and repair
8. Lighting installations – cleansing and repair
9. Bridges and structures – cleansing and minor works
10. Road markings - renewal

- **Programmed maintenance**

Programmed maintenance consists of works which form part of a yearly or longer programme and primarily consist of;

1. Carriageways – preventative works, resurfacing or reconstruction
2. Footways & Cycleways– preventative works, resurfacing or reconstruction
3. Street lighting renewals
4. Sign replacements

This section of the Maintenance Plan therefore defines the condition standards for each element of the network, which are considered necessary to meet the requirements for safety, serviceability and sustainability.

6.2 Types of Standard or Investigatory Level

This plan addresses the operational standards relating to asset condition (safety, serviceability, sustainability) for the following elements of the highway;

- Carriageway
- Footways
- Cycle routes
- Drainage systems
- Embankments and cuttings
- Landscaped areas and trees
- Fences and barriers
- Traffic signs and bollards
- Road markings and studs
- Street lighting
- Bus stops

In addition to these elements the code of practice also refers to the following standards

- Regulatory functions
- User and community response
- Public rights of way

These standards along with the operational standards for structures (Code of Practice for the Management of Highway Structures) and traffic signals, street lighting pedestrian and cycle crossings.

Each element of the network could have different standards of condition, a minimum one to satisfy requirements for safety, and higher ones, designed to meet local requirements for serviceability or sustainability. These higher standards are referred to as "investigatory levels", as failure to reach the defined standard in most cases could give rise to a range of responses, each of which needs to be further investigated prior to action being taken. There will be certain circumstances, of course, primarily for safety reasons, where an immediate response, i.e. reactive maintenance, is necessary.

The Code of Practice also recommends that operational standards should be set for inspection frequency and the nature and timing of response. These standards are contained within the Highway Inspection Manual 2004. However, where practice varies due to insufficient funding being available, this is stated in the Highway Maintenance Plan. Where this is the case the additional requirements to meet the condition standard and sustaining it have been stated.

6.3 Treatment options

As part of the wider asset management plan it is recognised that each element of the highway asset will have a variety of lifecycle options taking the asset through from creation to disposal. Furthermore, within the lifecycle of the asset there are also a variety of treatment options which will provide for short, medium and long term maintenance of the asset. These treatment options will form an integral part of the process for identifying and prioritising treatments as part of the asset management process. The treatment options chosen will have an impact on both achieving the core objectives of safety, serviceability and sustainability and maintaining or improving the asset value.

This plan identifies the treatment options that should be considered for each element of the highway asset. It does not however deal with lifecycle planning or scheme prioritisation as this will be considered within the Highway Asset Management Plan

6.4 Condition of Carriageways

The condition of the carriageway fabric can contribute to the key objectives as follows:

Safety

- Nature, extent and location of surface defects
- Nature and extent of edge defects
- Nature and extent of surface skidding resistance

Serviceability

- Nature and extent of surface defects
- Ride quality of the surface

Sustainability

- Surface noise attenuation characteristics
- Nature and extent of surface defects
- Nature and extent of pavement defects

The condition of the network is assessed on a regular basis through a systematic regime of technical surveys. A variety of different techniques are used, and the particular type of survey employed depends upon the classification of the road. Unclassified roads are subjected to visual inspections whilst more sophisticated techniques are used on strategic routes. However, in more recent years the reliance on SCANNER surveys in order to produce national Best Value Performance Indicators (BVPIs) or more latterly National Indicators (NIs) and Local Indicators (LIs) has resulted in a scarcity of design data or information concerning the residual life of carriageways. In order to address this shortage it was decided to re-introduce the deflectograph surveys on selected routes and to use the information produced in asset management terms. The data collected in a typical year represents 20% of the flexible principal road network, meaning that a 5 year cycle would result for total coverage.



A good example of a failing carriageway in the Hookhills area.
Probably created by its extensive usage by public service vehicles.

There are essentially three types of maintenance operations associated with carriageways these being: -

- Reactive
- Routine
- Programmed

These are discussed below: -

Reactive Maintenance

The carriageway surface should be maintained in a safe condition in relation to its use.

Reactive maintenance of the carriageway includes those operations required to maintain the road surface in a safe condition and are undertaken on all roads. Typical operations include signing/making safe of defects, temporary and permanent repairs.

Currently safety inspections are being carried out in accordance with the Highway Safety Inspection regime. Urgent category defects on roads are completed within 36 hrs. Other defects not identified via the Highway Safety Inspection but reported by third parties are entered into 'Mayrise' and inspected within 3 days; non emergency work will then take place within 28 days.

Condition standard currently met within available budget – Safety repairs are inspected and issued within target timescales. Budget provision for these works is adequate for purposes.

Routine Maintenance

The carriageway surface should be maintained in a serviceable condition in relation to its use.

Routine maintenance of the carriageway includes those operations required to maintain the road surface in a serviceable condition and is undertaken on all roads. Typical operations

include minor works and patching.

Currently service inspections are being carried out in accordance with the Highway Inspection Manual, however only those defects above the intervention level are recorded. Limited information is recorded on the maintenance requirements for carriageways therefore the routine maintenance backlog cannot be consistently identified and therefore accurately calculated.

Areas identified for treatment are prioritised within the available budget, however, due to the limitations on funding a backlog of routine maintenance requirements currently exists. This leads to an increase in reactive maintenance.

Condition desired standard NOT currently met within available budget – Although BVPI targets for principal and classified non principal roads meet our own targets and are showing a sustained rate of condition improvement, the budget provision means that local roads are experiencing a deteriorating trend. As a result it is not always possible to carry out intervention works or preventative maintenance to the level that would be desired. This means that there is a gap in treatments between surface dressing and slurry seal measures and the need to undertake expensive reconstruction and resurfacing works.

Programmed Maintenance

The carriageway structure should be maintained in a manner and condition which promotes the sustainability of the network.

Programmed maintenance of the carriageway includes those operations required to maintain the sustainability of the road structure. Typical operations include major works, resurfacing, surface dressing or reconstruction.

Areas for treatment are prioritised within available budget and in accordance with best value principles; these works are measurable as NI (National Indicators) or LI (Local Indicators) and may influence future funding levels. However due to the limitations on funding a backlog of programmed maintenance requirements currently exists. This typically leads to an increase in reactive maintenance.

Condition standard NOT currently met within available budget – A similar situation to that reported for Routine Maintenance exists here. Local roads often have deteriorated beyond the point where preventative routine measures are possible whilst the budget available for programmed works limits us to concentrating on the roads with the highest level of usage and to meet Department for Transport BVPI's.

The table below reflects the statements above whereby the principal and classified non principal roads (categories 2, 3a and 3b) are treated within the existing budgets. Whereas the Local roads (categories 4b and 5), do not have sufficient funding available given current expenditure levels.

x Maintenance Levels Currently Regularly Achieved

	Maintenance Heirarchy					
	2	3a	3b	4a	4b	5
Reactive	x	x	x	x	x	x
Routine	x	x	x	x		
Programmed	x	x	x			



An extreme example of an abandoned carriageway that is now classified as a Green Lane (category 5)

The following table gives a list of different maintenance treatments that are available to us and endeavours to divide these treatments into their appropriate time frame classifications. The short term reactive work being in the main the treating of defects identified from safety inspections, with the medium term work being termed as preventative maintenance and the final long term category consisting of the more expensive work that is when a carriageway structure has reached the end of its useful life and is no longer cost effective to continually repair. The ideal situation occurs where an appropriately timed medium term measure will negate the need to resort to early long term intervention treatments. However, in an ideal situation a road surface would not be expected to remain in use for more than 25 to 30 years but recently published national statistics show that some surfacing remains for more than twice as long before resurfacing eventually takes place. This is where the need to adhere to the principles associated with the sister document to this Highway Maintenance Plan which is being developed in house as Torbay's Transport Asset Management Plan can prove that the maximum benefit is being derived from the available maintenance funds.

- Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Minor Works Minor Patching	Category 1&2 defects Major Patching Major works Surface Dressing Slurry Seal Haunching	Planned Works Resurfacing Reconstruction Major Improvements

The table below suggests ways to possibly better record the condition trends associated with a perceived lack of maintenance investment in the highway infrastructure. Although we currently operate an efficient 'Pavement Management System' which was required in part to validate National Government Performance Indicator targets, we are obliged to purchase the relatively expensive survey data to feed into this system and as a result have in the main concentrated this data on parts of the network that we are legally obliged to report on. In line with most other highway authorities nationally, the fact that funding income was partially dependant on the BVPI's that were reported for higher classification roads, the local unclassified roads have probably suffered more from a relative lack of investment. We now need to identify and prioritise future expenditure to identify and reduce any maintenance backlogs, whilst still ensuring that appropriate preventative maintenance in other areas does not decline.

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made. This is ongoing as part of the Gershon initiative but is unlikely to produce significant savings.
Routine	A more robust service inspection regime could be developed to consistently and accurately determine the routine maintenance backlog. The principles of this will be incorporated into the TAMP and inspection methods are being investigated.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog. Again the principles associated with this will be integrated into the TAMP
Programmed	As with routine maintenance, a more robust service inspection regime could be developed to consistently and accurately determine the programmed maintenance backlog.
	Again as per routine maintenance above, prioritise and treat sites identified as deficient from inspections to eradicate backlog

6.5 Condition of Footways, Cycleways and Public Rights of way

The condition of footways, cycleways and public rights of way (PROW) can contribute to the key objectives as follows:

Safety	Nature, extent and location of surface and trip defects Nature and extent of kerb and edging defects
Serviceability	Nature and extent of surface defects Extent of encroachment and weed growth The slipperyness of the surface The quality of the surface Integrity of the network
Sustainability	Convenience and ease of use Nature, extent and location of surface defects Extent of damage by overrunning and parking

General

A footway is a paved facility for pedestrians, usually within the highway boundary. Footways include the walking surfaces of subways, underbridges, overbridges and pedestrian rights of way which are the responsibility of the Highway authority and which may occasionally fall outside the highway boundary. Public rights of way (PROW) are mainly footpaths or bridleways that are remote from the public highway and which mainly consist of non paved surface. PROWs are recorded on the 'Definitive Map' as set out in the 'Wildlife and Countryside Act 1981' which must be kept up to date and in addition to the requirements of the Highways Act 1980 they are subject to the 'Countryside and Rights of Way Act 2000'. Inspections are undertaken on an annual basis as recorded in the 'Maintenance Inspection Manual – For Rights of Way'. A cycle track is a paved facility available for persons with pedal cycles, with or without a right of way on foot, usually within the highway boundary. It is common for cycleways to be contiguous with either the carriageway or footway. Again there are essentially three types of maintenance operations associated as with carriageways these being: -

- Reactive
- Routine
- Programmed

These are discussed below: -

Reactive Maintenance

The footway surface and edging should be maintained in a safe condition in relation to its use

Reactive maintenance of the footway includes those operations required to maintain the feature in a safe condition and should be undertaken on footways of all maintenance hierarchy. Typical operations include signing / making safe, temporary and permanent repairs.

Currently safety inspections are being carried out in accordance with the Highway Safety Inspection and Rural/Cyclic Maintenance regime. Urgent category defects on rural roads are completed within 36 hrs. Other Category 1 defects not identified via the Highway Safety Inspection or Rural/Cyclic Maintenance regime are addressed via the Demand Maintenance regime.

Condition standard currently met within available budget – Safety repairs are inspected and

issued within target timescales. Budget provision for these works is adequate for purposes.

Routine Maintenance

The footway surface and edging should be maintained in a serviceable condition in relation to its use.

Routine maintenance of the footway includes those operations required to maintain the feature in a serviceable condition. Typical operations include minor works such as the application of a slurry seal surface and patching repairs.

Currently service inspections are being carried out in accordance with the Highway Inspection Manual, however only those defects above the intervention level are recorded. Limited information is recorded on the maintenance requirements for footways; therefore the routine maintenance backlog cannot be consistently identified and therefore accurately calculated.

Areas identified for treatment are prioritised within the available budget, however, due to the limitations on funding a backlog of routine maintenance requirements currently exists.

Condition standard NOT currently met within available budget – As the BVPI data required by the DfT only recorded 50% of the network consisting of categories 1 and 2. As a result there were no detailed inspections undertaken on the majority of footways which are in the residential areas and planned routine maintenance is not consistently recorded or identified.

Programmed Maintenance

The footway structure and kerbing should be maintained in a manner and condition which promotes the sustainability of the network.

Programmed maintenance of the footway includes those operations required to maintain a sustainable footway structure and should be undertaken on routes of all maintenance hierarchy. Typical operations include major works, resurfacing or reconstruction.

Currently service inspections are carried out in accordance with the Highway Inspection Manual, however only those defects above the intervention level are recorded. Limited information is recorded on the maintenance requirements for footways; therefore the routine maintenance backlog cannot be consistently identified and therefore accurately calculated.

Areas identified for treatment are prioritised within the available budget. However due to the limitations on funding a backlog of programmed maintenance requirements currently exists particularly on lower category footways. This backlog leads to an increase in reactive maintenance

Condition standard NOT currently met within available budget – This is mainly due to the lack of reliable data in order to be able to identify and prioritise such works. Although the essential safety inspections do show a reducing level in the number of claims made against the authority, it is realised that there are many footways present, of older forms of construction such as concrete or paving slabs awaiting funds for conversion to bituminous surfacing. The full extent of these is not recorded. It is apparent that there is a desire from members of the public to restore the visual amenity of many streets but this wish is largely ignored whilst there is a need to target funds on the higher used categories of footway.

The table below reflects the statements above. Footways in residential areas do not have sufficient funding available for anything other than reactive maintenance given current expenditure levels or a clear record of any backlog of works that may be required.

x Maintenance Levels Currently Regularly Achieved

Maintenance Heirarchy				
	1	2	3	4
Reactive	x	x	x	x
Routine	x	x		
Programmed	x	x		

The following table shows the relationship between the reactive/routine maintenance typically identified from safety inspections to the programmed preventative and long term resurfacing/reconstruction options. However, in addition to endeavouring to identify the optimum timing to apply any preventative treatments such as slurry seal, it is also necessary to identify and implement a planned longer term policy to replace many footway areas with traditional paving slabs with a bituminous surface throughout Torbay.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Minor Works Minor Patching	Category 1&2 defects Major Patching Major works Surface treatments/slurry seal	Planned Works Resurfacing Reconstruction Major improvements

The table below shows an idealized situation where an increased commitment to record better survey data could be used to identify and prioritise maintenance backlogs. It is accepted however, that the cost of collecting this data needs to be carefully balanced against the associated loss of funding available to physically carry out the works. Presently reliance is placed heavily on surveys being undertaken by specialist government approved inspectors carrying out surveys on areas that are required to be reported on in the production of BVPI's (or N.I's). The particular BVPI associated with footways is to be dropped from the proposed reduced National Indicator set which may then eventually give some leeway to better target such surveys to suit local requirements. However, presently it is necessary to continue to produce the original data for the purposes of reporting on the Local Transport Plan.



An example of a recently resurfaced footway in the Plainmoor area

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made. This is ongoing as part of the Gershon initiative but is unlikely to produce significant savings.
Routine	A more robust service inspection regime could be developed to consistently and accurately determine the routine maintenance backlog. To produce condition information for the type 3 and 4 roads to fully assess the requirements of preventative maintenance. The principles of this will be incorporated into the TAMP and inspection methods are being investigated.
	Additional network referencing required for lower category footways or increased coverage of detailed condition surveys.
Programmed	Prioritise and treat sites identified as deficient from inspections to eradicate backlog. Again the principles associated with this will be integrated into the TAMP
	As with routine maintenance, a more robust service inspection regime could be developed to consistently and accurately determine the programmed maintenance backlog.
	Again as per routine maintenance above, prioritise and treat sites identified as deficient from inspections to eradicate backlog

6.6 Condition of Highway Drainage

The condition of highway drainage can contribute to the key objectives as follows:

Safety	Accumulation of water on carriageways, footways and cycleways
Serviceability	Accumulation of water on carriageways, footways and cycleways
Sustainability	Polluted effluent from highway drainage affecting watercourses

Inadequate drainage of the highway structure will reduce effective life and increase maintenance liability

- **General**

Highway drainage elements fall into six main categories

- Grips, ditches and buddleholes, which may be obstructed by growth of vegetation, accumulation of silt and detritus or structural damage.
- Gullies, catchpits and interceptors, which may be affected by blockage, accumulation of silt and detritus, subsidence and structural damage
- Culverts under roads, which may be affected by blockage, subsidence or structural damage
- Other piped drainage which may be affected by blockages, subsidence or structural damage
- Sustainable urban drainage systems and oil interceptors which may require special maintenance attention for maximum effectiveness
- Surface boxes and ironwork for both drainage and non drainage applications which may be affected by subsidence or structural damage.

As well as their responsibility for highway drainage systems, authorities also have a responsibility to adjoining landowners with regard to flooding from the highway and should also work with others in the wider community to minimise the risk of flooding.

Ironware comprising covers, gratings, frames and boxes set in the carriageways, footways and cycle routes has the potential to compromise safety and serviceability and in certain cases to cause noise and disturbance to local residents. Many of these covers and boxes are the responsibility of statutory undertakers. Where defects exist with these covers the relevant utility should be advised of the location and nature of the defect. It may be necessary to issue a notice under section 81 of the New Roads and Street Works Act 1991

The treatment categories are as follows: -

Reactive Maintenance

Highway drainage shall be free of blockages to a severity which causes flooding of the carriageways, footways, cycleways or adjoining property

Problems such as flooding, where reactive maintenance of a drainage system is required, usually result from blockages or structural defects in the drainage system, which create an immediate hazard to the highway user, adjacent landowners or the structural integrity of the highway. However problems may also be caused by abnormally high groundwater and tidal water or by inadequacies in the non-highway drainage system.

There are a range of responses to these problems including the removal of blockages, temporary repair of the defect or where defects cannot be immediately rectified, making safe until a permanent repair can be affected.

If a problem is subsequently determined to be attributable to deficiencies in the infrastructure or the maintenance regime, given the nature of the weather conditions under which it occurred then action to permanently relieve the problem should be considered. If the event is attributable to a third party the matter should be taken up with them at the earliest opportunity.

The advantages of an accurate, location referenced inventory system for gullies and other drainage items is further highlighted by the problems which are often experienced when dealing with flooding. Such drainage items are often submerged and may be the cause of flooding. Their easy location will help to speed relief and reduce the extent of the hazard and any related interference with traffic flow, claims and complaints.

Currently safety inspections are being carried out in accordance with the Highway Safety Inspection regime recording defects above ground level.

Condition standard currently met within available budget and reactive works are undertaken at short notice based on the drainage priority action table at the end of this section.

Routine Maintenance

Highway drainage shall be structurally sound, free of blockages and able to facilitate free drainage of highway surface water

Routine maintenance includes cleansing operations such as gully emptying, jetting, ditching and minor structural repairs such as the replacement of short sections of pipe, rebuilding of chambers/gullies.

Service inspections are being undertaken in accordance with inspection manual; however only those above the intervention level and defects visible at ground level recorded. Limited information recorded on maintenance requirements therefore the routine maintenance backlog cannot be consistently identified and therefore accurately calculated.

Routine cleansing is currently undertaken on urban gullies as part of the gully cleansing regime and all gullies will be treated on at least an annual basis. Jetting of piped systems and cleansing of other drainage features is undertaken in response to reactive maintenance as required.

A detailed inventory is being collected for highway drainage features which may eventually lead to less reactive works being required with a subsequent increase in routine and planned works.

A robust condition standard is currently met within available budget. However, further inventory work is being coordinated to assist in identifying maintenance backlogs.

Programmed Maintenance

Highway drainage shall be maintained in a manner which promotes the sustainability of the network

Programmed maintenance of drainage systems includes major repairs, refurbishment and improvement of drainage systems.

Service inspections are undertaken in accordance with the Highway Safety Inspections Code of Practice recording defects above the intervention level. Limited information recorded on maintenance requirements therefore the programmed maintenance backlog cannot be consistently identified and therefore accurately calculated.

Specialist inspections are only routinely undertaken on gullies. However specialist inspections may be undertaken on localised sites in response to flooding/local concern. Due to the lack of specialist inspections many defects are not identified until major deterioration has occurred leading to an increase in the need for reactive maintenance due to flooding/structural defects. This also leads to an increased risk of claims for damage/injury and disruption to users.

Programmed maintenance is undertaken in response to local concern/flooding events and resulting specialist inspection. Due to prioritisation within the available budget a backlog of programmed maintenance exists leading to increased reactive maintenance and reduced efficiency of highway drainage.

There is a case for considering programming CCTV surveys of culverts to assist in inventory collection and to conduct inspections of all highway drainage soakaways as a matter of routine to fully identify backlogs of outstanding maintenance works.

Condition standard is NOT strictly met within available budget as most works are generally reactive in nature.

The table below reflects the above statements. Inventory collection and investigatory work on all levels of drainage is being carried out.

x Maintenance Levels Currently Regularly Achieved

		Maintenance Hierarchy					
		2	3a	3b	4a	4b	5
Reactive		x	x	x	x	x	x
Routine	Structural Repairs – all drainage	x	x	x	x	x	x
	Gully Cleansing	x	x	x	x	x	x
	Other Cleansing	x	x	x	x	x	
Programmed		x	x	x			

The following table indicates idealised treatments associated with highway drainage. The 'programmed' categories can only be fully implemented on completion of the inventory collection, but known problem areas are treated on an individual basis. See 'drainage priority rating' table at the end of this section.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Routine cleansing & jetting Minor works	Category 1&2 defects Refurbishment Partial upgrade/improvement	Planned Works Replacement New provision

The table below suggests how the treatment of highway drainage could be expanded on completion of the inventory collection.

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made
Routine	Undertake specific inventory collection of drainage features.
	A more robust service inspection regime should be developed to consistently and accurately determine the routine maintenance backlog
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog
Programmed	Develop a risk based programme of cleansing for all drainage features
	Undertake programmed specialist inspection regime to determine condition and integrity of drainage systems and to consistently and accurately calculate the programmed maintenance backlog.
	Develop specialist inspection regime for oil interceptors
	Develop specialist inspection regime for SUDS
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog



Flooding in Torquay's Fleet Street in August 2007

Drainage Priority Rating						
Highway Reason for Proposal Works	Maintenance Category					
	2	3a	3b	4a	4b	5
Flooding of Residential/Commercial Property.	1	1	1	1	1	1
Seepage of Water onto the carriageway liable to result in the formation of ice in the wheel tracks.	2	8	10	14	25	-
Flooding/Ponding on the carriageway presenting a hazard to road users.	2	3	4	6	7	-
Water crossing the carriageway on bends and gradients liable to cause aquaplaning.	2	8	10	22	25	-
To eliminate damage to the highway requiring immediate works i.e. severe scouring.	2	3	4	6	7	20
To eliminate damage to the highway requiring medium term works.	10	13	16	22	25	31
To eliminate damage to the highway requiring long term works.	18	23	28	38	43	53
Works in conjunction with major structural maintenance or surface dressing.	10	13	16	22	25	-
Drainage of construction at wet spots.	6	13	16	22	25	-
Flooding of land adjacent to the highway.	Separate justification must be made for schemes in this case.					

The table above shows priority ratings associated with differing types of drainage defects. We are obliged to prioritise most types of works in a similar fashion to make best use of the available funds.

6.7 Condition of Landscaped Areas & Trees

The condition of landscaped areas and trees can contribute to key objectives as follows:-

Safety	Obstruction to user visibility and legibility of traffic signs Falling branches from trees Leaf fall from trees causing slippery surface Root growth affecting surface regularity
Serviceability	Potential for service interruption Quality of user experience
Sustainability	Landscape conservation Mitigation of climate change effects Support for habitat and biodiversity Problems of root growth for surface, structure and highway drainage

It should be noted that trees and hedges adjacent to the highway are often the responsibility of adjoining landowners. In this case their cooperation should be sought in maintenance requirements and, if necessary, appropriate notices served under Section 154 of The Highways Act (1980), see section 6.7.3 below. Alternatively, and in appropriate cases only, the Authority's common law powers may be used to remove the immediate danger.

6.7.1 Grassed areas

Grass verges are an important part of the highway corridor. They provide valuable habitats, biodiversity and visual amenity. However not all verges adjacent to the highway are the responsibility of the highway authority. Many of the grass verges within the urban areas are the responsibility of the landowners. Landscaped areas are also included within grassed areas.

- Highway grass verges are split into two categories, urban and rural, depending on location.
- Rural verges are cut twice a year, late spring and late summer. Immediately following cutting the nominal height shall be 100mm.
- Urban verges are cut in general up to 5 times a year depending on growing conditions. Immediately following cutting, the nominal height shall be 40mm.
- Additional grass cutting is undertaken at the discretion of the supervising officer.
- Grass cuttings are not collected or removed, but are left on the verge.
- Herbicides are not applied to grass verges.
- Other maintenance to verges, including edge trimming and top soiling and seeding are undertaken at the discretion of the supervising officer.

Highway grass verge cutting is currently undertaken by a private contractor and supervised by the Cultural Services Division of the Community Directorate.

6.7.2 Trees

Highway trees are inspected at regular intervals, and where necessary maintained by appropriate pruning to retain visibility for highway users, clearance above pavements and carriageways for pedestrians and vehicles, while adding to the amenity of the street or road in which they grow.

In urban areas, trees have a significant impact on the local environment, but can cause damage to highways and property if not properly managed. A proactive management programme including inspections by qualified arboricultural officers is handled by Torbay Councils Planning Development and Policy Department.

Highway trees are inspected during the growing season and the dormant season, to assess:

- The health and safety of the tree
- Any work that would be required to allow the tree to grow in a healthy and aesthetically pleasing way
- Any work needed to provide clearance for pedestrians and vehicles
- The need for removal of epicormic (sprout) growth

Tree works are carried out by contractors, on the Council's behalf, using British Standard BS 3998:1989 as a minimum standard.

Arboricultural advice will be taken on any requests received for works on highway trees but particularly felling. If that advice is that the tree shall be felled, (due to disease, unsuitability of location etc.) the adjacent landowner and the local Member will be informed prior to work being carried out. Replacement trees will be planted when finances permit.

6.7.3 Hedges

Torbay Council, as the Highway Authority, is responsible for maintaining approximately 6km of hedges. These hedges are within the public highway or other areas of land maintained by the Highway Authority.

Cutting and other work is undertaken to the hedges to maintain visibility and remove obstruction for highway users, health and safety of the hedge and retain environmental attractiveness.

All other hedges are the responsibility of the landowner to maintain. The Highway Authority has enforcement powers through the Highways Act 1980 where private hedges are impinging on the public highway.

Hedges which are the responsibility of the Highway Authority within Torbay are routinely trimmed twice per annum, initially in April and secondly in August/September of each year. Additional work would only be undertaken at the discretion of the Highway Authority to improve visibility, increase clearance above the highway or to remove obstruction.

Highway hedges are planned to be cut once a year during late summer. The side of the hedge facing the public highway is trimmed vertical to a height of 5m above the highway. Unless agreed otherwise the top of hedges are not cut.

Hedge/Tree Cutting Notices – Non Highway

In addition to maintaining highway trees and hedges it is often necessary to take measures to deal with problems created by privately owned vegetation. This is required to minimise danger or obstruction to pedestrians or vehicular traffic, to avoid obstruction or interference with view of drivers, including obstruction to street furniture and light from public lighting.

Landowners/occupiers are responsible for all trees, shrubs and hedges that are growing on private land and which are adjacent to or overhanging a public highway.

Specification

On receipt of a complaint or personal observation the owner/occupier of the land from which problems arise are advised of their responsibilities under Section 154 Highways Act, 1980.

Initially a letter is sent to the owner/occupier of the land requesting remedial work within 14 days.

At the end of this period, if necessary work is not carried out an enforcement notice is serviced under Section 154(3) Highways Act, 1980 requiring the work to be carried out within 14 days as directed.

Should the necessary works not be carried out or an appeal lodged then the works are carried out on behalf of the Highways Authority and the owner/occupier is subsequently billed. These costs are recoverable through the County Courts as a civil debt.

Highway trees/hedges/shrubs are dealt with either by the Parks or Arboriculture Department of the Council.

6.7.4 Weed Treatment

The Weeds Act (1959) and the Ragwort Act (2003) places a responsibility on authorities to take action to inhibit the growth and spread of injurious weeds growing within the highway. Ragwort is the only prescribed weed actively treated through routine maintenance. However, the Wildlife and Countryside Act 1981 also places a responsibility to deal with Japanese Knotweed. This latter noxious weed is becoming more of a problem throughout Torbay. In addition to the above, weed treatment is carried out on those weeds not covered by legislation but which if left untreated are unsightly and could create damage to the fabric of the highway.

Weed treatment is normally a routine activity and conducted in ward areas on an eight week cycle, but reactive maintenance may result where weed growth is deemed to be an immediate or imminent hazard. For instance Japanese Knotweed once established in the fabric of a footway, can create trip hazards in a relatively short time and can be expensive to treat if not tackled immediately.

Most treatment is conducted by the Street Cleansing Division of Direct Services and Waste.



The picture shows Japanese Knotweed affecting a footway.

6.8 Condition of Fences and Barriers

The condition of fences and barriers contributes to the key objectives as follows: -

Safety	Integrity and location of safety fencing for vehicles and pedestrians
Serviceability	Risk of livestock disrupting traffic
Sustainability	Appearance and condition of fencing

6.8.1 Vehicle Safety Fencing

Safety barriers are required to either mitigate the risk that a hazard may cause to the highway user or to protect an asset from being damaged.

The recommended treatment categories are as follows: -

Reactive Maintenance

Vehicle safety fences should be maintained in a sufficiently sound structural condition to serve their intended purpose.

The reactive maintenance of vehicle safety fences is usually in response to accident damage. Damaged sections of safety fences shall be treated as Urgent Category defects unless damage is clearly superficial with no loss of integrity of the fence or the barrier.

Currently safety inspections are being carried out as part of visual inspections conducted by Highway Inspectors. The identification of defects therefore are generated as a result of these visual inspections but more frequently as a result of reports of accidents by third parties.

As there are presently no planned regular inspections of vehicle safety fences, inventory data is being updated. Once this is integrated into the TAMP an inspection regime will be set up and the situation reviewed. However, the condition standard is generally met.

Routine Maintenance

Vehicle safety fences should be maintained in a structurally sound and effective condition.

Although not mandatory within the Code of Practice, routine maintenance of vehicle safety fences ideally will include those works required to maintain the structural integrity of the fence, including the checking of mounting heights and adjusting to correct torques.

Service inspections should then be carried out on tensioning bolts on at least a bi-yearly frequency. Inspections of mounting height and integrity should take place at least once every 5 years.

As reported above, the extent and details of Vehicle safety fences is not currently recorded. On completion of the inventory collection exercise the current maintenance practices should be revisited

Programmed Maintenance

Vehicle safety fences should be maintained in a structurally sound and effective condition. Vehicle safety fences shall be fit for purpose for their intended use.

Programmed maintenance will usually be required where the replacement of steel, concrete or timber elements are made necessary as a result of long term deterioration or where the fence is no longer fit for purpose. Programmed maintenance will usually be initiated from specialist inspections undertaken within routine maintenance.

It is suggested that once the amount locations and types of vehicle safety fences are recorded and input into the TAMP, programmed maintenance measures and inspections can be considered further.

The present lack of records on vehicle safety fencing is being remedied but in the short term we are undertaking reactive maintenance and relying on safety inspections to determine routine maintenance. Programmed maintenance is therefore limited to setting types of barrier in new build situations.

The table below reflects the above statements and shows the importance of the inventory collection exercise that is being conducted. Although, the reactive treatments associated with the high speed roads normally entail an element of service inspections, these are not planned events.

x Maintenance Levels Currently Regularly Achieved

	Maintenance Hierarchy					
	2	3a	3b	4a	4b	5
Reactive	x	x	x	x	x	x
Routine						
Programmed						

The table below shows the different treatments associated with reactive/routine and programmed options. The programmed areas will be developed further following the collection of the full inventory data.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects	Category 1&2 Defects Minor Repairs Tensioning	Replacement Removal

This table suggests areas of improvement to be able to eventually meet all of the condition standards that are desired.

Recommendations

Reactive	Survey and record all locations in Torbay where vehicle safety barriers are present.
	Develop risk based approach to urgent category safety fence repairs
Routine	A more robust specialist inspection regime should be developed following the inventory collection.
	Prioritise and treat sites identified as deficient from inspections.
Planned	A more robust specialist inspection regime should be developed.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.

6.8.2 Pedestrian Guardrails

Pedestrian guardrails are required to mitigate the risk to pedestrians from either vehicular traffic or other hazards.

The recommended treatment categories are as follows: -

Reactive Maintenance

Pedestrian guardrails should be maintained in a sufficiently sound structural condition to serve their intended purpose.

The reactive maintenance of vehicle safety fences is usually in response to accident damage. Damaged sections of pedestrian guardrails shall be treated as Urgent Category defects and made safe within 72 hours unless damage is clearly superficial with no loss of integrity of the fence or barrier.

Currently safety inspections are not being carried out on a planned basis but do form part of visual inspections conducted by Highway Inspectors. The identification of defects therefore relies on the visual inspections but more frequently as a result of reports of accidents by third parties.

Regular inspections of pedestrian guardrails take place as part of the routine safety inspections; inventory data is also being updated. Once this is integrated into the TAMP an inspection regime can be set up and the situation reviewed. However, the condition standard is generally met.

Routine Maintenance

Pedestrian guardrails should be maintained in a structurally sound and effective condition.

Routine maintenance of pedestrian guardrails may include cleaning or painting to maintain integrity.

Pedestrian guardrails will be included in part of visual inspections conducted routinely by Highway Inspectors. Maintenance works currently included as part of 'Contracts' works.

Regular inspections of pedestrian guardrails take place as part of the routine safety inspections. In addition third party reports on condition are logs. From records of these, painting programmes are generated and carried out annually on a priority basis.

Programmed Maintenance

Pedestrian guardrails should be maintained in a structurally sound and effective condition. Pedestrian guardrails shall be fit for purpose for their intended use.

Programmed maintenance will usually only be required where the replacement or removal of the fence is made necessary through long term deterioration or where the fence is no longer fit for purpose. Programmed maintenance will usually be initiated from inspections undertaken within routine maintenance.

This operation follows on from the routine maintenance operations where a length of railing may be determined to be in need of replacement.

The table below shows the different treatments associated with reactive/routine and programmed options. The programmed areas will be developed further following the collection of the full inventory data.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects	Category 1&2 Defects Minor Repairs Major repairs	Replacement Removal

6.9 Condition of Traffic Signs and Bollards

The condition of traffic signs can contribute to the key objectives as follows: -

Safety	Identification of risk to users Separation of potential traffic conflicts Viability of enforcement of regulatory orders
Serviceability	Contributes to ease of use Contributes to network integrity
Sustainability	Support of sustainable transport modes Contribution to local economy Heavy traffic routing can optimise maintenance

The primary objective is to keep all traffic signs legible, visible and effective as far as possible at all times in relation to the road use and traffic speeds. Routine maintenance procedures promote the continued effectiveness of the sign and monitor any deterioration in performance.

The presence of electrical equipment on highways relating primarily to road lighting, illuminated traffic signs and signals requires special attention to ensure the safety of users and the community. The failure of street lighting and illuminated signs and signals could have implications for the safety of users. Therefore there is a separate Code of Good Practice for Road Lighting Maintenance, published in 2004, which places it outside of the scope of this document.

Condition standards, inspection and maintenance requirements relating to the electrical elements of traffic signs and bollards are contained in the contract conditions administered by the street lighting section. Presently a full inventory collection of non illuminated signs is being carried out in order to determine future maintenance needs and to potentially remove any unnecessary sign clutter. This is ongoing and will feature in the TAMP.

The treatment categories are as follows: -

Reactive Maintenance

Traffic signs and posts should be maintained in a safe condition. Important warning and regulatory signs should be maintained in a sufficiently visible, legible and effective condition to serve their purpose.

The reactive maintenance of illuminated or non illuminated traffic signs and bollards is usually in response to accident or willful damage. The following defects in signs and bollards should be treated as Urgent Category defects;

Matters affecting the legality of important warning and regulatory signs.

Damage, deterioration, or vandalism to signs and bollards leaving either the sign or situation to which it applies in a dangerous condition.

Missing traffic cylinders across gaps in the central reserve fence at emergency crossing points.

The speed of permanent repair will depend on the degree of danger, but important warning or regulatory signs should be replaced as a matter of urgency.

Reactive maintenance of blockwork chevrons includes repairing accident damage or displaced blocks.

Currently sign obstructions and legibility are included as part of routine safety inspections and illuminated signs are also inspected by the contracted street lighting contractor.

Condition standard currently met within available budget – Safety repairs are inspected and issued within target timescales. Budget provision for these works is adequate for purposes.

Routine Maintenance

Traffic signs and posts should be structurally sound, legible, visible and effective at all times in relation to road speed and use.

Routine maintenance requirements of illuminated and non illuminated signs and bollards includes routine cleansing works and routine replacement due to deterioration and damage.

Obvious signing defects are recorded as part of the routine safety inspections or inspections conducted by the street lighting contractor on illuminated signs. Regular inspections of speed limit terminal signs at enforcement sites are undertaken separately. In addition some cleansing operations on non illuminated signs are carried out by the Torbay Lengthsman programme.

Due to the need for prioritisation of the available budgets a backlog of routine maintenance works exists particularly with regard to information signs. Accordingly there is a need to record and rationalise signs of this type as an ongoing commitment. This type of issue should be addressed fully when conducting inventory works associated with the TAMP.

A desired condition standard is NOT currently met within available budget. Further inventory work is being coordinated to assist in identifying backlogs.

Programmed Maintenance

Traffic signs and posts should be structurally sound, legible, visible and effective. Traffic signs should be fit for purpose in relation to the road use and traffic speeds.

Programmed maintenance requirements for illuminated and non illuminated signs and bollards includes replacement programmes following specialist inspections to determine degradation of colour, retro reflectivity and surface luminance. In addition works may be undertaken to maintain the integrity of the overall sign regime, e.g. removal of superfluous information signs and sign clutter in general. This exercise can only be conducted following the completion of recording the signing inventory associated with the asset management plan.

Once the amount locations and types of traffic signs are recorded and input into the TAMP, programmed maintenance measures and inspections can be considered further.

The table below shows the different treatments associated with reactive/routine and programmed options. The programmed areas will be developed further following the collection of the full inventory data.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Minor Repairs Replacement of mandatory/regulatory signs	Category 1&2 Defects Replacement of warning/informatory signs	Network integrity Replacement Removal

The following table suggests areas of improvement to be able to eventually meet all of the condition standards laid down in the code of practice.

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made
Routine	A more robust specialist inspection regime should be developed to accurately identify the routine maintenance backlog.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.
Programmed	A robust service inspection regime to check the performance of traffic signs should be developed to accurately determine the programmed maintenance backlog.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.
	A robust specialist inspection regime should be developed to check the overall integrity of the signing regime and to accurately determine the programmed maintenance backlog.

6.10 Condition of Road Markings and Studs

The condition of road markings and studs can contribute to the key objectives as follows: -

Safety	Routine delineation in bad weather Traffic Control Potential safety hazard if loose
Serviceability	Ease of use in darkness and bad weather
Sustainability	Support of sustainable transport modes Edge delineation to reduce edge damage

6.10.1 Road Markings

Road markings serve an important function in conveying to road users information and requirements that are not always possible to relate on vertical signs. Road markings do have their limitations, particularly with loss of conspicuity in inclement weather or even being completely obscured by snow. In addition their conspicuity is reduced when the markings are worn or dirty and their effective life is reduced by heavy trafficking. Road markings make a vital contribution to safety by separating conflicting movements and clearly defining the path to be followed through hazards and delineating the road edge on unlit roads at night.

In addition many road markings give effect to statutory provisions such as no overtaking, keep left and stop. It is important therefore that their legal status is not affected by undue wear or damage.

The treatment categories are as follows: -

Reactive Maintenance

Mandatory/regulatory road markings should be maintained in a sufficiently visible and effective condition to serve their purpose.

Reactive maintenance of road markings should not, in normal circumstances, be required. However, should the condition of such markings constitute an immediate or imminent hazard to highway users, or mean that traffic regulation orders could not be enforced, reactive maintenance may be necessary.

Currently the condition of road markings are recorded as part of the highway safety inspection, however additional information from other sources such as Parking Attendants, the Police and members of the public is also received.

Markings requiring urgent attention are to be signed 'No Road Markings' within 24 hours and remarked within 7 days.

Condition standard currently met within available budget

Routine Maintenance

Road markings should be maintained in a visible and effective condition

Routine maintenance of road markings throughout Torbay involves replacing all markings on at least a three year cycle. Markings on main junctions or within town centres may be replaced on a shorter cycle or as reactive maintenance as required.

This condition standard is currently met within available budget

Programmed Maintenance

Road markings should be maintained in an effective condition and level of reflectivity in relation to road use and traffic speeds.

Programmed maintenance of road markings involves renewals based on reflectivity and luminance properties. Surveys to assess these levels should be conducted by specialist companies and should be undertaken on Category 2a, 2b and 3a routes and other roads of high safety risk. No programmed surveys of this type are currently commissioned by Torbay Council.

Condition standard is NOT currently met within available budget as no specialist surveys have been undertaken, although driven night time inspections are undertaken on the high speed routes.

The table below shows the different treatments associated with reactive/routine and programmed options. Potentially if a specialist survey into reflectivity of studs and markings did cause concern, there would be a need to hasten some of the planned longer term works. Otherwise condition standards are met.

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Replacement of mandatory/regulatory lines	Category 1&2 Defects Replacement of warning/informatory lines	Network integrity Bulk replacement Removal

The following table suggests areas of improvement to be able to eventually meet all of the condition standards laid down in the code of practice.

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made
Routine	A more robust specialist inspection regime should be developed to accurately identify the routine maintenance backlog.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.
Programmed	A robust service inspection regime to check the performance of traffic signs should be developed to accurately determine the programmed maintenance backlog.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.
	A robust specialist inspection regime should be developed to check the overall integrity of the signing regime and to accurately determine the programmed maintenance backlog.

6.10.2 Road Studs

Retro reflective road studs are frequently used to supplement longitudinal road markings. They are used in addition to reflectorised lines where traffic flows are high and where there is no street lighting. They remain effective in wet weather and are particularly useful in areas prone to fog, when the efficiency of the reflective marking is reduced.

They should be subject to annual specialist inspections in Torbay and the treatment categories are: -

Reactive Maintenance

Reflectors and casings should be structurally sound

Reactive maintenance of studs involves the removal or replacement of loose or displaced road studs that are causing an immediate or imminent hazard to highway users.

Condition standard currently met within available budget

Routine Maintenance

Reflectors and casings should be structurally sound and provide effective reflectivity on mandatory/regulatory stud systems

Routine maintenance of road studs involves the replacement of reflectors or studs and where necessary raising the levels of studs to maintain an effective night time reflectivity on mandatory/regulatory stud systems.

Currently limited stud replacement is undertaken. A small backlog of routine maintenance currently exists as identified by driven night time inspections.

Condition standard NOT currently met within available budget as known backlog exists

Programmed Maintenance

Reflectors and casings should be structurally sound and provide effective reflectivity in relation to road use and traffic speed.

Programmed maintenance of road studs involves the replacement of reflectors or studs and where necessary raising the levels of studs to maintain an effective night time reflectivity on mandatory/regulatory stud systems.

This should be based on a specialist survey recording reflectivity issues. No such survey has been conducted recently within Torbay.

Condition standard NOT currently met within available budget as no specialist surveys have been undertaken.

The table below separates the reactive/routine treatments from the longer term programmed options

Lifecycle options

Reactive/Routine	Programmed	
Short Term	Medium Term	Long Term
Urgent defects Replacement		Category 1&2 Defects Network integrity New provision Removal

The following table suggests areas of improvement to be able to eventually meet all of the condition standards laid down in the code of practice.

Recommendations

Reactive	Monitor service to ascertain whether further efficiency savings can be made
Routine	A more robust specialist inspection regime should be developed to accurately identify the routine maintenance backlog.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.
Programmed	A robust specialist night time reflectivity inspection regime should be developed funding permitting.
	Prioritise and treat sites identified as deficient from inspections to eradicate backlog.

6.11 Condition of Traffic Signals (VMS Signs) and Pedestrian Crossings.

The condition of traffic signals and pedestrian crossings can contribute to the key objectives as follows:-

Safety	Separation of potential traffic conflicts Key safety contributor for vulnerable road users
Serviceability	Contributes to ease of use and efficiency Contributes to network integrity
Sustainability	Support of sustainable transport modes Support for local economy

Traffic signals in Torbay are operated within an Urban Traffic Control (UTC) system in order to maximize the capacity of the road network by coordinating signal timings, car park/diversion variable message signing and fire service greenwaves. Monitoring of the UTC operation is conducted within the Network Management section and maintenance works are conducted by specialist contractors under contract agreements.

Traffic signals, pedestrian and cycle crossings are the key point of interaction between vehicles and the most vulnerable road users, and are also key to the maintenance of network integrity. It is therefore crucial to the cause of transport integration that they are maintained to a high standard. Signal control also can add significantly to the efficiency of the network. In most cases an automatic fault monitoring regime, incorporated into the system, will facilitate an effective maintenance programme. Torbay has some 80% of signals currently incorporating an automatic fault detection system, the remainder of notifications of signal failures are dependant on third party reports, typically these are in less traffic sensitive locations.

The primary objective is to keep traffic signals and pedestrian crossings legible, visible and effective, as far as possible at all times, in relation to the road use and traffic speeds. The following condition standards are set for signal controlled facilities:

- Defects in operation are treated as urgent
- Warning signs are erected if signals are likely to be off in excess of one hour
- Temporary traffic management measures will be installed at critical junctions if signals are likely to be off in excess of one day
- Failed lamps will be replaced within 2.5 days
- Bulk lamp changes are made at 6-monthly intervals



A rare signal lamp outage at Barton Road

7.0 Monitoring and Review

The Highway Group is committed to establishing and refining consistent and sustainable policies for highway maintenance. In so doing it aims to achieve value for money whilst maintaining a defined level of service.

In doing so, there were targets set by national government that were monitored by the Audit Commission called 'Best Value Performance Indicators' (BVPIs) these are to be replaced by National indicators (NIs) which all Local Authorities are required to report on. A sub group of some 20 of these BVPIs were classified as Key Performance Indicators (KPIs) and used by the Audit Commission to report on a local authorities overall performance. Whilst the number of these indicators is being significantly reduced in 2008, these indicators are incorporated into the Local Transport Plan which runs until 2011 and are used for comparison purposes within the Transport Asset Management Plan which is being developed. Therefore the data required to compile these indicators will still be collected in the majority of cases.

In addition to the above performance indicators, Torbay belongs to a group of south west local authorities that benchmark such data and exchange examples of best practice. Highway services in Torbay traditionally perform well in such comparisons but it is intended to expand the data compiled to include customer satisfaction surveys. The first of these is scheduled to take place this year.

This maintenance plan is a position statement of current practice and will be used as the basis for appraisal and enhancement of policy. It will be reviewed on an annual basis in order to ensure that stated policies are being observed and to identify where shifts in need have arisen.

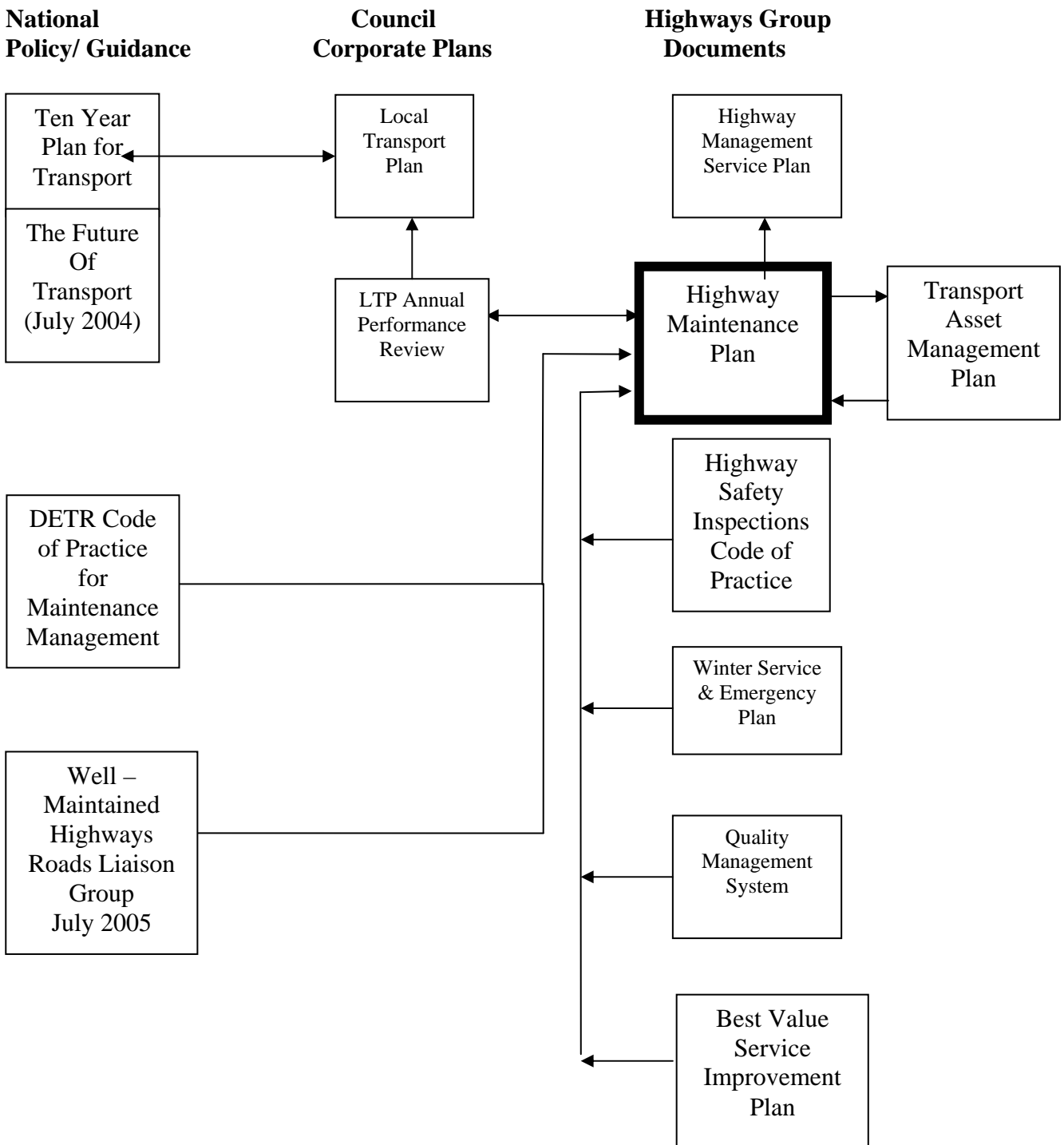
In order to achieve these aims, the Highways Management Service of the Residents and Visitors Services Business Unit will continue to pursue the funding required to implement policy and sustain an appropriate level of service. The Highways Management Group is committed to obtaining value for money through the priority targeting of funds and will continue to monitor the service and react to the expectations of Elected Members and the public.

List of Appendices

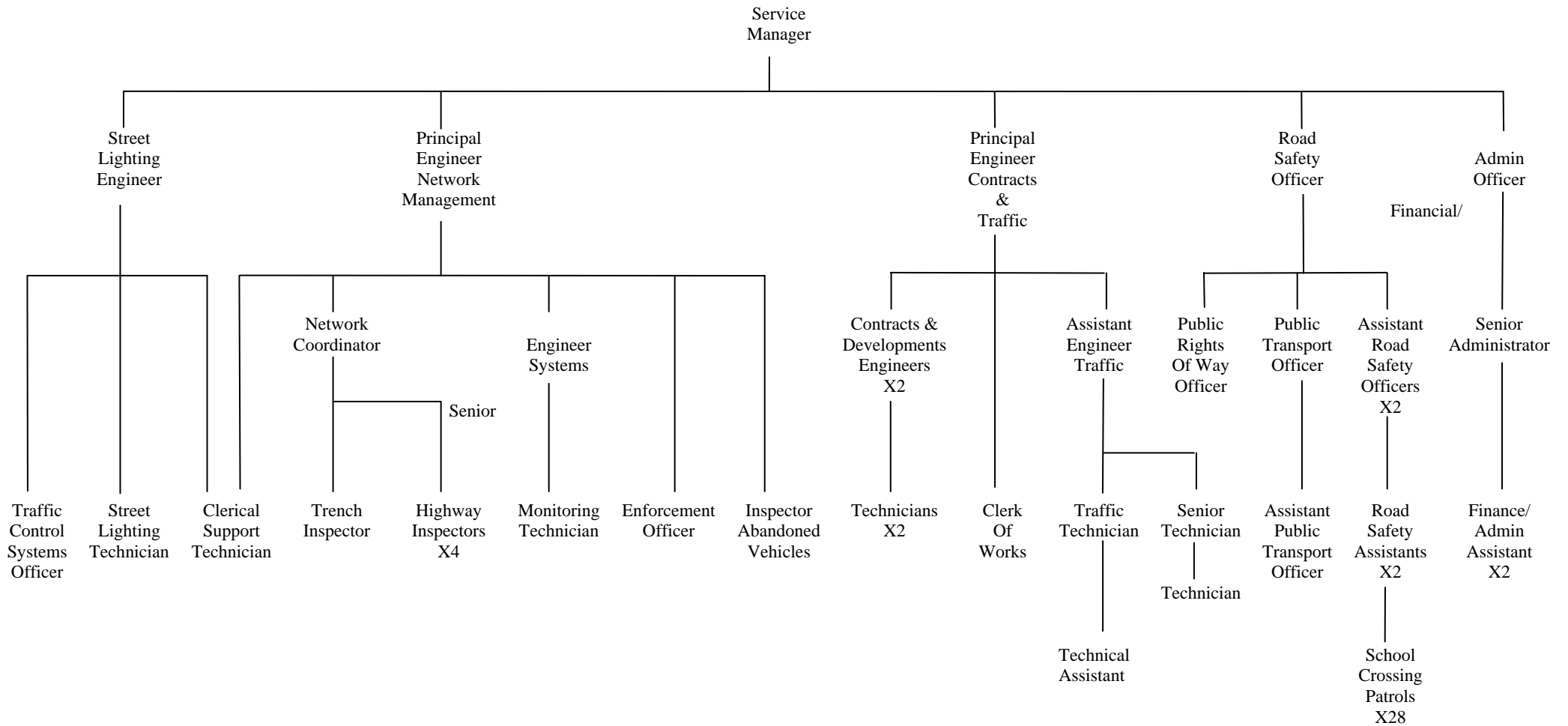
1. Inter-relationship between the Highway Maintenance Plan and Other Documents
2. Highways Group Staff Structure
3. Maintenance Activities
4. Cyclic Maintenance Frequencies
5. Reference Documents

Appendix 1

Inter-relationship between the Highway Maintenance Plan and Other Documents



Appendix 2 Highways Group Staff Structure



Appendix 3 Maintenance Activities

Activity	Definition	Purpose
Gully Emptying	Removal of accumulated debris and detritus from gullies and catch pits	To maintain effective highway drainage To prevent blockage of gullies, catch pits and pipework
Ditch and pipe cleaning	Removal of accumulated debris and detritus and obstructive vegetation	To maintain effective highway drainage To prevent blockages of pipework and ditches
Siding	Removal of verge and hedge overgrowth	To maintain carriageway and footway width
Verge maintenance	Grass cutting	To preserve visibility
Highway safety reaction	Removal of debris from the highway	To preserve safety for highway users
Weed control	Removal and prevention of weed growth	To avoid the presence of weeds in the highway
Maintenance of street lighting	Repair and cleaning of lighting units and associated equipment	To maintain effective illumination carriageways, footways and sign faces
Traffic sign maintenance	Repair, replacement and cleaning of traffic signs	To preserve safety for highway users To enable enforcement of Road Traffic Orders To maintain the provision of advice and information to road users
Maintenance of road markings	Renewal and refurbishment of road markings	To preserve safety for highway users To enable enforcement of Road Traffic Orders To maintain the provision of advice and information to road users
Carriageway reconstruction Overlay	Reconstruction to a depth greater than 100mm Additional flexible material laid onto existing carriageway or footway	To restore structural strength To increase structural strength To arrest deterioration To improve ride quality To provide surface integrity To correct adverse camber To increase skid resistance
Resurfacing	Replacement of flexible pavement at depths up to 100mm	To increase structural strength To arrest deterioration To improve ride quality To provide surface integrity To increase skid resistance
Surface Dressing	Surface treatment using non-structural layer	To arrest disintegration of the surface To seal the surface against water penetration To improve surface texture and skid resistance
Patching	Non continuous resurfacing or reconstruction of limited areas	To remove hazards to road users As for overlay or resurfacing but on a limited basis
Haunching	Construction or reconstruction of carriageway edges	To provide or restore lateral support to the carriageway To arrest deterioration
Drainage repairs	Restoration of ineffective drainage systems	To restore effective highway drainage
Winter pre-salting	Spreading of de-icing salt on selected routes where icy conditions are forecast	To prevent the formation of ice on selected routes To preserve highway safety
Snow clearance	Removal of accumulated snow from the highway in accordance with priorities	To remove obstruction to the highway by snow

Appendix 4 Cyclic Maintenance Activities

Cyclic Maintenance Frequencies

Activity	Frequency
Gully Cleaning	Once per year In areas vulnerable to flooding, additional cleaning is undertaken as deemed appropriate
Grass cutting Urban verges Rural verges	Approx. 5 cuts per year depending on growing conditions Two planned cuts per year, with additional cuts where needed for safety
Weed control Routine weed spraying Noxious weed removal	Once per year during Spring additional spraying depending on Growth (approx 8 week cycle) Selective spraying and hand pulling as appropriate
Hedge cutting	Twice per year, additional cutting where needed for safety

Appendix 5 Reference Documents

Reference Documents

Local Transport Plan 2006/11 (by Torbay Council)

Winter Maintenance & Emergency Plan 2008/09 (by Highways and Engineering)

Highway Safety Inspection Code of Practice 2004 (by Highways and Engineering)

Highway Management Best Value Review Summary Report including Service Improvement Plan (by Highways and Engineering)

Highway Management Service Plan 2008/09 (by Highways and Engineering)

Torbay Council's Major Emergency Guide 2008 update (by Highways and Engineering)

Code of Practice for Dealing with Possible Incidents Involving Substances Hazardous to Health or the Environment 1999 (Health and Safety Executive)

Specification for Highway Works 2008 Update (Highways Agency)

Design Manual for Roads and Bridges (Highways Agency)

Design Guide for Highways in Residential and Commercial Estates 1996 (Devon County Council)

Well-maintained Highways – Code of Practice for Highway Maintenance Management (July 2005) (UK Roads Board)

Part 2

Highway Maintenance Plan

A to Z of Maintenance Activities

The following statements cover the highway maintenance activities undertaken by the Highways Group. These are provided to give a brief description of policy, specification and work frequencies where applicable.

A to Z of Maintenance Activities

'A' Boards and Displayed Goods

Abandoned Vehicles

Access Lines

Audit – Maintenance

Bridge Inspection and Maintenance

Bus Shelters

Carriageway Markings

Computerised Maintenance Systems

Culverted Watercourses

Disabled Parking

Drainage

Enforcement

Emergencies

Footways

Grass Verge Cutting

Gully Cleansing

Hedge Maintenance

Hedge/ Tree Cutting Notices

Illuminated Traffic Signs

Inventory

Material Testing

Mobility Impaired Access

Network

National Street Gazetteer (NSG)

New Roads and Street Works Act (NRSWA)

Patching

Pavement Café Permits

Pedestrian Crossings
Private Streets
Public Rights of Way – Definitive Map
Public Rights of Way – Maintenance
Retaining Walls
Road Closures
Road Condition Surveys
Safety Defects
Safety Inspections
Scaffolds
Seats
Section 106/ 278 Developments
Section 38 Developments
Signing and Guarding of Works Sites
Signs – Fixing to Walls
Signs – Pedestrian
Signs – Traffic
Skid Resistance
Skips
Street Furniture
Street Lighting
Street Name Plates
Street Naming & Numbering
Structural Maintenance
Surface Dressing
Surfacing – High Friction
Surfacing Materials
Traffic Counts/Counters
Traffic Regulation Orders

Traffic Signals, Urban Traffic Control and Variable Message Control

Tree Management

Vehicle Crossing

Winter Service

'A' Boards and Displayed Goods

Objective

Torbay Council has a duty to ensure that footways and other pedestrian areas are not illegally obstructed by unauthorised signs, displayed goods or other items on the public highway.

Policy

Presently Torbay Council operates a low level flexible approach to dealing with these issues. Although there is a level of discretion used, the general policy guidelines are as follows.

1. No signs, boards, displays, etc. will be permitted on the highway when there are private forecourts that could be used to accommodate them.
2. All signs, boards, displays etc. must be temporary in nature so that they can be easily removed.
3. Signs, boards, displays etc. must not be chained, attached or fixed to any footway, tree, lamp column, post, or any other item of street furniture.
4. Signs, boards, displays etc. must not damage the highway.
5. Signs, boards, displays etc. must be stable and not easily blown over. In the event of high winds they should be removed from the footpath completely.
6. All signs, boards, displays etc. must be totally removed from the highway at the end of the days trading.
7. Signs, boards, displays etc. must not cause a visual distraction or obstruction to vehicle or pedestrian sight lines.
8. All signs, boards, displays etc. will be the owner's responsibility when placed on the highway and the owner should seek public liability indemnity for any injury or damage caused to highway users.
9. An unobstructed footway width of 2 metres is essential in all town centres and precinct areas and desirable in other locations. Where this is not practicable in other locations a minimum width of 1.5 metres must be maintained. The Council reserve the right to consider each individual location on its own merits.
10. Signs, boards, displays etc. must be such that they can be easily detected by the visually impaired and easily negotiated by those with mobility difficulties. Any display overhanging the highway must allow a clear headroom of 2.1 metres.
11. Where practicable, the sign, board, display etc. should be sited directly adjacent to the shop frontage (i.e. within 600mm from the shop front). Alternatively, it may be sited in line with existing street furniture or pavement cafes outside shop frontages depending on the location, where such furniture is wider than the sign itself.
12. Rotating or swinging signs, boards, displays etc. will not be permitted.
13. Any sign, board, display etc. should be no wider than 600mm and no higher than 900mm above ground level.
14. Only one sign, board, display etc. will be permitted per premise.
15. Where multiple occupancy premises share joint accesses, only one sign, board or display etc. will be allowed per shop frontage.
16. The Council may require the immediate removal of any sign, board, display etc. if requested by a Police Officer/Police Community Support Officer or Council Officer if there is perceived problem requiring full access to be maintained for whatever cause.
17. Nothing in these guidelines absolves those concerned from their legal responsibilities under the Highways Act 1980 and other legislation.

Specification

The Highways Act 1980, Disability Discrimination Act 1995,

Abandoned Vehicles

Objective

Torbay Council has a duty to remove abandoned vehicles under the 'Refuse Disposal (Amenity) Act 1978' and as modified by the 'Clean Neighbourhoods and Environment Act 2005'.

Policy

The council investigates all reported vehicles to ascertain whether they consider them to be abandoned or not and will issue notices to registered keepers, prior to the vehicles being removed. The normal period of notice is 7 days. In cases where the officer deems the vehicle to have no value (e.g. burnt out) it can be removed immediately and destroyed.

All vehicles suspected as being abandoned will be inspected within 24 hours of being reported and the appropriate action will be assessed using the discretion of the responsible officer. Vehicles that are untaxed but not deemed to be abandoned and which are not causing an immediate danger to highway users will be reported to the DVLA office, as this authority does not have powers for their removal.

The 'Clean Neighbourhoods and Environment Act' does enable this authority to remove abandoned vehicles from all land in the open air, where members of the public have reasonable access. Where the land is privately owned a 15 day 'private land notice' is sent to the owner of the land to allow them to object to the removal.

Specification

A contract with a private contractor to deal with collection, storage and subsequent disposal of abandoned vehicles is maintained and operated by the Council's Inspector, Abandoned Vehicles. This contract fluctuates in value depending on the price of scrap metal.

All decisions pertaining to abandoned vehicles will depend on the guidance of the current legislation then in force.

Access Lines

Objective

To seek to prevent the obstruction of private driveways by vehicles parked on street.

Policy

To provide an access line carriageway marking following the written request of individual house owners and subsequent site inspection. A nominal charge is made.

Specification

The Traffic Signs Regulations and General Directions 2002: The size and layout in accordance with diagram 1026.1.

Audit – Maintenance

Objective

Maintenance audit is a process used to consider future maintenance issues for new development and improvement schemes.

By considering future maintenance requirements at the design stage, questions about structural adequacy, material match, availability and cleaning can be addressed.

Policy

All new development schemes subject to an adoption agreement are to receive a maintenance audit prior to the agreement being made. In practice, the Council's Developers Design Guide specifies construction and materials and therefore schemes complying with the guide would pass an audit.

Improvement schemes of £50,000 or more are to be audited and recommendations considered for agreement and inclusion into the scheme.

Specification

All highway maintenance aspects are to be considered when auditing qualifying schemes.

Improvement schemes shall be audited by the Maintenance Team.

Bridge Inspection and Maintenance

Objective

To safeguard the public and enable the maintenance of the stock of highway structures to be actioned and planned in a rational manner and on a cost effective basis.

Policy

All Council owned highway bridges, culverts and subways (that are above a specified minimum size) are inspected and maintained to the following specification.

Specification

The highway structures asset management and information system is maintained by the Engineers Department.

Structures have a principal inspection every six years. During a principal inspection the Engineer gets within touching distance of all inspectable parts of the structure and materials testing is actioned as required.

Wet structures, such as culverts and structures over watercourses generally have a principal inspection every two years. This inspection takes place instead of a general inspection and is part of the programme of inspections for scour.

All structures have a general inspection every two years. During a general inspection the engineer examines all visible elements of the structure.

Superficial inspections are conducted, on an ad-hoc basis, by highway inspection staff who report anything requiring urgent attention, e.g. impact damage, damage to superstructures, bridge supports or parapets.

Some inspections are carried out from railway (Railtrack) property.

A programme of prioritised works (Bridge Condition Indicators) is submitted for budgetary consideration each year.

Maintenance works are procured either by competitive Tenders or by Torbay Council Contracting Divisions competitive rates.

Sites supervision and contractual administration is conducted by the Engineers Department.

Reference within other plans / documents

Design Manual for Roads and Bridges: BD63/94, BA63/94, BD54/93, BA50/93

Evaluation of Bridge Condition Indicators

Bus Shelters

Objective

To provide attractive and convenient bus shelters to encourage the public to use public transport.

To ensure that repairs and maintenance are carried out efficiently.

Policy

The following specification is the policy for maintaining Bus Shelters.

Torbay Council Owned Shelters

There are currently 29 Torbay Council owned and maintained shelters within Torbay which are cleaned once per year in accordance with the Service Level Agreement.

Adshel Shelters

Adshel inspects, cleans and provides a full maintenance and repair service to their shelters at no cost to the Council on a regular basis as follows:

- A minimum cycle of 10 working day inspection of shelters.
- Full shelter wash on a twenty working day cycle.
- The removal of graffiti/fly posting within 48 working hours of notification.
- Full repair of non-urgent faults or damage within ten working days of notification.

Adshel are required to maintain a service to receive and record faults or damage notified in respect of their shelters covering 24 hours a day, seven days a week.

Attendance on site in response to urgent faults or damage is as follows:

- Within 4 working hours for faults reported between 0730 and 1500 on working days.
- By 12 noon on the next working day for faults reported between 1500 and 0730 and on Saturdays and Sundays.

Fernbank Shelters

The Company shall, at its own expense, inspect and wash each shelter and provide full maintenance and repair service on a regular basis as follows:

- Emergency damage response time of 8 hours
- Full shelter wash on a twenty working day cycle
- The removal of graffiti/fly posting within 48 working hours of notification
- Full shelter repairs within 3 working days

It is the aim of the Council to reduce the amount of Council owned shelters within the area and replace them with Adshel/Fernbank shelters, thus reducing the Council's ongoing maintenance costs and liabilities.

The contracts with Adshel and Fernbank and the Bus Shelter Replacement Programme are managed by the Council's Public Transport team.

Carriageway Markings

Objective

To provide clear markings on the carriageway to direct drivers and pedestrians to contribute to an efficient network that is easy and safe to use in all weather and light conditions.

Policy

Torbay Council carries out maintenance to carriageway markings on a cyclic basis with a policy to replace all markings on a three year cycle. Markings on main junctions or within town centres may be replaced on a shorter cycle.

The Highway Inspectors under the Highway Safety Inspections Code of Practice monitor road markings. The Council also receive information from Traffic Wardens, the Police and members of the public with regard to carriageway markings and respond appropriately.

Identified defects are issued for remarking to be completed within 28 days. Markings requiring urgent attention are to be signed "No Road Markings" within 24 hours and remarked within 7 days.

Carriageway markings that are removed as a result of road works may be replaced before the road is open to traffic or signed "No Road Markings" until it is remarked. As set out in Delivering Best Value in Highway Maintenance.

All markings will comply with the Traffic Signs Regulations and General Directions 2002

Specifications

All markings will comply with the Manual of Contract Documents for Highway Works, Specification for Highways Works (volume 1). Permanent road markings shall be one of the following materials:

1. thermoplastic road marking material or paint in accordance with BS EN 1871
2. permanent pre formed road markings in accordance with BS EN 1790;
3. other materials as outlined in Specification for Highways Works to BS EN 1871

Computerised Maintenance Systems

Objective

To hold current and historic information relating to the Torbay Highway assets in specialised electronic form. The systems used must provide an efficient means of storing, analysing, and reporting data required for the development, implementation and subsequent monitoring of the Council's maintenance policy.

Current Systems

The Highways Group operates and maintains a variety of systems in order to meet its objectives. The systems currently in place and the activities they help to manage are detailed below.

Highway Maintenance, Mayrise systems

Call Centre – Provides an interface to load information relating to public enquiries and complaints on highway matters. The enquiries are provided with a unique log number, are referenced to a specific street name, are assigned to an Officer for response and can be traced as they progress from receipt to completion. It is primarily used by Highways Admin team to log the calls.

Highways Maintenance – Provides a detailed database, listing the calls received and recorded against the public carriageway and footway. Typically the type of defect, number, position and caller reporting is recorded and stored together with the date and status. The calls logged are generally in line with the Maintenance Code of Practice for Highway Inspection and provide the audit trail needed to investigate and defend Public Liability claims against the Authority.

Pavement Management System, WDM Limited

Road Condition Surveys - Provides a database for the full range of machine based condition surveys, traffic count information and road construction history. The system has the National standard analysis software PANDEF and SKID built in, allowing fully processed data to be reported. The processed data can be reported in tables, charts or overlaid on a map background through an internal GIS. The reported data is used for prioritising and planning the maintenance programme and is the primary source of information to bid for Capital funding through the Local Transport Plan. The system is also used to calculate both National and Local Performance Indicators relating to the maintenance of the road network.

UKPMS - UKPMS is a series of condition Indices that have been recently adopted by the DETR to measure the condition of the footway and carriageway of roads. A series of new visual survey techniques have been introduced which when processed produce a condition rating that can be compared across networks. The Council has been required to report the condition of its classified road network in terms of UKPMS condition indices from March 2001. The data produced can then be used to generate a needs based budget and help in the prioritisation of the maintenance programme. We currently operate a 'Tranche 2' level system which will prioritise works on a condition basis but during 2002/03 a 'Tranche 3' system is planned which will also be able to prioritise works on an economical basis.

Street Works, Mayrise systems

Street Works Co-ordination – Street Works is the system used for recording and monitoring opening and reinstatement activities of Statutory and private undertakers under the New Roads and Street Works Act (NRSWA). Details of the road openings are received and loaded to the database including duration of works and the undertakers involved.

Inspections of the utility works are co-ordinated and recorded through the system, coring programs are developed and defect notices stored within the database.

Within the Highways Group there are also a number of other computerised systems that are not specifically linked to Highway Maintenance.

Street Lighting, Mayrise systems

Street Lighting - This system is a complete street lighting management package. The system can store a range of information including a street light inventory, works ordering for the contractors and maintains a record of faults and associated works against street light reference.

Accmaps, Buchanan computing

Accident Data - Accmaps provides a system to load, store and report data relating to road traffic accidents recorded by the Police. The data is received and loaded to the database in Stats19 format, a national standard, direct from Devon and Cornwall Police. The data holds key information about each incident such as location and severity, which can then be analysed from the tables either individually, or through the production of summary reports. The system uses the MapInfo GIS system and visual presentation can be made to display the information held. It can be used for developing traffic schemes and production of Performance Indicators.

Parkmap, Buchanan computing

Traffic Regulation Order Data - Parkmap provides a system to store and report data relating to road traffic regulation orders that exist within Torbay. The data is held both textually with a history and detail relating to each order and graphically allowing the extent and location of the various orders to be displayed in a way which is easy to understand. The system uses the MapInfo GIS system and visual presentation can be made to display the information held against a variety of different map based backgrounds.

Prefect (FMS)

Prefect is a comprehensive management tool which was designed to assist local authorities with the management of traffic control equipment and the associated maintenance. It can be used to create a database inventory of all maintained equipment as well as producing various reports which include number of faults, fault types and fault times. This system is a direct link to our maintenance contractor and Prefect can accept fault reports generated automatically by other traffic control systems or entered manually by operator action. When a fault report is received the system will automatically inform the appropriate maintenance contractor and monitor performance.

RMS

The Remote Monitoring and Control System (RMS) is a system enabling the efficient monitoring and management of traffic control equipment. The system features an advanced installation, which allows operators to appreciate the status of all monitored equipment at a glance, using a fully user customisable map-based display. Fault and status reporting is via PSTN or GSM network, allowing the traffic control equipment to report to the system automatically. Operator action can also be used to interrogate the traffic control equipment via the remote monitoring system and check the status and any associated faults.

UTC

The Urban traffic control system provides a central point for the monitoring and control of traffic signal junctions and pedestrian controllers. The System provided a means running coordinated fixed times plans as well as the more adaptive SCOOT control, the monitoring side helps to identify faults and inform the operator which ensures maintenance issue can be identified and dealt with quickly. The system also incorporates a built in timetable allowing all or individual junctions to change priorities and timings 24hrs a day 7 day a week.

Siespace

The Siespace park guidance information system controls all car park signs centrally within an authority; the system provides real time information to motorists regarding the availability of car parking space within an area. The system also provides operators and managers to timetable events on certain signs as well as overriding signs when the need requires.

Culverted Watercourses

Objective

To ensure the free passage of streams and watercourses that pass beneath the highway via culverted watercourses.

Policy

Under the Land Drainage Act 1976, the Council is responsible for all culverted watercourses that pass under the highway including any screens or other structures that are adjacent to the highway.

The Highways Section has a regular maintenance schedule for the cleaning of all screens adjacent to watercourses, which in turn will prevent the potential blockage to the culvert beneath the highway.

All culverted watercourses that pass under the highway will be surveyed using CCTV every three years to ascertain its structural and serviceability condition status.

Specification

All construction work is to be in accordance with 'Specification for Highway Works' of the Manual of contract documents for Highway works (H.M.S.O. May 2002).

Disabled Parking

Objective

To recognise the problems faced by disabled people who drive a motor car and who are unable to park within walking distance of either their property or town centre shopping/amenity areas.

Policy

Provision of the two types of disabled parking bay as required by disabled motorists.

Residential disabled parking bays (single)

The disabled driver owns a vehicle, is in possession of a current blue badge and does not have off street parking within the boundary of their property.

The location for the disabled bay is in a safe location with regard to other road users and does not clash with existing Traffic Orders.

The location is agreed by the Police.

Town Centre disabled parking bays (multiple)

This type of disabled parking requires a Traffic Order and is indicated by a sign plate as well as road markings.

Location is usually agreed through a general consultation with disabled groups, the Police and other interested parties.

Specification

Adhere to recommended advice and standards, including:

Highway Code : General location and consideration for other road users.

The Traffic Signs Regulations and General Directions 2002 : Size and layout in accordance with diagram 1028.3 for along the edge or centre of carriageway and diagram 1033 for echelon type parking.

Reference within other plans / documents

Disabled parking bay application forms

Drainage

Objective

To drain water off the highway, under the highway or prevent discharge onto the highway to avoid flooding thereby reducing the potential risk to users.

Policy

Torbay Council has a duty to maintain the highway under the Highways Act 1980 to a standard that is appropriate to the traffic that uses it, this includes the highway drainage. The Council is responsible for not only the road gullies but also pipework connecting the gullies to the public sewer or discharge point.

Under the 'Highways Act' the local authority has a right to continue to discharge highway drainage to the public sewer from existing carriageways, however, the water authority can refuse connections from new developments.

The Council has powers to construct any barriers, drains, soakaways or ditches on or adjacent to the highway in private land in order to drain surface water from the highway, however, this may require compensation to the landowner.

The Highways Group has a regular maintenance schedule for the cleaning of all drainage ditches, open channels and buddle holes.

All other defects are repaired on a reactive basis. The Highway Inspectors are responsible for identifying incidents of standing water, water flowing across the highway or flooding. Works are prioritised in accordance with the ratings system (on page 43).

All necessary improvements to the highway drainage system following re-occurring flooding problems are prioritised. The regime used to prioritise the work compares the severity of known problems and takes into account the road classification . This priority list is then used for the allocation of capital funding.

Specification

All construction work is to be in accordance with 'Specification for Highway Works' of the Manual of contract documents for Highway Works (H.M.S.O. May 2002).

Enforcement

Objective

The Council employs a Highways Enforcement Officer to deal with offences under the 'Highways Act 1980' and any local bylaws affecting land designated as public highway.

Policy

The Council has a duty to protect the public rights on the road and footpath network. The effectiveness of legislation in protecting the public is dependant on the compliance of others.

Officers from time to time are required to deal with businesses and individuals who, for whatever reason, breach the statutory protection relating to highways. The initial aim of officers is to assist businesses and others to comply with their legal obligations without unnecessary expense or hardship. However, ultimately, firm action will be taken against those who disregard the law.

Enforcement action areas include, Public Rights of Way, Pavement Café Licensing, Highways and Highways Works associated with new developments.

The Council, as Highway Authority, has a duty to maintain adopted highways to safe and serviceable standards. Staff have to protect the rights of the public to the use and enjoyment of such highways by ensuring they are free from nuisance, danger, obstructions, unlawful stopping up, interference and encroachments.

Officers may deal with matters informally or formally and the action may lead to prosecution.

Reference within other Plans / Documents

Highways Act 1980

Emergencies

Objective

Emergency situations affecting the highway and its users need to be managed to minimise the risk of injury and disruption.

These situations can have many causes including high wind, heavy rain, fire, accident, spillage etc., and each type of incident needs to be treated differently. The Council treats emergencies with the utmost urgency and has prepared detailed plans to manage these situations.

Policy

The Council has prepared plans which detail how various types of emergencies affecting the highway are to be managed including:

Winter maintenance and emergency plan for highways.

Major emergency guide.

Code of Practice for dealing with possible incidents involving substances hazardous to health or the environment.

Reference within other plans / documents

In addition to those documents listed under the above policy heading, the following document also refers to emergencies on the highway.

Code of Practice for maintenance management

Footways

Objective

The Highway Authority has a duty to maintain the fabric of the highway, including footways, to ensure users have a safe passage, based on the policies of the Local Authority.

Policy

To inspect footways on a cyclic basis in accordance with their frequency category and implement maintenance works as required.

Identified footways/pedestrianised areas within town centres are to be surfaced and maintained with modular paving. Other strategic routes and local shopping areas have been identified to be surfaced with red bitumen macadam during future maintenance. When necessary, all other footways will be surfaced with black bitumen macadam or insitu concrete, at the discretion of the Highways Group.

Specification

Footways are categorised for inspection frequency according to the amount of usage, as defined in the Highway Safety Inspection Code of Practice.

Torbay is split into 3 individual areas, each administered by 1 Highways Inspector.

Defects identified by inspectors are repaired using the most cost effective method.

Programmed footway works will include minor improvements such as dropped crossings and provision of tactile paving.

Reference within other plans / documents

Highways Act 1980

Highway Safety Inspection Code of Practice

Code of Practice for Maintenance Management

Specification for Highway Works

Department of Transport's Design Manual for Roads and Bridges, Volume 7, Pavement Design and Maintenance.

Grass Verge Cutting

Objective

Highway grass verges are maintained by regular cutting to retain visibility for highway users, tidiness of the location and to allow litter picking to be undertaken.

Policy

The following Specification is the policy for maintaining highway grass verges.

Specification

Highway grass verges are split into two categories, urban and rural, depending on location. Rural verges are cut twice a year, late spring and late summer. Immediately following cutting the nominal height shall be 100mm.

Urban verges are cut in general 5 times a year depending on growing conditions. Immediately following cutting, the nominal height shall be 40mm.

Additional grass cutting is undertaken at the discretion of the supervision officer.

Grass cuttings are not collected or removed, but are left on the verge.

Herbicides are not applied to grass verges.

Other maintenance to verges, including edge trimming and top soiling and seeding are undertaken at the discretion of the supervising officer.

Reference within other plans / documents

Highway grass verge cutting is undertaken by a private contractor and supervised by the Leisure Section of the Residents and Visitor Services Department of the Environment Directorate. The Highways Grounds Maintenance Contract details the works specification and legal agreement between the contracted parties.

Gully Cleansing

Objective

To minimise flooding incidents on the highway by allowing the free passage of surface water into the drainage system through well maintained highway gullies and gully gratings.

Policy

Torbay Council has adopted a policy to routinely clean all gully pots that are situated on highway land.

Cleansing work is carried out by our Contracting Division under the Service Level Agreement. Throughout the financial year all highway gullies will be cleaned at least once, although in known pre-designated flood prone areas the frequency of cleaning is increased to reduce the likelihood of flooding.

The process of gully cleaning involves cleaning the gully grating, removing all silt and debris from the gully pot and ensuring that the gully is running effectively by surcharging the pot with water and monitoring the efficiency in discharging to the highway drain. Should the highway drain appear restricted then a process of rodding and jetting will be carried out to remove any blockage.

Defective gullies or old style masons traps which run slowly are reported to the Engineer by the operational staff with a view to construction work being carried out to remedy the situation.

Blocked or defective gullies that are reported to the Engineer by members of the public or the highway inspectors are passed to the Control Room of the Contracting Division, so the operational staff can attend as soon as is practicable. Cleaning of these gullies is carried out within a 24 hour period.

Specification

All works carried out as gully cleansing are to be in accordance with the document 'Well-maintained Highways' (Roads Liaison Group. July 2005) which is the current code of practice for maintenance management.

Hedge Maintenance

Objective

Torbay Council, as the Highway Authority, is responsible for maintaining approximately 6km of hedges. These hedges are within the public highway or other areas of land maintained by the Highway Authority.

Cutting and other work is undertaken to the hedges to maintain visibility and remove obstruction for highway users, health and safety of the hedge and retain environmental attractiveness.

All other hedges are the responsibility of the landowner to maintain.

The Highway Authority has enforcement powers through the Highways Act 1980 where private hedges are impinging on the public highway.

Policy

Hedges which are the responsibility of the Highway Authority within Torbay are routinely trimmed once per annum. Additional work would only be undertaken at the discretion of the Highway Authority to improve visibility, increase clearance above the highway or to remove obstruction.

Specification

Highway hedges are planned to be cut once a year during late summer. The side of the hedge facing the public highway is trimmed vertical to a height of 5m above the highway. Unless agreed otherwise the top of hedges are not cut.

Reference within other plans / documents

Statement on Hedge/Tree Cutting Notice

Highway Adoption Plans

Hedge Cutting Contract

Highways Act

Hedge/Tree Cutting Notices

Objective

To minimise danger or obstruction to pedestrians or vehicular traffic, avoid obstruction or interference with view of drivers, including obstruction to street furniture and light from public lighting.

Policy

Landowners/occupiers are responsible for all trees, shrubs and hedges that are growing on private land and which are adjacent to or overhanging a public highway.

Specification

On receipt of a complaint or personal observation the owner/occupier of the land from which problems arise are advised of their responsibilities under Section 154 Highways Act, 1980.

Initially a letter is sent to the owner/occupier of the land requesting remedial work within 14 days.

At the end of this period, if necessary work is not carried out an enforcement notice is serviced under Section 154(3) Highways Act, 1980 requiring the work to be carried out within 14 days as directed.

Should the necessary works not be carried out or an appeal lodged then the works are carried out on behalf of the Highways Authority and the owner/occupier is subsequently billed. These costs are recoverable through the County Courts as a civil debt.

Highway trees/hedges/shrubs are dealt with by either Parks or Arboriculture Department of the Council.

Illuminated traffic signs

Objective

To convey to vehicular traffic a warning, information, prohibition, restriction or requirements

To illuminate these traffic signs in accordance with Schedule 17 of The Traffic Signs Regulations and General Direction 2002

Policy

To ensure that the sign plate is lit to the standard laid down in BS 873 part 5 1983 Mean luminance to satisfy categories 1 and 2

Signs to be attached to street lighting columns where possible to avoid street clutter. If not they are mounted on wide based post.

Manufactured with micro-prismatic retroreflective material (eg 3 M's VIP Diamond Grade)

Layout to conform to Traffic Signs Regulations and General Directions 1994

Specification

Light unit to be minimum IP56 external fittings/fastening in stainless steel

Colours of all finished signs to comply with current T.S. regulations

Sign to conform to current T.S. regulations and general directions and capable of passing test to BS 1474

Sign face, post and fixings to conform to BS 873

Material to be aluminium, and stiffened or fully framed in aluminium channel section

Aluminium not less than 3mm thick (11 SWG) to BS 1470 SIC – H4, with aircraft Grey at rear, on which to be placed manufacturers trade mark

Reference within other plans / documents

The Traffic Signs, Regulations and General Direction 1994

CIE Publications 54 1982 (measurement of reflectivity)

BS 873 (DETR working drawing)

BS 1474

Inventory

Objective

A Highway Inventory is maintained to provide the information needed to efficiently and cost effectively manage the Highway network. The Inventory is basically a list of items associated with the Highway and records the location, type, size etc. of various assets that need to be maintained.

Policy

The Code of Practice for Maintenance published by the DTLR recommends that Highway Authorities maintain a detailed inventory of their asset.
The Highways Group is to consider the future format of its highway inventory.

Specification

Torbay inherited from Devon County Council a detailed Inventory of its Highway assets collected between 1994 and 1998. This information was collected against the old Devon highway network and included a list of items defined by County Hall. This list was comprehensive and included information relating to over 100 different items present on the highway.

Torbay has continued collecting Inventory data since becoming unitary and currently has accurate and up to date information relating to a number of items present including Street lighting units, Highway seats, bus shelters etc. These items are used in the day to day management of the Highway and as an aid when preparing management contracts.

A new local authority Code of Practice has recently been released and work will shortly begin on a review of the Inventory data Torbay holds.

Reference within other plans/documents

Code of Practice for Maintenance Management

Material Testing

Objective

To ensure that the materials supplied for highway works are fit for the purpose intended. The design life of the highway network is to provide an infrastructure that will last for 20 years.

Policy

Torbay Council is committed to a testing regime of materials that are supplied for use on the highway network. Testing of materials are carried out during construction and measured against the specification set out for the works in question, samples are taken and examined at NAMAS accredited laboratories to check compliance.

As part of the testing regime Torbay Council inserts an end performance specification in all of the contracts that it lets. Testing of materials insitu, is then carried out by a NAMAS accredited laboratory to ensure that the completed works conform to the specification.

Torbay Council as the Highway Authority can also carry out sample material inspections of the various utility companies that carry out works on the highway whilst maintaining their apparatus. All costs associated with the testing and inspection are levied against any utility company found not to be working in accordance with the New Roads and Street Works Act 1994 specification.

Specification

All construction work is to be in accordance with 'Specification for Highway Works' of the Manual of contract documents for Highway works (H.M.S.O May 2002).

New Roads and Street Works Act 1991
Code of Practice for Specification for Reinstatement of openings on the Highway

Mobility Impaired Access

Objective

To recognise the problems faced by disabled people (as well as people with prams and pushchairs, young children and older people) in dealing with an environment designed for non-disabled people, and to give full weight to finding ways to help these people live a full life.

Policy

Ensure that special consideration is given to ease of access for disabled people between and within public areas by the careful provision, siting and design of parking areas, paths, dropped kerbs, pedestrian crossings, street furniture and open space.

Ensure that access to, and egress from, existing buildings and their surroundings is improved as opportunities arrive through alterations, extensions and changes of use.

Ensure that in new developments, suitable provision is made for disabled people, both as employees and customers, in terms of facilities, access/egress and car parking.

Specification

Adhere to recommended standards, including:

- Layout and dimensions of footways and footpaths;
- Choice and positioning of street furniture;
- Layout and construction of pedestrianised areas;
- Layout and construction of crossing facilities, including dropped kerbs suitable for deaf people, visually impaired people and wheelchair users;
- Parking of vehicles for Blue Badge holders;
- Provision of wheelchair accessible public toilets;
- Lighting;
- Signage

Reference within other plans / documents

Disability Discrimination Act 1995

Merseyside Code of Practice on Access and Mobility

Torbay Council Policy towards Disabled people

National Street Gazetteer

Objective

The National Street Gazetteer (NSG) is the definitive reference system used in the notification process and the coordination of street works. Under legislation, each local highway authority in England and Wales is required to create and maintain its own Local Street Gazetteer (LSG) and Associated Street Data (ASD). These are then compiled into the only master index and managed by Intelligent Addressing. Gazetteer is then used within the Street Works register and Local Land and Property Gazetteer

Policy

To monitor changes in the street network of authority area and include those changes within computer software for onward distribution to the NSG custodian on a monthly basis. The legislation requires that all publicly maintained highways, prospective publicly maintained roads, as well as private roads are recorded in the National Street Gazetteer.

Specification

Built to the national standard BS 7666, for access by a number of other organisations via the NSG online hub and managed by Intelligent Addressing.

The following types of streets are included in the NSG:

- motorways
- classified principal streets including trunk roads and other classified numbered streets
- other publicly maintained unclassified numbered streets
- prospective publicly maintained streets
- private streets known to the highway or roads authority
- cycleways
- remote footpaths
- subways that are publicly maintained
- footpaths where maintained or metalled.

Reference with other plans / documents

- New Roads and Street Works Act 1991
- National Street Gazetteer BS 7666
- Local Land and Property Gazetteer
- Street Works Register

Network

Objective

The network defines a model against which all other data relating to Highways Maintenance and management can be referenced. The network is used as the basis for the National Street Gazetteer and National Land and Property Gazetteer. The network divides the Highway in Torbay into a set of uniquely referenced sections against which data can be stored and is digitally mapped on the corporate GIS, MapInfo.

Policy

Every street in Torbay, whether publicly maintainable or not, and all linking footway are divided into sections, each uniquely referenced. The sections are defined as junction to junction and sections are created or amended as new development works take place and new junctions or roads are built.

Every section within the network is assigned with a letter code relating to its classification (i.e. A, B, C etc), road number and a section code. These three pieces of information create a unique reference that allows each section to be individually identified (e.g. A380_40100).

In addition to this unique code, each section has its measured length, street name, start and end junction description, maintenance hierarchy and other assorted information used in managing the Highway network.

The network is fully digitised and stored within MapInfo, the corporate GIS, with the shape of old and new sections being drawn based on Ordnance survey maps.

The data held within the network is used to produce the National Street Gazetteer, which is produced by the Highway Maintenance Section and submitted to Ordnance Survey every 3 months.

New Roads and Street Works Act

Objective

The Highway Authority has a duty to monitor the performance of Statutory Undertakers works undertaken in the Public Highway from the planning of the works to the reinstatement of excavations. Street Works and Works for Roads Purposes are co-ordinated to reduce the disruption to users of the highway.

Policy

To implement the full range of inspection and defect procedures at the Statutory charging levels, including Section 74 (Charge for unreasonably prolonged occupation of the highway). To co-ordinate works on the highway.

Specification

5 stages of inspection are undertaken: excavation; backfill; permanent reinstatement; permanent reinstatement 6 months old and end of guarantee period.

A Random Sample of sites are inspected equating to 30% of the total numbers of opening notices for each Undertaker per annum.

Defect notices are issued when works fail to comply with Codes of Practice. These can be derived from a Random Sample inspection or an investigation of a third party report.

Chargeable amounts for defect site visits after the initial serving of notice are double the cost of the first inspection.

Co-ordination of Street Works is carried out to reduce the amount of disruption to users of the highway.

Streets meeting certain legal requirements can be designated as having Special Engineering Difficulties or Traffic Sensitive at certain times of the day.

Reference within other plans / documents

New Roads and Street Works Act 1991

Codes of Practice include:

Specification for Reinstatement of openings on the Highway

Co-ordination of Street Works

Inspections

Torbay Council Policies:

Traffic Sensitive Streets

Special Engineering Difficulty

Road Class (for reinstatement)

Patching

Objective

The Highway Authority has a duty to maintain the fabric of the highway to ensure users have a safe passage, based on the policies of the Local Authority.

Policy

To maintain the highway network in accordance with the Highway Safety Inspection Code of Practice.

Specification

Patching works will be instigated where the surface of the highway has suffered from either subsidence, cracking, erosion or a step in level.

Intervention levels are given in the Highway Safety Inspection Code of Practice in respect of each failure of the surface and in consideration of the usage of the highway.

Emergency situations may result in an interim repair being carried out until a permanent repair is conducted.

Patching work is undertaken in accordance with the Specification for Highway Works.

Reference within other plans / documents

Highways Act 1980

Highway Safety Inspection Code of Practice

Code of Practice for Maintenance Management

Specification for Highway Works

Pavement Café Permits

Objective

Pavement Cafés are regulated by virtue of permits granted under Highways Act, 1980 primarily to ensure the public safety and freedom of users of the Highway.

Policy

The permit contains a number of conditions, 24 at present time, which the permit holder is required to comply with; failure may ultimately result in cancellation of permit.

Specifications

All applications are acknowledged.

Sites are visited to check suitability – i.e. public highway, minimum 2m pedestrian footpath in addition to minimum 1.5m width for pavement café; other traffic hazards.

Notice to applicant for display in prominent position on premises for 28 days – advising public of application.

Notices to adjoining frontagers with an interest.

Letters to Ward Councillors inviting views and objections to applications.

Notices to Fire, Police and Ambulance Services of applications.

Notice to freeholder of premises if other than applicant.

File then prepared to include details of any objections together with recommendations for a decision by an appropriate officer under delegated powers from the Licensing Committee of Torbay Council. Some applications may be referred to the Committee for ratification if so required.

Following decision of Officer/Committee, the applicant is advised of outcome.

Permit issued and delivered – explaining requirements as to compliance with conditions attached.

An administration fee is charged to the applicant.

Enforcement of the conditions are by virtue of Highways Enforcement Officer in conjunction with local Police.

The Permits are granted in compliance with Highways Act, 1980 Part VIIA Section 115E.

Pedestrian Crossings

Objective

To provide a safe crossing facility where pedestrians experience significant delay and or danger in crossing the road.

Policy

The Council through the Torbay Local Plan, Revised Deposit Version seeks to encourage walking and improve pedestrian crossing facilities through Policies T2, T6, T7 and T8.

Policy S1.2 in the Torbay Local Transport Plan 2001-2006 also seeks to encourage walking.

Background

There are currently four types of pedestrian crossings;

a. Zebra Crossings

Zebra Crossings have the advantage of relatively low cost but must be installed only where they are the most appropriate type of crossing. To have priority over traffic pedestrians have to be on the Zebra Crossing markings.

This form of crossing is therefore not ideal where traffic speeds or volumes are high, or where pedestrian flows are so high as to dominate the crossing causing long delays to vehicular traffic.

b. Signal controlled crossings come in three forms;

Pelicans use far side pedestrian signal heads with a green man aspect, are demanded by a pedestrian push button and have a fixed duration of flashing amber to traffic concurrent with flashing green to pedestrians.

Puffins use near side pedestrian signal heads with an extendable all red crossing period which is demanded by both kerbside and on crossing detectors (to cancel demands which are no longer required).

Toucans use far side pedestrian and cycle signal heads and the same on crossing detection as the Puffin.

All signal controlled crossings can be fitted with tactile rotating cones which are positioned under the push button box as an aid to the visually impaired. In addition audible beepers are used in appropriate locations.

The justification for a formal crossing facility is determined through detailed site assessment and consideration of options.

Site assessment includes:

- site location
- carriageway type
- carriageway width
- footway width
- refuge island
- road lighting standard

minimum visibility
waiting/loading/stopping points
nearby junctions
other pedestrian crossings
school crossing patrol
skid risk
surroundings i.e. hospital, schools, bus station
traffic/pedestrian flow and composition
time to cross
difficulty in crossing
vehicle speed
personal injury accident frequency

Before installation it is essential to consult with the Police and give notice to the public. The Secretary of State must also be informed. The Road Safety Officer can offer instruction on the use of, in particular Puffin and Toucan Crossings, if there are old persons homes or schools in the vicinity.

Specification

Traffic Signs Regulations and General Directions 1994

Road Traffic Regulation Act 1984

Zebra Pedestrian Crossings Regulations 1971

Pelican Pedestrian Crossings Regulations and Directions 1987

Local Transport Notes 1/95, 2/95

Private Streets

Background

A number of roads within Torbay are not maintainable at public expense as adopted highway and are classified as private. Examples of private streets include carriageways, footways, linking footpaths, flights of steps and rear allies.

Responsibility for maintenance of private streets rests with the land owner/s although the Highway Authority can enforce action to undertake maintenance work through the Highways Act 1980.

Whilst the Highways Group maintains records of adopted highway it does not have records of land owners associated with private streets. This information would be available from the Land Registry provided the land has been registered.

There are two ways in which a private street can become maintainable at public expense and these are:

1. The Section 38 Agreement
2. Notice of Adoption under Section 228.

Under a Section 38 Agreement of the Highways Act 1980 the owner of the land agrees to make up a road across it to a standard set by the Highway Authority and then to dedicate the road as a public highway. It is important to note that there must be a dedication and that these agreements can only be entered into by landowners.

Where the owner of a right of way is not the owner of the soil and cannot make a valid dedication as a highway, Section 228 of the Highways Act 1980 is used. The developer makes up the road in the exercise of his right of way and it is then for the Highway Authority to give notice of adoption under Section 228. This procedure can be operated by the Highway Authority when any street works have been executed in a private street. It can be used when works have been completed under the Private Street Works Code and it can also be used when other people have carried out the street works. The Council is required to display a notice in a prominent position in the street declaring that it will become a publicly maintainable highway, subject to objections, one month from the day in which the notice was first displayed.

Policy

The Council does not fund works to improve private streets up to an adoptable standard but assists residents to fund the works themselves.

Public Rights of Way

Definitive Map

Objective

To keep the Definitive Map and its accompanying Statements up to date as the legal records for all public rights of way.

Policy

To keep the Definitive Map under review with regard to the procedures set out in the Wildlife & Countryside Act 1981, the Highways Act 1980 and the Countryside and Rights of Way Act 2000.

Specification

Adhere to the appropriate legislation.

Advise the public, developers and other interested bodies.

To consult with all relevant parties with regard to any changes suggested or proposed to be made to the Definitive Map and Statement.

To complete the review of the Definitive Map and Statement by 2026.

Reference within other plans / documents

The CROW Act 2000 requires the surveying authority to prepare a rights of way improvement plan, with regard to the local network and to review the plan in 10 years time.

To have regard to the relevant Acts that relate to the management of public rights of way.

Public Rights of Way

Maintenance

Objective

To assert and protect the public rights of way network and to ensure that the rights of the public to use and enjoy the network are also protected.

Policy

It is the duty of the highway authority to maintain all public rights of way as directed by the Highways Act 1980 and amended in parts by the Countryside and Rights of Way Act 2000.

Specification

To ensure the rights of way network is adequately signed.

Easy to use according to the nature of the land crossed by the route.

Landowners are made aware of their responsibilities when a path is obstructed.

To have due consideration to the environment when carrying out repairs.

To be guided by legislation when the route of a path is in dispute.

Retaining Walls

Objective

To ensure retaining walls supporting or adjacent to the highway are maintained in a condition such that public safety is assured.

Policy

The following Specification is the policy for inspection of highway retaining/boundary walls.

Specification

Highway retaining walls are split into two categories. Walls supporting the highway and retaining/boundary walls adjacent to the highway.

Highway retaining and boundary walls will be inspected if the condition is reported as dangerous by either a Highways Inspection or a member of the public.

The wall will be inspected by a suitably qualified Engineer within 24 hours.

Subsequent to the inspection the owner, be it the Highway Authority or otherwise, shall be informed of any works required.

Design and contractual supervision of new retaining walls constructed for the Highway Authority in accordance with required standards.

New replacement walls and maintenance works are procured either by competitive Tenders or by Torbay Council Contracting Divisions competitive rates.

Reference within other plans / documents

Highways Act 1980, Design Manual for Roads and Bridges

Road Closures

Objective

The Highway Authority may permit a temporary closure of a public highway to vehicular traffic in order to facilitate works to be conducted by persons licensed by the Authority.

Policy

Permission to close a highway will be given when there is no alternative method of carrying out works or events that would maintain traffic flow in any form.

Specification

Request for a road closure must be received in writing.

Notification must be given 3 months in advance of the proposed start date.

The Highway Authority will consult with other Authorities and interested parties over the effect of the closure, there is a statutory 5 day consultation period.

The promoter of the closure will advertise the closure in the local press and with on street signing.

The promoter will also confirm in writing, the traffic arrangements to the residents of the street being closed.

Access to properties in the affected area will be maintained for residents and Emergency Service vehicles.

The Highway Authority will design an alternative route for vehicles affected by the closure.

The Authority will design an alternative route for vehicles affected by the closure.

Road closure signs will be erected at each end of the street.

All costs incurred in the processing of a road closure are the responsibility of the works promoter.

Reference within other plans / documents

Highways Act 1980
Traffic Signs Manual
Road Traffic Regulations
Town Police Clauses

Road Condition Surveys

Objective

To monitor the condition of the roads in Torbay for safety, structural strength and functionality.

Policy

Torbay Council has adopted a policy of routinely measuring the roads using nationally approved equipment and techniques. The frequency and type of survey used is dependent on the Maintenance Hierarchy of the road. The frequencies are broadly in line with those recommended in the LAA Code of Practise for Highway Maintenance and are additional to the Highway safety inspection regime.

Survey Type	Strategic Routes	Main Distributor	Secondary Distributor	Link & Local Access Roads
Deflectograph	Whole network on cyclic basis every 4 years	A class roads on 4 year cyclic basis, others as required for Site Investigation	~	~
SCRIM	Whole network on cyclic basis every 2 years	Whole network on cyclic basis every 2 years	Whole network on cyclic basis every 2 years	As required based on Accident history
High Speed Monitor	Whole network on cyclic basis every 2 years	Whole network on cyclic basis every 2 years	Whole network on cyclic basis every 2 years	Selected routes as required
Coarse Visual Inspection (based on road class not maintenance hierarchy. Read as A, B, C and Unclassified)	Whole network on annual basis	Whole network on annual basis	Whole network on annual basis	Quarter of the network on cyclic basis

The results from these surveys are used to prioritise maintenance to the network on a needs basis. They provide information on the current condition of the network and can also provide an estimate for remaining life. The information on remaining life provides the council with the opportunity to conduct planned maintenance on the network before failure occurs.

The results from the surveys are used in a set of Performance Indicators, established both locally and nationally, to monitor the progress being made in maintaining the network.

The main survey techniques, used to monitor road condition, are deflectograph, SCRIM, High-Speed Road Monitor (or TRACS) and Coarse Visual Inspection.

Deflectograph is a vehicle-based survey, travelling at 2.5km/h, which measures the deflection of the road surface under a rolling standard load. The deflections measured are temperature corrected and used, together with road construction and commercial vehicle traffic flow information, to estimate structural residual life.

SCRIM (**S**ideways-force **C**oefficient **R**outine **I**nterrogation **M**achine) is a vehicle-based survey, travelling at a nominal 50km/h, which measures the wet road skidding resistance of the road surface. The measurements recorded are used to identify lengths of roads at or below Investigatory Levels defined for a range of different site categories. The site categories are defined, based on the road layout at any particular location, with higher or lower required levels matched to relative safety risk.

High-Speed Road Monitor (HRM) is a vehicle-based survey, travelling at normal traffic speed, which measures several road characteristics in a single pass. The parameters measured are longitudinal profile, transverse profile, rut depth, texture depth and the alignment functions of gradient, crossfall and radius of curvature.

TRACS (**T**RAffic speed **C**ondition **S**urveys) is a new advance in high-speed surveys and includes real-time surface crack measurement and a Global Positioning Survey in addition to the measures currently supplied. Both traditional HRM and TRACS surveys also offer the capture of a video image referenced to the road network.

Longitudinal and Transverse profile are measured using laser sensors and are used to assess the longitudinal ride quality and for transverse unevenness of the road.

Rut depth data is reported for both left and right wheel-tracks and is used to identify lengths where excessive rut depths exist. Excessive rut depths can indicate areas of structural weakness as well as causing functional problems for road users.

Texture depth data is reported for both left and right wheel-tracks and is used to identify areas where loss of texture has occurred. Road surface texture provides channels across the road surface to help water drain away and minimise the quantity of water left between vehicle tyres and the road surface.

Measurement of the alignment functions provides topographical information, which can be used during the assessment of maintenance schemes and design of any remedial treatments. Alignment of the road can be an important factor in road safety and is sometimes considered during analysis of road traffic accidents.

Coarse Visual Survey (CVI) is, as the name suggests, a visual assessment of road and footway condition in relation to nationally agreed parameters. The survey has been developed as part of the UKPMS (United Kingdom Pavement Management System). UKPMS is a systems approach, designed to standardise road assessment techniques and allow for national comparison of individual authorities network condition. UKPMS has been adopted by DETR for monitoring of the road network and a CVI survey and subsequent reporting of results, over the whole of the classified road network, is now a statutory requirement for local authorities. The use of CVI data, beyond performance Indicators, is still under investigation by Torbay Council and the policy may be amended when the investigation is complete.

Ranges of other condition surveys are also used occasionally, primarily for a specific purpose other than routine monitoring. These include Ground Penetrating Radar (GPR), Coring, Falling Weight Deflectometer (FWD) and British Pendulum Testing.

GPR and Coring are both techniques for identifying the depth and type of construction layers present in existing roads. GPR is non-intrusive and measures the velocity of radio waves passed through the road construction. These measures are then passed through a computerised processing method to identify distinct layer thickness within the road. Coring involves cutting a circular hole in the road, removing the contents intact as a solid 'core' and then manually measuring and identifying the materials contained in the layers. GPR provides continuous layer depth information along the road, with an accuracy of approximately 10% but usually requires a small sample of cores to be taken in order to 'calibrate' for material type. Coring provides accurate depth and material type information on the road but only at the individual core location.

FWD surveys measure the deflection of the road surface under a known impact point load. A set of eight geo-phones records the deflection at different radius distances from the point

of loading and models a deflection bowl on these measurements. The data is analysed, together with road construction and commercial vehicle traffic flow information, to calculate the elastic modulus of the bound layers and subsequent remaining structural life.

British Pendulum testing measures the skid resistance of the road surface at a single point using manually operated equipment. It provides a means of testing the skid resistance of a road surface in locations where it is not possible or suitable to conduct a SCRIM survey.

Safety Defects

Objective

The Highway Authority has a duty to maintain the fabric of the highway. The highway network is inspected at regular intervals with defects identified and recorded in accordance with the Highway Safety Inspection Code of Practice. This has also been introduced to determine what action is required to be undertaken for each circumstance found.

Policy

That defects be categorised for the purposes of response and repair according to the severity of the defect and the usage of the highway as determined in the Councils Highway Safety Inspection Code of Practice

Specification

Public Highway will be inspected on a cyclic basis to identify safety defects.

Defects can be identified as occurring with deterioration of the highway fabric, items placed on the highway surface and any item obstructing the free passage of the highway outside of prescribed limits.

Discovery of a safety defect will result in three possible stages of action:

Immediate Action – Protect the area with signing and guarding.

Temporary Action – Effect temporary repair.

Permanent Action – Effect Permanent repair.

The stage implemented may vary according to the nature of the defect and contractor / material availability.

Each report and subsequent action will be recorded in the Highway Management System.

If a safety defect involves a third party, formal notice will be issued on the third party to rectify the defect.

Reference within other plans / documents

Highways Act 1980

Highway Safety Inspection Code of Practice

Code of Practice for Maintenance Management

New Roads and Street Works Act 1991

Safety Inspections

Objective

The Highway Authority has a duty to maintain the fabric of the highway. In order to maintain the safe passage of users of the highway and to ascertain whether maintenance is required, safety inspections are undertaken.

Policy

That the public highway in Torbay be categorised for both footway and carriageways in consideration of usage. That safety inspections are undertaken on a cyclic basis in accordance with the categories, all as defined within the Highway Safety Inspection Code of Practice.

Specification

Highway Inspectors inspect the Public Highway in accordance with the specified frequency for each street.

Categories of inspection include streets inspected monthly, 3 monthly, 6 monthly and annually.

Footway inspections are carried out on foot whilst carriageway inspections may be carried out from a vehicle.

Intervention levels are applied to defects observed upon an inspection.

Each type of highway defect has varying appropriate courses of action determined from the severity of the defect.

All inspections undertaken are recorded.

Recorded information includes the name of the inspector, date and time of inspection, name of street being inspected and any safety defects observed.

Reference within other plans / documents

Highways Act 1980

Highway Safety Inspection Code of Practice

Code of Practice for Maintenance Management

Scaffolds

Objective

The erection of scaffolds on the public highway are regulated by virtue of the Highways Act 1980 Section 169 primarily to safeguard the public at large.

Policy

The following specification is the policy adopted to ensure compliance.

Specifications

A licence must be obtained from the Highways Authority before any scaffolding is erected on public highway.

Provisions of Section 169 must be strictly complied with, together with any requirements of the Council.

Traffic signs must be provided, where appropriate, to comply with New Roads and Street Works Act, 1991.

Scaffolding to be lit during hours of darkness.

Name and telephone number of scaffold company to be displayed on scaffold.

Scaffold must be kept and maintained in good order.

The licence must also comply with any request/directive given by the Highway Authority.

In addition to all the foregoing the Highway Authority may also impose conditions relating to times of work, erection/dismantling, in town centres or pedestrian sensitive areas.

Seats

Objective

To provide clean, safe seating in areas of significant beauty, opportune and requested locations.

Policy

Torbay Council has adopted the policy to provide seating on the public highway. This is not a legal requirement.

Seats will be provided in areas that are agreed and determined by the Highways Group. Generally these will be locations offering scenic views, near to bus stops, on steep gradients and adjacent to parks and public rights of way.

Memorial plaques will be fitted to existing seats wherever possible, the cost of the plaque and any maintenance work required to the seat will be charged to the individual ordering the plaque.

Maintenance (including cleaning) and replacement of existing seats will be undertaken on a priority basis. Aesthetic and general maintenance will be issued on a needs basis determined by the Highways Group.

The Highways Group has undertaken the responsibility of surveying all seats within the Highway Network on a yearly basis to assess any needed works.

Specification

New seats provided by Torbay Council will be "Streetmaster Chepstow" 1.8m long or similar unless otherwise stipulated for the area required i.e. a conservation area. All new seats are to be confirmed by the Highways Group.

Section 106 (Town and Country Planning Act 1990)
Section 278 (Highways Act 1980)

Objective:

Torbay Council as the Highway Authority have powers under the Highways Act 1980 and the Town and Country Planning Act 1990, to ensure that any alteration to a highway maintainable at public expense is carried out in accordance with its design guide.

Policy:

Torbay Council ensures that all alterations to the Highway are done so in accordance with The Highways Act 1980. Any private developer who provides a new development that results in the need to alter the highway must consult Torbay Council and conform to the requirements set forth. Alterations to the highway may be subject to the restrictions described in the local plan or specific strategic policies. Areas of regeneration may require fundamental changes to the highway network to allow for the increased traffic flows, which will form part of the planning process.

Any developer wishing to alter the highway will, after approval is granted, enter into a Section 106/278 Agreement with the Authority. A bond will be lodged with the Authority that will cover the full cost of the works should the developer fail to complete the agreement. A fee of 6% of the value of the works will be paid to the Authority to cover supervision and administration costs incurred.

Specification:

All construction work is to be in accordance with 'Specification for Highway Works'.

Section 38 Developments

Objective

Torbay Council as the Highway Authority has a legal duty under the Highways Act 1980, to ensure that any construction of a New Development requested to become a highway maintainable at public expense is carried out in accordance with its design guide.

Policy

Torbay Council ensures that all new constructed developments requesting to become adopted Highway are done so in accordance with The Highways Act 1980. Any private developer who provides a new development that results in the Highway to become maintainable at public expense must consult Torbay Council and conform to the requirements set forth. The highway may be subject to the restrictions described in the local plan or specific strategic policies. Areas of regeneration may require fundamental changes to the highway network to allow for the increased traffic flows, which will form part of the planning process.

Any developer wishing to request for the highway to become adopted will, after approval is granted, enter into a Section 38 Agreement with the Authority. A bond will be lodged with the Authority that will cover the full cost of the works should the developer fail to complete the agreement. A fee of 6% of the value of the works will be paid to the Authority to cover suspension and administration costs incurred.

Specification

All construction work is to be in accordance with 'Specification for Highway Works' of the Manual of contract documents for Highway works (H.M.S.O May 2002)
Highways in Residential and Commercial Estates, Design Guide Devon County Council 1996

Reference within other plan / documents

Town and Country Planning Act 1990

The Specification for Highway Works 1991 with any subsequent amendments

Control of Pollution Act 1974

Chapter 8 of the Traffic Sign Manual "Traffic Safety Measures for Roadworks", published May 1991

The Construction (General Provisions) Regulations 1961

Guidance Note GS7 (Revised 1989) issued by the Health and Safety Executive

The New Roads and Street Works Act 1991

British Standard Specifications (BS)

European Specifications (EN)

Simplified Tables of External Loads on Buried Pipelines

Code of Practice for Laying Precast Concrete Block Pavements, published jointly by the Cement and Concrete Association, the County Surveyors Society and the Interlocking Paving Association (Interpave)

Recommended Positioning of Utilities Mains and Plant for New Works (1986)

Department of Transport's Design Manual for Roads and Bridges, Volume 7 "Pavement Design and Maintenance"

Department of Transport's Manual for Streets.

Signing and Guarding of Works Sites

Objective

To conduct and regulate works on the highway incorporating signing and guarding for the safety of site operatives and the users of the highway.

Policy

Any persons occupying the highway to conduct street works or works for road purposes will protect themselves and members of the public with the use of signing and guarding in accordance with Chapter 8 of the Traffic Signs Manual.

Specification

Signing and guarding will be placed out prior to any physical works being undertaken. Particular attention will be given to the needs of disabled persons when installing signing and guarding.

Work sites will be designed and risk assessed for safety prior to the undertaking of works. Responsibility for the maintenance of signing and guarding on active work sites is with the site operatives.

Safety equipment must be kept clean and in good condition.

Advanced warning signs will be placed at visible locations without causing unnecessary obstruction.

Identification boards will be positioned on site giving details of who is conducting the works and an emergency contact number.

Upon completion of works, all safety equipment will be removed from the highway.

Slow moving operations can utilise Mobile Works techniques where static signs are not required but vehicle mounted.

Mobile Works require vehicles to be conspicuously coloured and employ roof mounted flashing amber beacons.

Site operatives will use personal protective equipment.

Reference within other plans / documents

Highways Act 1980

Chapter 8 of the Traffic Signs Manual

New Roads and Street Works Act 1991

Health and Safety at Work etc Act 1974

Signs – Fixing to Walls

Objective

To avoid congesting footways and to remove the need for frames Torbay Council will, wherever possible, fix street nameplates (and occasionally other signs) to walls.

Policy

Torbay Council has adopted the policy to try and fix new street nameplates and similar to walls wherever possible. Also if placing directional signs could cause a dangerous obstruction they may also be fixed to boundary walls of properties.

When a new site for a street nameplate is proposed and would be advantageous to be attached to a private boundary wall, the occupants are notified and permission is asked to confirm consent in writing to the request. A new sign will not be placed on a private boundary unless permission is given in writing prior to placement of sign.

When informing the residents of the property a plan showing the approximate size and location will be included with the request along with a copy of the letter attached for the owner to sign and return.

Although the sign will be attached to a private residence Torbay Council will maintain the sign and its fixings.

Specifications

Specification for Highway works.

Signs - Pedestrian

Objective

To direct pedestrians safely and effectively on the Public Highway.

To warn pedestrians of dangers on the highway (can be permanent or temporary).

To inform and instruct pedestrians of a statutory prohibition.

Policy

In accordance with The Traffic Signs Regulations and General Directions 1994.

Specification

Adhere to recommended advice and standards, including:

The Traffic Signs Regulations and General Directions 2002 : Size, layout and colour.

Traffic signs manual Chapters 1, 3, 4 & 7.

Department for Transport (DfT) advice notes.

Chapter 8 & Safer Road Works Ahead (temporary signing for roadworks).

British Standard for sign manufacture – BS873.

Reference within other plans / documents

The Highway Code

Signs - Traffic

Objective

To direct motorists safely and effectively around the highway networks.

To warn motorists of dangers on the highway (can be permanent or temporary).

To inform and instruct motorists of a statutory prohibition on the highway.

Policy

In accordance with The Traffic Signs Regulations and General Directions 1994.

Report No ENV/168/00 to Environment Services Committee (19th September 2000) for direction signing (including tourism).

Specification

Adhere to recommended advice and standards, including:

The Traffic Signs Regulations and General Directions 2002 : Size, layout and colour.

Traffic signs manual Chapters 1, 3, 4 & 7.

DfT advice notes.

Chapter 8 & Safer Road Works Ahead (temporary signing for roadworks).

British Standard for sign manufacture – BS873.

Reference within other plans / documents

The Highway Code

Appropriate Traffic Regulation Order

Skid Resistance

Objective

Skid resistance surveys are conducted to measure whether the surface of the carriageway provides adequate skid resistance compared to national standards. It is used to help maintain safety for the public travelling within Torbay.

Introduction

A Sideways Force Coefficient Routine Investigation Machine (SCRIM) is commissioned by Torbay Council, as part of the South West Counties Consortium, to provide a wet road skidding measurement of the road surface.

Policy

Surveys are undertaken on a cyclical basis on National Primary, County Primary, County Secondary and Local Distributor roads using the SCRIM survey vehicle. The highways selected are surveyed in one direction each year with the specified direction, alternating year on year. Additional surveys are also undertaken on other category of roads on an ad hoc basis as required using both the SCRIM vehicle or Pendulum tester.

In the event that a section of road has MSSC (Mean Summer SCRIM Coefficient) values at or below the specified Investigatory Levels (IL), a site investigation is undertaken to determine the risk of an accident problem occurring. The exact scope for the investigation is not specified but include items such as:

- Skidding resistance of the site
- Accident history
- Validity of SCRIM data
- Surface Texture
- Signing and Road Markings
- Lighting
- Other Hazards

Figure 1 – SITE INVESTIGATIONS

MSSC Deficiency	
=>0	SITE NOT DEFICIENT
<0 to 0.05	NO IMMEDIATE ACTION REQUIRED, INVESTIGATION TO BE UNDERTAKEN SURFACE TREATMENT WORKS PROGRAMMED 'IF DEEMED NECESSARY' ON PRIORITY BASIS
0.05 to 0.10	SIGNS TO BE ERECTED AND INVESTIGATION TO BE UNDERTAKEN SURFACE TREATMENT WORKS PROGRAMMED 'IF DEEMED NECESSARY' ON PRIORITY BASIS
>0.10	SIGNS TO BE ERECTED AND INVESTIGATION TO BE UNDERTAKEN IDENTIFIED PROBLEMS OTHER THAN SURFACE CONDITION TO BE ADDRESSED SURFACE TREATMENT WORKS PROGRAMMED ON PRIORITY BASIS

If, following the investigation there is an unacceptable risk of an accident problem occurring due to low skidding resistance then surface treatment must be programmed and in the interim warning signs erected.

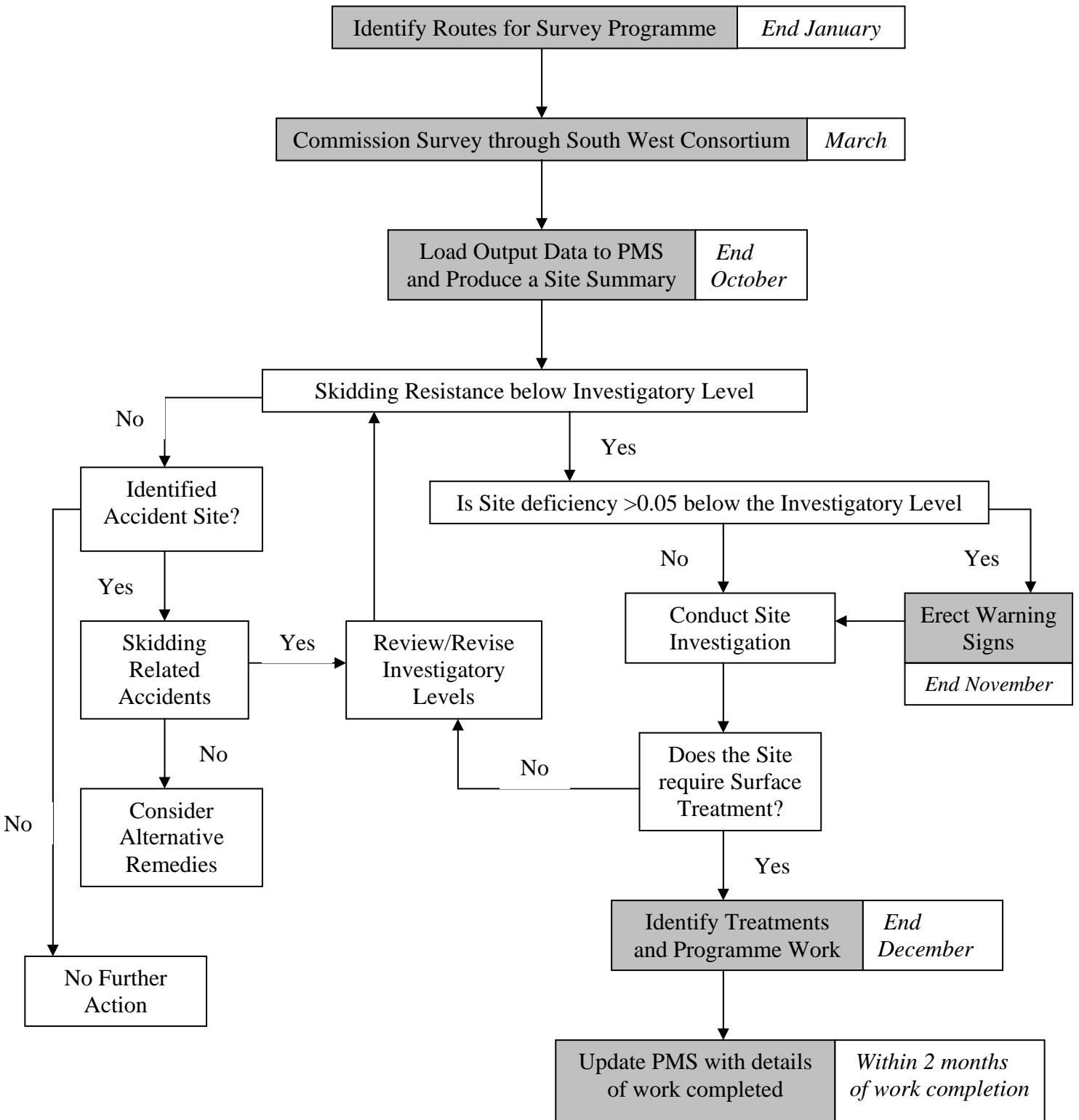
As described above, action is only taken if the site investigation reveals it to be necessary and SCRIM results alone are not to be the basis to determine if instant surface treatment is required.

While accepting the logic of this approach, it is considered that the 'no action' option should not be applied where the MSSC is significantly below the Investigatory Level. The limits of Skid resistance deficiency at which different actions are to be applied are presented in Figure 1.

In addition to the consideration of measured skid resistance as part of a site investigation, if necessary an assessment of reasons when the survey may not be representative e.g. an exceptionally dry summer, extraordinary traffic usage, surface contamination can all create conditions for lower than normal MSSC values. An assessment should also be made to determine if the site has reached its equilibrium level of skidding resistance or whether it is likely to fall further still.

The procedure for identifying and treating sites with skidding resistance problems is detailed in Figure 2.

Procedure for identifying and treating sites with Skid Resistance Problems.



Skips

Objective

The depositing of skips on the public highway are regulated by virtue of Section 139 Highways Act 1980, to ensure the safety of pedestrian and vehicular traffic.

Policy

The following Specification is the policy for regulating skips on the highway.

Specifications

A licence to deposit a skip on a highway must be obtained before a skip is so placed.

On receipt of application, if the area is not known it is checked for suitability before licence issued by Highways Inspector (Check for safety of public – vehicular and pedestrian)

Conditions attached to licence include:-

- a) skip to be properly lighted during hours of darkness
- b) skip to be clearly and indelibly marked with owners name and/or address and phone number
- c) skip to be removed as soon as practicable after it has been filled
- d) that each of the Conditions subject to which permission granted is complied with and any failure is an offence liable to a fine.

A number of other Conditions are included to prevent harm to the public by virtue of mixture of items placed into or falling onto highways.

The Highways Inspector may also attach extra conditions as he sees appropriate in the particular circumstances.

The owner of the skip shall remove or reposition, or so cause to be, at the request of the Highway Inspector. Failure to comply with this request or conditions as set out is an offence. The skip may be removed or repositioned by the Highway Authority and reasonable costs for such works are recoverable from the skip owner.

Street Furniture

Objective

Street furniture consists of items placed on the highway to provide safety and assistance to highway users and to improve the attractiveness of the environment. These items include:

- bollards
- seats
- railings
- planters
- hanging basket posts
- signs

Policy

The design and location of street furniture on the public highway has to be considered to take account of safety and maintenance requirements. The design and location of street furniture is therefore at the discretion of the Highways Group.

Specification

The siting of street furniture on the highway should be in accordance with Chapter 1 of the Traffic Signs Manual. Fixing of the items onto the highway should be in accordance with the Specification for Highway Works.

Reference within other plans / documents

- Chapter 1 of the Traffic Signs Manual
- Specification for Highway Works
- Design Manual for Roads and Bridges
- Code of Practice for Maintenance Management

Street Lighting

Objective:

To form an intrinsic part of the Council's sustainable transport policy by helping to increase the use of existing and new highways after dark.

To provide the community with a sense of well being, improve safety, reduce crime and fear of crime, improve commerce and generally improve the night scene making sustainable non-motorised as well as motorised transport more attractive and friendly.

Policy

To achieve a structured and coherent approach to the provision of lighting on public highways, within the objectives of the Authority.

All new lighting schemes to be designed to relevant standards as laid down in BS5489 parts 1 – 10 or CEN Road Lighting Standard pr EN 13201

Provision and maintenance of lighting to be carried out in a sustainable manner taking account of the need for energy conservation and the requirements of the Council's 'Carbon Management Programme', including consideration of light pollution.

To adopt a Best Value approach as laid down in the new highways code of practice when considering policies and type of equipment used.

To consult with public organisations and police when considering implementation on new lighting schemes, and take into consideration their wishes and priorities.

To adopt a Duty of Care compliant with the requirements of Health and Safety legislation for electrical installations.

To have routine maintenance programmes to ensure structural integrity, electrical safety and aesthetic appearance of the stock.

Specification

All works and materials to be compliant with relevant documents and manufacturers recommendations.

Reference Within Other Plans/Documents

BS 5489 Parts 1 – 10 CEN Road Lighting Standard pr EN 13201 Crime and Disorder Act 1998

IEE WIRING REGULATIONS 16TH Edition 1991

Various ILE TECHNICAL REPORTS

Torbay Council's 'Carbon Management Programme'

Recommendation contained within Highway Management Best Value Review

Street Naming and Numbering

Objective

To provide and maintain a sustainable numbering system to ease delivery to and location of individual properties.

Policy

Torbay Council is obliged to maintain and update any naming and numbering systems within the network under Clause 64 of the Town Improvement Clauses Act 1847. They also have a duty to inform all concerned of the postal addresses of new developments and areas ready for adoption.

When a new address is requested it is always preferred for the property to keep a number. This is for ease of location and is especially useful for emergency services etc.

Once a new address has been checked against the database it is confirmed to the occupier. On a regular basis all information that has been updated is compiled and sent to a comprehensive list of contacts including Royal Mail, utility companies, emergency services etc.

On receiving a property name update the request is checked against a database to confirm that the address will not be located close to a similar property with the same name causing a conflict. Any address that causes concern can be checked with the local delivery office for advice before the final decision is made.

Torbay Council has the right to decline a requested address if it is felt that it would create problems for deliveries and emergency services. The Highways Group determine the final decision on the naming and numbering of a property and street.

Torbay Council can not issue postcodes for any address within the district. It is the duty of the Royal Mail to attach postcodes to new and updated addresses.

On naming a new or existing road a name will be chosen that follows any existing themes in the area, no living person's name will be used and names with a local connection are preferred. The name given to the road should reflect the type or layout of the road i.e. "close" or "terrace" as set out in specifications below.

Specifications

Although there is no specification for the updating of the compiled list of addresses. Torbay Council has taken steps to update on a monthly basis.

Set out below are the guidelines for naming and numbering single properties, multiple property developments and new/existing streets:

Mews – A converted stables or barn, therefore only 1 or 2 buildings in a complex with separate name to existing street

Court – An open space enclosed wholly or partly by buildings or circumscribed by a single building

Terrace – A group or row of houses or apartments possibly on raised or sloping ground

Close – An adoptable no through road with many possible buildings.

Structural Maintenance

Objective

Structural Maintenance is the term used for work undertaken to increase the structural strength of the carriageway construction allowing the highway to perform satisfactorily for the duration of its design life.

Policy

Structural maintenance is funded through both the Council's revenue budget and capital budget in conjunction with the Local Transport Plan. On receipt of condition survey data, schemes are prioritised in order of overall condition by considering safety, structure and functionality.

Specification

Works for structural maintenance would be undertaken in accordance with the requirements of the Specification for Highway Works

Reference within other plans / documents

Local Transport Plan

Code of Practice for Maintenance Management

Specification for Highway Works

Design Manual for Roads and Bridges

Surface Dressing

Objective

Surface dressing is a treatment applied to carriageways, and to a much lesser extent, footways, where a bituminous film is sprayed on the surface and stone chippings spread onto the binder.

Surface dressing is an efficient and economic method of improving an existing surface and provides the following benefits:

- Improves skid resistance of surface depending on the polished stone value of the aggregate.
- Seals surface against the ingress of surface water.
- Arrests surface deterioration.
- Enhances appearance of the highway by providing a uniform colour and texture over patches and joints.

Policy

An annual programme of carriageway surface dressing work is prepared and contracted out for work to be undertaken during the spring.

The highway condition surveys identify which, if any, carriageways have a skid resistance deficiency. From investigation of the deficiency and risk, where considered necessary, these sites would form the highest priorities for the next surface dressing programme. Other sites are prioritised from those where it is known that the surface is deteriorating or heavily patched.

Specification

The specification is 'Specification for Highways Works'. Surface dressing works within Torbay are undertaken generally in accordance with recommendation made in the Code of Practice Road Note 39 published by the Highway Agency.

Reference within other plans / documents

Road Note 39 published by the Highways Agency.

Design Manual for Road and Bridges published by the Highways Agency

Code of Practice for Maintenance Management published by the DETR.

Surfacing – High Friction

Objective

High friction surfacing is a thin veneer surfacing material used where a high skid resistance is required. It is normally used on the approaches to signal controlled junctions, pedestrian crossings and roundabouts.

Policy

When undertaking major maintenance work to sections of the highway network in Torbay, the requirements of Table 2.1, Section 3, Volume 7 of the Design Manual for Roads and Bridges will be met.

Where a minimum PSV of 70 is required high friction surfacing complying with Clause 924 of the Specification for Highway Works will be used.

High friction surfacing is available in a small number of colours to be used as specified below unless otherwise agreed by the Highways Group:

Approaches to give way lines at roundabouts, steep gradients and sharp bends	-	grey
Approaches to stop lines at traffic signals, pedestrian crossings, railway level crossings	-	buff
Road safety and traffic calming features	-	red
Cycle lanes	-	green

Specification

High friction surfacing will be laid in accordance with the above policy in conjunction with carriageway resurfacing and reconstruction schemes.

All works are to be undertaken in accordance with the Specification for Highway Works.

Surfacing Materials

Objective

Torbay Council has to balance the needs of a holiday resort with the use of materials on the highway befitting a major holiday destination but at the same time find materials that possess a 20-year design life. Torbay also has large residential areas away from the main centres, which need to be maintained with alternative materials.

To help provide long term efficient maintenance to the outer town areas, Torbay Council has a long-term policy to replace the slabbed and concrete footways with bitmac, which will help reduce trip accidents and reduce the maintenance required.

Torbay Council is constantly striving to find environmentally friendly materials and seeks to recycle and use recycled materials where possible. The authority sets out in its contracts the need to use sustainable products and tenderers are asked to take this into account as part of the tender process.

Specification

All construction work is to be in accordance with 'Specification for Highway Works' of the Manual of Contract Documents for Highway Works (H.M.S.O. May 2002).

Traffic Counts/Counters

Objective

Torbay Council collects traffic data for use in specifying maintenance engineering works, submissions to the Department for Transport (DfT) and for use in designing in house traffic schemes.

Specification

The Traffic Team operates a number of different data collection devices including: -

Manual Traffic Counts involving the use of Traffic Count Enumerators

Speed Detection Devices, either covert or with built in speed display such as Speed Visor

Use of automatic vehicle counters on fixed sites using buried induction loops, there are 15 such sites on carriageways and 3 on cycle facilities.

Portable automatic counters for use on sites without permanent detector loops.

The data collected from these surveys is required to assess the requirement or possibility of creating traffic improvement schemes and is used extensively for reporting to the DfT in areas such as accident trends and traffic delays.

The speed data is used for determining appropriate speed limits or assessing traffic calming or road safety improvement schemes.

The use of portable 'Speed Visor' type signs and in some situations fixed vehicle actuated signs can also be used as a form of low cost speed reduction measure in their own right.

Traffic Regulation Orders

Objective

To promote road safety and the free passage of vehicles on the public highway.

Policy

Torbay Council's Parking policy 2006 or subsequent revisions. There is currently a moratorium in force on any new applications due to the costs associated with processing orders. This is subject to an annual review.

Background

In general waiting restrictions (double and single yellow lines) should only be considered for the benefit of all road users in order to promote road safety and the free passage of vehicles.

Restrictions should only be considered where displaced parking will not cause additional parking problems in adjoining roads.

Restrictions should not be considered in isolated areas where enforcement would be difficult.

Appropriate use of restrictions:

- a) Parking at major junctions causing hazards and where visibility is continually obstructed
- b) Collision risk due to parking on busy narrow roads, subject to width of road
- c) Parking obstructing access for emergency vehicles, (i.e. private residential homes and old peoples flats, etc.)
- d) Serious obstructions to through traffic on major routes
- e) To prevent danger to pedestrians
- f) At a location where there are parking related accidents

Inappropriate use of restrictions:

- a) Where parking obstructs a view from a property or noise associated with parking
- b) Parking obstructing access to private property
- c) At minor and residential cul-de-sacs

Note: (Highway Code Regulations)

"DO NOT park your vehicle or trailer on the road where it would endanger, inconvenience or obstruct pedestrians or other road users. For example, do not stop – "

- a) on a footpath or pavement
- b) near a school entrance
- c) at or near a bus stop or taxi rank
- d) opposite or within 10 metres of a junction
- e) at a lowered kerb to help wheelchair users
- f) in front of entrance to a property
- g) anywhere that would prevent access for Emergency Services

Specification

The Traffic Signs Regulations and General Directions 2002.
Traffic Signs Manuals Chapters 3 and 5.

Traffic Signals, Urban Traffic Control & Variable Message Control

Objective

To design, install, operate and maintain traffic signal and signalised pedestrian crossing facilities in order to manage traffic and reduce conflicts between road users.

To also operate and manage the Urban Traffic control (UTC)/SCOOT (Split, Cycle and Offset Optimisation Technique) systems in order to maximise the capacity of the road network by co-ordinating signal timings, car park/diversion variable message signing and fire service greenwaves.

Background

Before the development of microprocessor technology in the late 1970s, only large cities could afford Area Traffic Control Systems. The computer revolution allowed the development of Compact UTC systems. Torbay had the worlds first Compact UTC system. Torbay currently has 50 traffic signal controlled junctions, plus 18 single & 8 double Pelicans/Puffins. Of these, 38 junctions and 15 Pelicans/Puffins are on UTC, of which 25 junctions and 9 Pelicans/Puffins are under SCOOT control or are capable of running SCOOT. The UTC also controls 5 car parks with a network of Variable Message direction signs.

Policy

To maintain the safe and effective operation and maintenance of signalised installations.

To minimise overall delay on the network by use of the UTC/CCTV systems.

To replace inefficient and obsolete equipment.

To ensure all equipment is monitored for faults by the use of the UTC System or the Remote Monitoring System

Reference with other plans/documents

ZPPPCRGD 1997

LTN 1/95, 2/95, 1/98

Guidance on the use of Tactile Paving Surfaces

TSRGD 1994

Design Manual for Roads and Bridges, Volume 8, section 1: MOVA system of traffic control at Signals; TD24/97; TA84/01

Design Manual for Roads and Bridges, Volume 6, section 2: TD50/99

DTLR advice notes and Standards TD 33/90; TA 60/90; TD 7/80; MCN1352C; Circular Roads 5/73; MCE0137; TA 8/80; TA 12/81; TA 15/81; TA 16/81; TA 18/85; TR0141C

Tree management

Objective

Highway trees are inspected at regular intervals, and where necessary maintained by appropriate pruning to retain visibility for highway users, clearance above pavements and carriageways for pedestrians and vehicles, while adding to the amenity of the street or road in which they grow.

Policy

Highway trees will be inspected during the growing season and the dormant season, to assess:

- The health and safety of the tree

- Any work that would be required to allow the tree to grow in a healthy and aesthetically pleasing way

- Any work needed to provide clearance for pedestrians and vehicles

- The need for removal of epicormic (sprout) growth

Tree works are carried out by contractors, on the Council's behalf, using British Standard BS 3998:1989 as a minimum standard.

Reference within other plans / document

Highway tree work is undertaken by a private contractor and supervised by the Amenity and Environmental Services Division of the Environment Directorate.

Vehicle Crossing

Objective

To allow highway users to park their vehicles off the highway, to reduce the number of parked cars on the carriageway within residential areas.

Policy

Torbay Council has adopted the policy to, wherever possible; positively encourage highway users to park their vehicles off the highway network by allowing the construction of vehicular crossings.

The customer has the option to employ either Torbay Council Direct Services or a nominated contractor. Any contractor will need to be approved by Torbay Council's highway Management Team and will require a licence to excavate in the Public Highway. They need adequate Public Liability Insurance, as advised by their insurance broker and be certified by an approved body as competent to undertake the requirements of "Chapter 8 of the Traffic Signs Manual issued by the DfT."

Torbay Council's Planning Department must be consulted, and planning permission obtained if required, for any works to be executed within the boundary of the property to be served by the footway crossing, or if the crossing gives access to a Classified Road. A vehicle crossing can not be provided unless there is the specified area within the property boundary (6.0x3.2m). Planning permission may not be granted where a vehicle crossing will be near a junction or where visibility is poor. Vehicle crossings on busy roads may also require a vehicle to enter or exit in a forward gear.

The Riviera Housing Trust must be consulted if the property is, or ever has been, Council owned.

The construction of a new vehicle crossing should visually match crossings currently installed in the road and to be in accordance with the standard details supplied by Torbay Council. Torbay Council's Highways Management Team must be consulted as to exact construction type.

If an unauthorised crossing has been constructed or a vehicle is regularly driven over the footway, Torbay Council has powers, under the Highways Act 1980, to serve notice and recover costs as a result of any subsequent works executed.

2.5m is the minimum crossing width with either taper/dropped kerb or quadrant kerb depending on existing in area.

Specifications

The Specification for Highways Works

Winter Service

Objective

This service is provided to maintain availability and reliability of the highway network during the winter months from October through to April.

Policy

Recent legal judgement has concluded that there is no duty upon authorities to remove ice from highways under the general responsibility to maintain the highway but this does not remove liability in all circumstances. However, there is a duty upon authorities to remove any obstruction of the highway resulting from accumulation of snow.

Torbay Council publishes an annual Winter Service and Emergency Plan detailing policy and service arrangements. Importantly, it details the approved salting network.

Specification

The salting network includes A & B classified roads, strategic C classified roads, strategic bus routes not identified in above categories, adopted highway adjoining entrances to hospitals, fire stations, ambulance stations, police stations and Royal Mail establishments and other strategic routes historically known to require treatment.

Through a consortium of South West Highway Authorities specialist weather forecasting information is provided by the Met Office.

The forecast information is enhanced daily by a specialist consultant to advise which roads within the salting network are likely to fall below freezing point.

Salting and snow clearance work is undertaken by the Council's Contracting Division as instructed by the Highways Group in accordance with the Winter Service Plan.

Reference within other plans / documents

Code of Practice for Maintenance Management

Winter Service and Emergency Plan



Highways Management, Resident & Visitors Services,
Roebuck House, Torquay TQ2 5TF