Executive Summary

Neath Port Talbot County Borough Council's Highway Asset Management Plan (HAMP) provides an integrated framework for the delivery of highway maintenance services across the Authority's road network and optimises resources for the management of the highway infrastructure.

The production of the plan has brought together practitioners for the different asset groups within the Council and follows the principles established nationally in Wales through the County Surveyor's Society.

The purpose of the Highway Asset Management Plan is to ensure the delivery of highway services in an intelligence led and customer responsive way. This approach will ultimately deliver greater value for money and help achieve key council goals and objectives.

Asset management requires a reliable knowledge of asset components and involves developing and maintaining comprehensive inventory and condition data. It also requires understanding individual asset group lifecycles and how long components will last. This knowledge provides the basis for predicting the annual level of investment required to deliver an appropriate level of service in the most cost effective manner.

An asset management approach to Highway infrastructure provides a framework for informed decision making. This plan sets out the management arrangements required to ensure the benefits of investment are optimised and that the highway asset is managed to meet the expectations of the highway user, within the context of the Council meeting its statutory duties as the Highway Authority.

1 Introduction

1.1 Highway Asset Management Planning

Asset management is a process intended to ensure that public infrastructure is managed cost effectively and that money spent on the asset is put to the best use. To this end, the following definition of asset management contained within the County Surveyors Society Framework for Highway Asset Management has been accepted by Neath Port Talbot County Borough Council:-

"Asset management is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future users"

"The adoption of asset management has been proven to provide significant financial benefits" as determined by the review of accounting, management and finance mechanisms for Local Authority Transport Infrastructure Assets, final report published in June 2008. This plan sets out how Neath Port Talbot CBC intends to access the potential benefits founded on the principles of:-

- **Affordable standards:** the plan establishes standards that can be afforded and communicates them such that the public know what service to expect.

- **Long term planning**: the plan covers a set time period to ensure the right balance of short term fixes, preventative actions, and planned replacement of aged assets.

- **Appropriate Budget allocation:** the plan identifies data and analysis concerning our assets to inform decisions about how best to allocate finite resources. It also identifies gaps in knowledge and associated actions.

- **Management of risk**: Within the context of long term planning and the setting of standards and budgets, the plan aims to gauge and manage the risk associated with decisions made.

The production of the Plan has brought together practitioners responsible for the different asset groups within the Council and follows the principles established nationally in Wales through the County Surveyors Society.

This plan needs to be read in conjunction with the Council's Highway Maintenance and Winter Maintenance plans.

1.2 Drivers for Change

In July 2005 the Roads Liaison Group published "Well Maintained Highways" the Code of Practice for Highway Maintenance Management. This Code emphasizes the need to establish a logical

management system in order to deliver value for money in highway maintenance. The Code recognises the need for local flexibility implied by the new focus on the needs of users and the community. It encourages Authorities to respond enthusiastically and creatively to the challenges posed by Best Value, The Wales Programme for Improvement and sustainability.

The objectives of the Code of Practice are:

- To encourage the adoption of asset management planning as a means of demonstrating value for money in the delivery of highway maintenance, consistent with the wide principles of integrated transport, sustainability and Best Value

- To encourage the development, adoption and regular review of policies on 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, 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, the rectification of defects arising from safety inspections, and investment priorities.

- To encourage continuing innovation in the procurement of highway maintenance services, whilst complying with high standards of corporate governance.

In line with the Code of Practice, Neath Port Talbot has established a Highway Maintenance Plan which aims to:

- Maintain safe passage for highway users.

- Protect the asset value of the highway.

- Ensure consistent standards of maintenance across the County Borough relative to road usage.

- Ensure expeditious movement of traffic by complying with the Traffic Management Act.

- Establish a “Needs Based” programme for the maintenance of the network.

- Target resources and maximise the benefit from available funds.

- Facilitate technical and financial monitoring in order to establish trends in highway condition and to assess achievement against expenditure.

- Provide a framework for reviewing policies and standards and for developing strategies.

- Implement the principles outlined in the Code of Practice for Maintenance Management; and,

- Ensure that all highway maintenance is undertaken with due regard for environmental considerations.

As well as endorsing the above aims and objectives implementation of the HAMP will support:

- The introduction of Whole of Government Accounts (WGA) and specifically the CIPFA Transport Asset Code.

- The desire of the Welsh Government to see authorities use asset management as a framework for the maintenance and

development of highways, and to maximise the cost benefits of investment.

- The pressing need to manage ever increasing budget pressures resulting from the national financial position.

- The introduction of the Prudential Code.

- Arresting the ongoing deterioration in some Highway Assets.

- The targeting of increasingly scarce resources to best effect.

- A positive response to increasing public expectation.

- Links to Communities and promotion of economic wellbeing.

- Corporate drives towards the regeneration of coastal and valley communities.

- Continuing requirements to improve safety and reduce risks to highway users.

- The implementation of defendable strategies in the context of the Association of Chief Police Officers Road Death Investigation Manual.

- Compliance with Department for Transport (DfT) booklet "Maintaining a vital Asset" and,

- Compliance with Code of Practice for Highway Maintenance Management

1.3 Progress to Date

This is the fourth update of the Neath Port Talbot CBC Highway Asset Management Plan first produced in 2006. Some of the significant actions taken in the intervening periods include:-

- Development of an in-house condition survey for the un-classified carriageway network and footpaths which is used to inform works programmes.

- Identification of inventory and condition data for safety barriers from which a maintenance programme was developed and actioned.

- The setting up of an inventory database and replacement system for highway signage.

- A review of the council's street lighting following life cycle analysis culminating in a £21 million investment programme to replace aged stock financed through prudential borrowing as part of the Council's Forward Financial Plan.

- A drainage review which has created a comprehensive database of the culverts, gullies and ditches from which improved maintenance schedules have been produced improving cyclical maintenance.

- An updated programme of works to strengthen substandard bridge decks, parapets and other structures.

- The completion of the strategic Port Talbot Peripheral Distributor Road (now named Harbour Way) providing an alternative diversion route off the M4 and opening up the former docks area for regeneration.

1.4 Council Expectations from the HAMP

The Council expects, through the continued refinement of The Highway Asset Management Plan, to continue development of a more planned and holistic approach to maintaining and improving highway assets for users, in line with its Statutory Duties, that maximises return on investment.

1.5 Corporate Asset Management within Neath Port Talbot CBC

Neath Port Talbot County Borough Council is committed to continuous improvement. The Corporate approach to Asset Management, particularly in the management and use of the Council's property and highway infrastructure assets, forms part of their commitment in support of the objectives of the Single Integrated Plan (SIP), NPTCBC being a Local Service Board Partner

The Corporate strategy helps to:

- Promote a corporate approach to the management of assets in pursuit of corporate aims and objectives.

- Secure continuous service improvement and build an understanding of the importance of assets in supporting service delivery.

- Manage property and infrastructure holdings and develop information covering their sufficiency, suitability and cost.

- Manage risk across the Council's range of assets.

- Ensure that capital projects are delivered on time and within budget.

1.6 Goals and Objectives of Highway Asset Planning

The main objectives of this plan are:-

- To identify the extent, condition and value of the Council's highway infrastructure.

- To understand asset and maintenance treatment lifecycles

- To enable the production of informed Works Programmes

In mapping the way forward, gaps in knowledge and good practice have also been identified along with appropriate improvement actions. Alongside the clinical approach of analysing asset condition and lifecycle data, the input of elected Ward Members is also recognised, with particular regard to local streets in the production of programmes and actions.

It is also noted that environmental (particularly coal tar contaminated surfaces) and economic factors are driving a critical reappraisal of traditional maintenance treatments. Furthermore, the requirement to "do more with less" whilst ensuring solutions are "fit for purpose" has signalled the need to introduce low cost treatments leaving in place as much as possible of the existing surface material, which is in itself a finite resource. To this end Neath Port Talbot CBC has trialled surface dressing schemes using the latest materials and techniques and is currently assessing preventative treatments along with re-cycling techniques for the purpose of lowering carbon footprint and increasing sustainability in its maintenance practice. Micro-asphalt, and jet injection patching are new systems that are frequently in use today. Thermal patching is another system that is presently being trialled and shows great potential for future strategies

The DfT booklet 'Maintaining a Vital Asset' sets out the UK Government's expectations of councils in maintaining their networks. If the Council is to meet these expectations, it can only do so through the better use of its resources and the adoption of asset management

planning. In addressing the expectations of Government in the areas of footways and unclassified roads, the Council has demonstrated a cost effective and innovative approach through the efficient use of internal resources, inventory and condition data providing for informed decision-making.

Considerable progress has been made in the implementation of asset management principles since the HAMP was first published. The identification of risks, performance gaps and the subsequent improvement actions are now enabling an improving level of asset management aimed, in the first instance, at arresting further deterioration of the Council's highway asset.

1.7 Time period and updating of this HAMP

This Highway Asset Management Plan covers the period 2015-2018 albeit the actions are based on longer term lifecycle plans. During this period the HAMP will be updated to capture any changes as a result of the ongoing improvements, reviews, budget changes and risk assessments.

1.8 Application of the HAMP

The HAMP aims to bring together all the Authority's goals, objectives and policies utilising both existing and new practices, and sets out how the principles of asset management are being applied to ensure

the highway service meets the requirements of the Council and highway users.

Effective planning will ensure that the network functions efficiently by highlighting the maintenance needs of the various highway components whilst taking into account the effects of damage caused by increased traffic flows, heavier and larger vehicles, climate change, expanded operations by utilities, and increasingly constrained budgets.

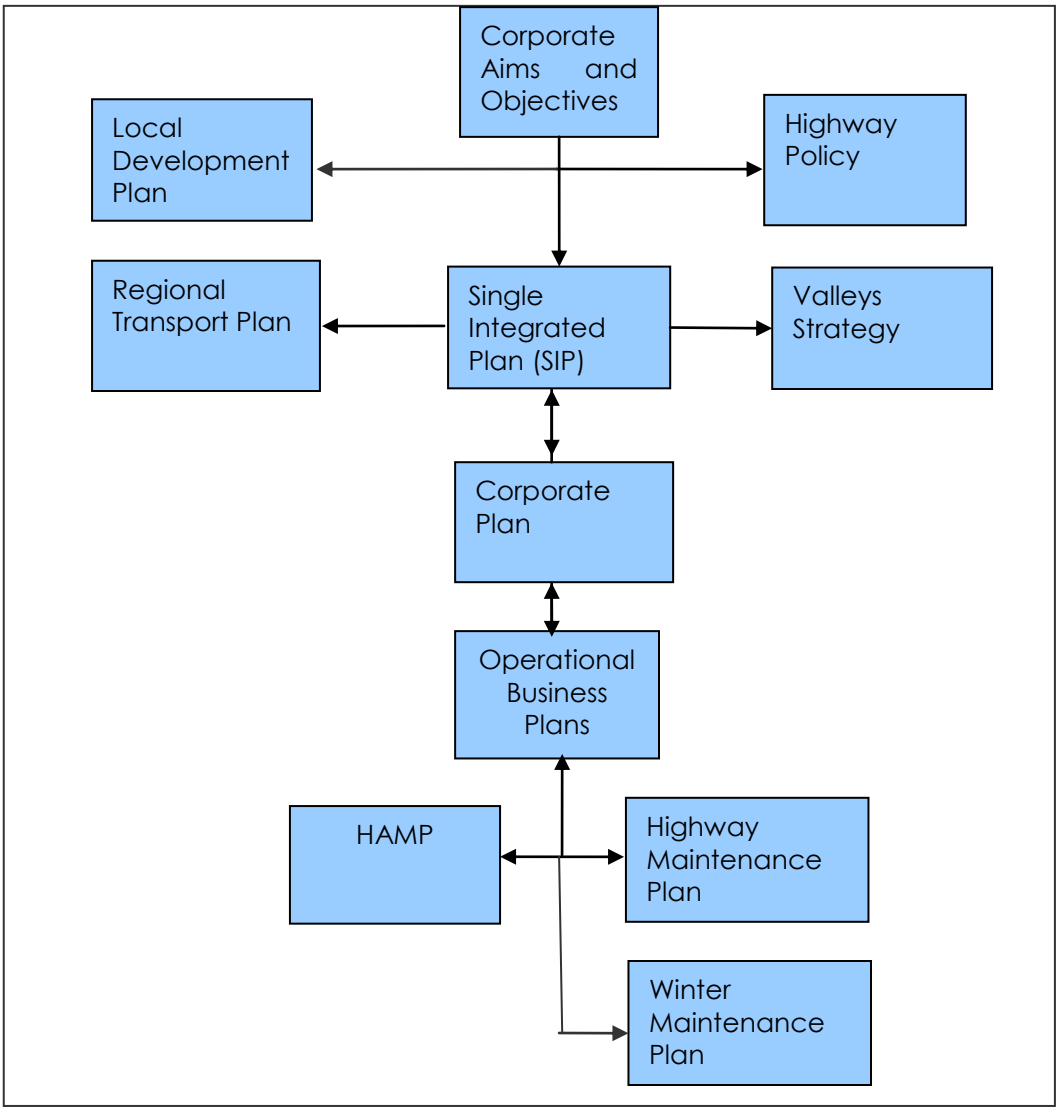
The plan is expected to provide an effective management tool for the running of the highway network with inventory and condition surveys of the different main highway assets enabling cost and risk analyses in lifecycle analysis to inform summary actions, service standards and works programmes.

Continued assessment and monitoring over time will provide the basis for measuring performance standards.

1.9 Strategic Document Framework

The strategic document framework below details the relationship between the various strategic documents within the Council, and how the Highway Asset Management Plan fits in.

Diagram 1.9.1 Strategic Document Framework



2 Asset Description

2.1 The Highway Asset

Neath Port Talbot CBC has detailed geographically referenced data sets for the eight main asset groups which are shown in Table 2.1.1 below:-

Table 2.1.1 Neath Port Talbot CBC – Main Highway Assets

Asset Description	Elements
Carriageways	Including lay-bys, bus lanes etc.
Footways	Including footways adjacent to carriageways
Structures	Including Bridges, culverts and retaining walls etc.
Lighting	Including Lighting columns, illuminated signs/bollards etc.
Traffic Signals	Including signalised junctions and pelican crossings
Signage	Including warning signs and regulatory signs etc.
Drainage	Including road drainage manholes, gullies and culverts (including inlets, intakes, outlets and outfalls) etc.
Road Restraint Systems (Crash Barriers)	

Since the original HAMP was produced in 2006 the Asset inventory has developed to such an extent that we now also have detailed information on the following additional assets groups shown in Table 2.1.2 below:-

Table 2.1.2 Neath Port Talbot CBC – Additional Highway Assets	
Asset Description	**Elements**
Cycle Routes	All cycle routes
Street Furniture	Including street name plates, bus shelters, bins, grit bins, pedestrian barriers, cattlegrids, highway trees, seating etc.
Road Markings	Road markings (limited)
Weather Stations	All weather stations
Traffic Calming measures	Including plateaus, speed cushions etc.
Bus Shelters	
Dog Bins	
Post and Rail Fencing	
Invasive Species	Knotweed, treated zones
Car Parks	
Residents Parking Bays	
Salt Bins	
Speed Cameras & Speed Advisory Signs	
Telephone Kiosks	
Tactile Paving	
Pedestrian Crossings	

An inventory overview of the main Highway Asset Groups is shown in Table 2.1.3:-

Table 2.1.3 Neath Port Talbot CBC – Main Highway Asset Inventory		
Asset Description	**Amount**	**Unit**
Carriageway	848.9	Kilometres
Footways	940.18	Kilometres
Structures: Bridges Culverts > 1 metre Diameter Retaining walls (in NPT ownership) Retaining walls (ownership unknown)	 356 80 649 1,175	 Number Number Number Number
Street Lighting	17,279	Number
Traffic Signals (light heads on junction control and pedestrian crossings)	372 (sets of traffic signals 67)	Number
Signage: Illuminated (inc. bollards) Non illuminated	 3,695 10,443	 Number Number
Drainage: Road culverts Gullies	 1,200 30,462	 Number Number
Safety Barriers /Vehicle Safety Fences	39.87 368	Kilometres Sections
Post and Rail pedestrian barrier	31.3 498	Kilometres Sections

2.2 Assets Not Covered by this Plan

Assets not covered by this plan include the following:-

- Motorways and Trunk Roads.
- Footpaths and car parks identified by Estates as being in Authority ownership but not maintained by the Highway Authority.
- Garage compounds owned by others.
- Public Rights of Way.
- Un-adopted / private roads.
- Lighting to car parks and parks not maintained by the Highway Authority.
- All other assets upon the highway that fall under the responsibility of other organisations such as Utility Companies.

2.3 Asset Growth

The carriageway asset in Neath Port Talbot has, over the two years since the last HAMP, grown by 31.2 kilometres, representing a 3.8% network growth.

This increase has been due mainly to:-

- New residential housing developments in the local area resulting in the adoption of new roads by the Authority.
- The completion of the new Peripheral Distributor Road (PDR) around Port Talbot.

This growth has resulted in an increase in other assets such as footpaths, drainage systems, street lighting and carriageway markings highlighting the need to periodically update the relevant asset information.

It is expected that, despite the economic downturn, this growth pattern will continue over the length of the plan due to a number of housing developments, including the Llandarcy Village development and development around the Port Talbot Peripheral Distributor Road (Harbour Way).

In addition, increased use of high specification materials, such as anti-skid and coloured surfacing, as part of accident reduction measures, as well as block paviors and decorative stone flags in town centres, as part of regeneration schemes, increase the overall cost of asset maintenance.

3 Community Requirements

3.1 Customer Consultation

The main sources of identifying local needs is through correspondence and via the Council's call centre and Customer Response Management system which handles queries and complaints from the public. Requests for service from the general public are carefully monitored and the detailed reports along with accident claims provide a valuable source of information which can be fed into the budget and works programming processes.

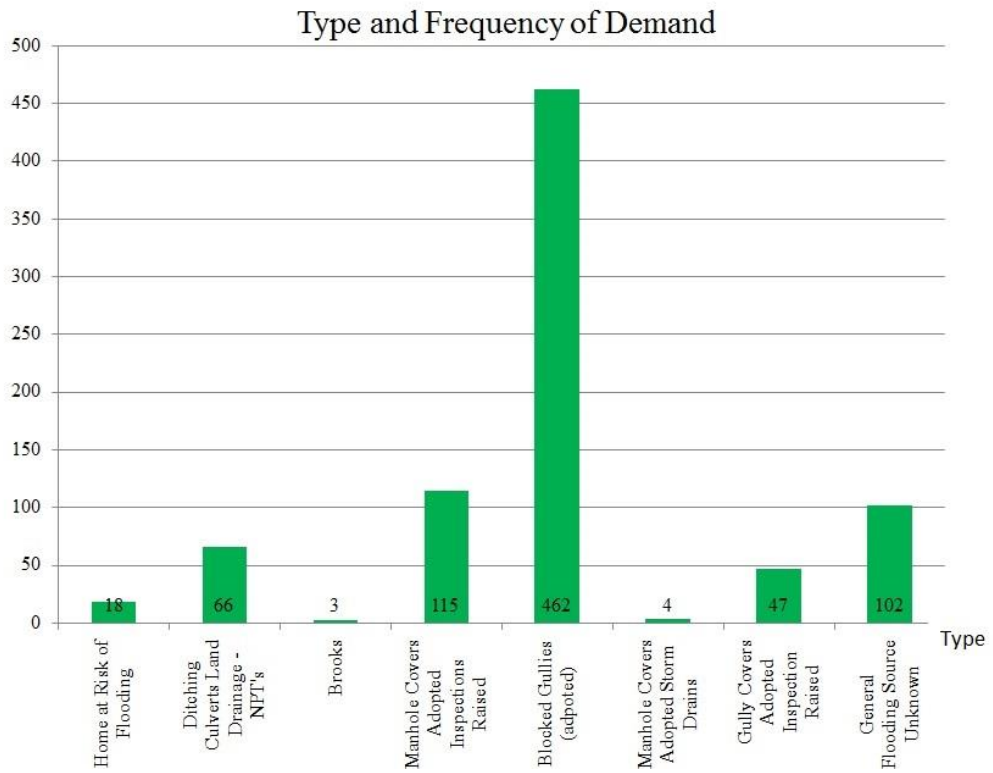
The Authority also has an established process of dialogue with elected Ward Members prior to finalising Planned Works Programmes. This process affords Members an opportunity to table concerns/requests in response to the needs of their ward constituents which can be considered in conjunction with the works identified from the condition surveys and other means.

As an indication of public demand for highways related activities, between 1 April 2014 and 31 May 2015, the call centre received 8,550 calls relating to Neighbourhood and drainage issues as categorised in Table 3.1.1 below and Table 3.1.2 overleaf:-

Table 3.1.1 Neighbourhood Demand (calls received)

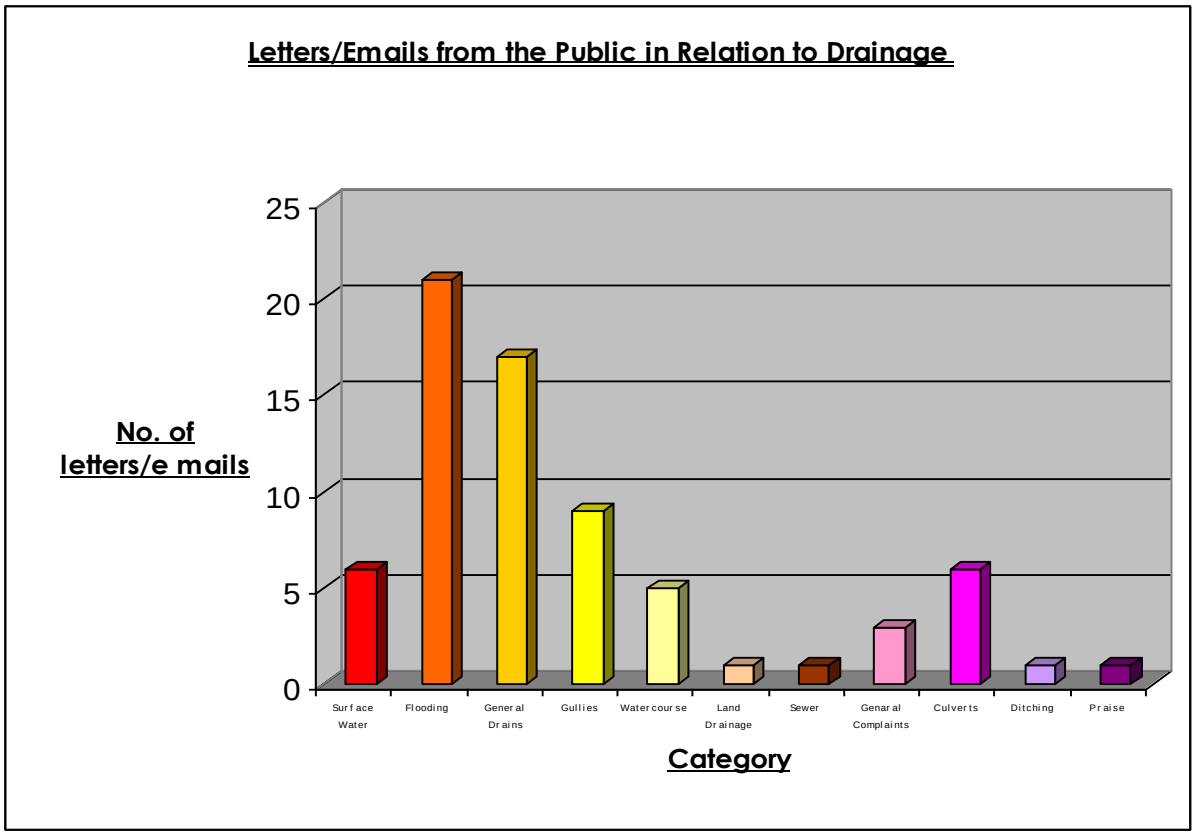
Category	Total Calls
Graffiti	27
Fly Tipping	1,897
Street Cleansing	2,992
Grounds Maintenance	983
Dogs	561
Gritting / Snow	56
Pot Holes / Highways	1155
Total	**8,550**

Table 3.1.2 Drainage - type and frequency of demand



It can be seen from the above (taken from calls received via the Customer Services contact centre) that when the survey was carried out blocked gullies was, by some margin, the biggest drainage maintenance demand.

Diagram 3.1.3 Analysis by letters/e mails from the public in relation to drainage

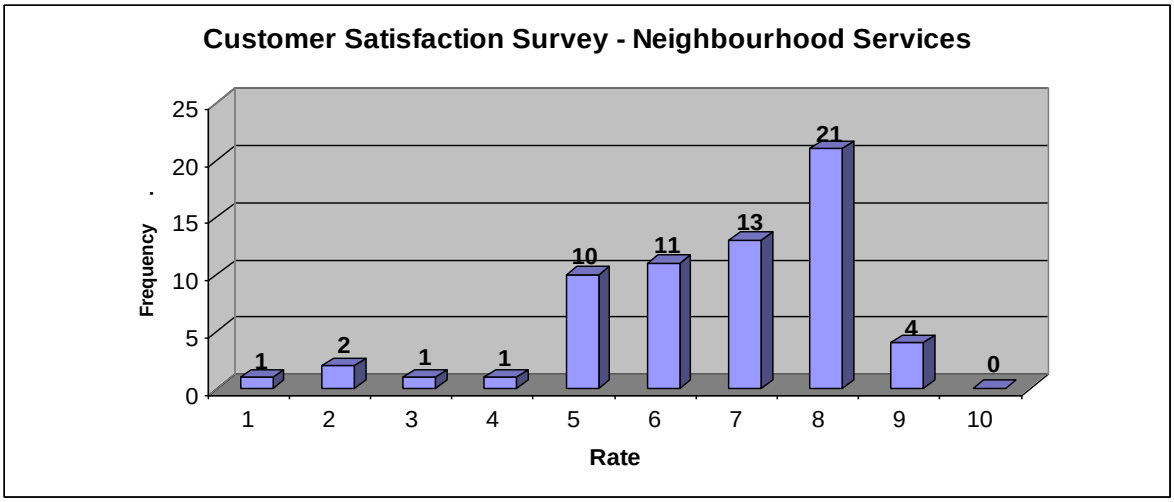


A Customer Satisfaction Survey for Drainage indicated that what mattered to the public was:-

- No Smells
- Gullies do not overflow
- Drains are maintained regularly
- Regular cleaning of fallen leaves
- Cleaning of gullies
- Quick response times to emergencies
- No water on road
- No noisy inspection covers
- Culverts do not flood

In the same period the results of a Customer Satisfaction Survey for Neighbourhood Services is shown below where members of the public were asked to rate the Council out of 10.

Table 3.1.4 Customer Satisfaction Survey – Neighbourhood Services



The public were asked "*if not a 10, how could we achieve a 10*?" and typical replies / comments are listed below:-

- Problems with grass verge not being cut and parking.
- Potholes in the road and pavement. Litter picker is good.
- My street is ok.
- Parking and potholes are bad.
- I live on a hill and the council are reluctant to come up some times.
- Potholes are a big problem it damages your car.
- Litter and potholes.
- Clean the streets more and potholes.
- Needs more sweeping and get shot of the weeds.
- The street around my area is ok.
- Streets are good.
- Grass and weeds and potholes are bad.
- Our road is in need of repair, potholes all along the roads.
- Potholes outside my house, everything else is good.
- Potholes on hill and litter needs to be cleaned more in out streets.
- Won't get 10 out of 10, only in a perfect world.
- Re surfaces and better roads.
- Lower council taxes, more lighting and more facilities on the beach.
- Potholes and fly tipping.
- Re vamp streets and roads around shopping centres.

- Potholes and re surfacing.
- Potholes, weeds and dog fouling.
- Cleaner streets.
- Cutting grass and parked cars.
- Potholes.
- Better lighting and potholes.

3.2 Results of Consultation and Use of Results

Information in the previous section has been used to help identify specific problem areas relating to the highway / drainage infrastructure and assist in identifying:-

- Potential projects for inclusion in future works programmes

- Maintenance hot spots

However, whilst feedback is useful it is not intended that the Highways Asset Management Plan will be particularly driven by public consultation alone as many of the issues addressed by the HAMP are technical in nature and need to be considered in the context of longer term analysis and projections.

It is anticipated that in future years there will be continued consultation with specific stakeholders, such as statutory undertakers, to obtain the benefit of their input, to coordinate investment, and ensure a shared understanding of asset

management as it affects their particular areas of interest. This will help ensure that stakeholder input is appropriately considered in the establishment of policy and practice adopted by the Authority. Input from stakeholders is also a valuable source of information concerning some aspects of the network and associated maintenance strategies. Their data will, along with technical surveys and other related information, contribute to ensuring appropriate asset management decisions are made.

4 Future Demands

4.1 Introduction

This section outlines the demands that we anticipate will be placed on the highway asset over the duration of this plan. These demands together with the associated risks have been considered when formulating the plan.

4.2 Traffic Growth and Composition

Past increases in car ownership and the general reliance on the private car has put pressure on roads and existing junctions through increased demand for road space. A number of key roads and junctions are at capacity and congested which is constraining growth in some areas and affecting the daily life of residents. The statistics below, from the Department for Transport, indicate the changes in volume of traffic over the past 10 years or so.

Table 4.2.1 Volume of Traffic 2000-2013

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Billion Vehicle Km. in Neath Port Talbot	1.17	1.20	1.25	1.27	1.30	1.38	1.34	1.32	1.27	1.30	1.29	1.30

Table 4.2.3 Volume of Traffic by Class of Road 2007-2013

	Motorway	A Trunk - Urban	A Trunk - Rural	A County -Urban	A County - Rural	All Major Roads
2007 - billion vehicle kilometres	0.55	0.02	0.20	0.11	0.24	1.12
2008 - billion vehicle kilometres	0.53	0.02	0.20	0.11	0.23	1.09
2009 - billion vehicle kilometres	0.51	0.02	0.20	0.11	0.23	1.07
2010 - billion vehicle kilometres	0.48	0.02	0.19	0.11	0.22	1.03
2011 - billion vehicle kilometres	0.51	0.02	0.19	0.11	0.23	1.06
2013 - billion vehicle kilometres	0.52	0.02	0.20	0.11	0.22	1.06

The volume of traffic by “class of road” in Neath Port Talbot (table 4.2.3) reflects an overall reduction in traffic from 2007 to 2013 (from 1.12 billion kilometres in 2007, to 1.03 billion in 2010). The reason for the reduction in traffic is unknown and could be a result of a number of factors, such as cost of fuel, the financial down-turn, or residents choosing more active forms of travel.

Whilst the overall level of traffic in NPT has been static over the last few years demand for road space in some localized areas is high

and/or increasing. As a result, due to the level of traffic, local topography and the existing road system within urban areas, a number of congestion hot spots exist across the County Borough.

Within Neath:

- M4 Junction 43 (Llandarcy): The capacity at this strategic junction between the M4 and the A465 (T) is a concern. Major improvements are ongoing to serve the Coed Darcy development, but future proposals to dual the entire length of the A465 will need to consider any need for further capacity improvements.

- Pen-y-Wern Junction (Bryncoch, Neath): Experiences congestion at peak times. Any further development would have an impact on the junction and could require road improvements between the junction and the Neath River viaduct – this would be expensive and could undermine the viability of any proposed development.

- Cwrt Herbert / Roman Way**:** Experiences congestion at peak times, one factor being the proximity to Dwr y Felin School. Land adjacent to Roman Way offers an opportunity to provide bulky goods shopping or housing in a central sustainable location, but such development could also increase traffic generation.

- Neath Abbey / Tesco**:** Experiences congestion at peak times.

- Neath Town Centre (Stockham's Corner / Cimla Hill / B&Q / Gnoll / Victoria Gardens): faces congestion, air pollution (Victoria Gardens) and in worst cases 'gridlock' at peak times. While development and regeneration proposals aim to revitalise the town centre, congestion could constrain demand.

Within Port Talbot:

- M4 Junctions 41 / 40 (Port Talbot): These junctions currently provide access points to Port Talbot, Cwmafan and the Afan Valley. With the completion of the PDR the Welsh Government has experimented with slip road closures, or partial closures (at Junctions 40 and 41), to discourage the use of the M4 for local traffic. The results of the experiments are being considered and whilst junction restrictions may ease congestion problems on the M4, the changes could make access to some areas more difficult.

- Heilbronn Way: Experiences congestion at peak times.

- Water Street: Experiences congestion at peak times.

Within Pontardawe:

- Tesco / Pontardawe Inn: Experiences congestion at peak times.

- The Cross: Experiences congestion at peak times. There is little potential to improve road capacity to address traffic congestion in Pontardawe, the emphasis will need to be on managing access to the town.

Recently Completed Developments:

The following schemes have recently been completed or are a priority for future years:-

- The Peripheral Distributor Road (PDR) Phase 2, also know as 'Harbour Way' was completed in October 2013. The new road eases congestion between J38 and J41 of the M4 by feeding traffic through the former docks regeneration area.

- Through the Regional Transport Plan, access to Kenfig Industrial Estate has been improved through the modification of an existing railway bridge with low headroom, allowing an alternative access for high sided vehicles. The bridge improvement scheme was completed in November 2012. The only previous access for high sided vehicles was through the narrow, suburban roads of North Cornelly, providing limited potential for development on the industrial estate as these have

consequent planning constraints on the number of high sided vehicles that could need access. These improvements allow these planning constraints to be removed and allow further development and business investment on the estate.

- The new Baglan Energy Park Link Bridge forms an integral connection in a network route between Port Talbot and Swansea. It also facilitates significant improvements on the Port Talbot to Swansea Priority Bus Corridor. The aim of the project was to reduce journey times, particularly for buses, on the A4286, Afan Way, and the A48, through Baglan and Briton Ferry, whilst providing improved access into Baglan Energy Park, permitting continued growth in employment and investment. Baglan Energy Park is a significant employment development area identified in the Unitary Development Plan and the emerging Local Development Plan. The bridge was completed in April 2015

Proposed Developments:

- Cymmer Viaduct, a grade II listed structure, has failed its structural assessment and is in urgent need of replacement or bypass. The structure is on a bus route and is currently the only viable means of accessing the upper Afan Valley. In 1999, as an interim measure an 18 tonne weight limit and a single lane working, controlled by traffic lights, were introduced. The structure is deteriorating and will require a full replacement or

ultimately closure to traffic combined with the provision of a new route to the upper Afan Valley.

- Interest has been shown from the multinational engineering company, AECOM, in providing an innovative underground hot water heating system linking individual buildings up to a kilometer apart, enabling buildings to be heated remotely. The company is looking to provide heating to commercial public buildings as well as domestic properties and propose to route the underground heating pipes along the public highway.
- The electrification of the main Swansea - Paddington railway line will see extensive road bridge accommodation works. Electric trains require greater headroom to operate and Network Rail are currently engaged in preparing the programme for the improvement programme

4.3 Utility Activity

Activity by Statutory Undertakers and other Utilities can have a major effect on the maintenance and management of the road assets which can generally be detrimental to the life cycle of the asset.

All statutory undertakers are responsible for carrying out their own reinstatements although they must be to Department of Transport standards (see *New Roads and Streetworks Act 1991 – Specification for Reinstatement of Openings in the highway)*.

At present NPT, in line with Department of Transport standards, enforces a 2 year maintenance period on all reinstatements and 3 years on any excavation greater than 1.5 metres.

Neath Port Talbot CBC as part of its Statutory duties inspects a random sample of 30% of Utility Works during the following three stages of excavation:-

- During the process of excavation.

- Within 6 months following interim or permanent reinstatement of the works.

- Within the three months prior to the end of the maintenance period.

Any remedial works required during the maintenance period are completed by the Utility Company, reducing any potential future deterioration of the highway asset and unnecessary costs to the Authority.

NPT is committed to improving co-ordination and standards of utility works and meetings are held on a quarterly basis with all Statutory Undertakers and neighbouring authorities in an effort to improve forward planning and help extend asset life cycles.

Co-ordination and monitoring is important, not only to minimise delays to the travelling public, but also because the Council is often criticised for delays caused by traffic management implemented by Utilities for reinstatements and repairs.

4.4 Climate Change

It is very difficult to forecast changes in climate but there has been an acceptance that general weather patterns are changing. The noticeable changes in the past few decades have seen a number of severe winters and increased rainfall. Some winters have been prolonged with long periods of minus temperatures and heavy snowfalls. Also, increased rainfall has resulted in short heavy downfalls producing localised flooding whilst prolonged periods of lighter longer lasting rainfall have resulted in land becoming saturated and flooding as a result of excessive surface water run-off. Furthermore it is envisaged that with the increasing severity of weather conditions flooding will become more prevalent providing increased infrastructure budget pressures.

As a consequence of the recent severe winters the Authority made the decision to provide a new salt barn providing additional capacity thereby increasing the resilience of the salt stocks in an effort to ensure the Strategic Network remains accessible during severe weather conditions.

A drainage unit has been established within Streetcare which, combined with a systems review and additional resources for culvert cleaning, has led to significant improvement in drainage information and cyclical maintenance.

4.5 Changes in Legislation

Changes in legislation often means the Council having to react and adapt, which often means an increase in the cost of maintaining the asset. The Council is however currently producing a flood risk management strategy in line with legislation which will ultimately, amongst other outcomes, identify drainage systems with potential for highway flooding that may need to be addressed.

The Well-being of Future Generations (Wales) Act 2015 comes into force on 1st April 2016 and may have an impact going forward on decisions in relation to the future maintenance and management of road assets and on the way in which services are delivered.

4.6 Local / Regional Transport Strategy / Demands for Additional Assets

The following key transport issues have formed the basis for the development of the Regional Transport Plan:-

- Road traffic volumes in the region and pressures in terms of unreliable journey times, localised congestion, reduced air quality, increased noise, vibration and carbon emission issues.

- Road safety issues and associated public concerns: Whilst there has been a general reduction in serious injuries and deaths from road traffic collisions, there are wide variations across the region and for particular road users' categories.

- Disparities in car ownership and use: Whilst overall both have increased, growth has not been consistent across the region. Those with cars are able to participate in a far wider range of opportunities than those reliant on public transport, walking or cycling for mobility.

- Variations in Public Transport provision: These broadly match population distribution, with higher frequency services and better coverage to the south and east of the region, where the majority of the population live, with less extensive provision in the more sparsely populated rural areas. Rail, bus and coach services are provided by private sector companies through

mainly commercial services along with services supported with Welsh Government funding.

- Access constraints: Physical access to bus and rail services remains a barrier to mobility impaired in some locations.

Other key issues that have influenced the Regional Transport Plan include:-

- Freight operation is an essential contributor to the economy but is planned and delivered by the private sector within European and UK legislative processes.

- Ports and Shipping facilitate the movement of passengers and freight to and from the region and are a critical link in the national supply chain network.

The Regional Transport Plan (RTP) links with the National Transport Plan for Wales and overall the Vision for South West Wales is to:

"*Improve transport and access within and beyond the region to facilitate economic development and the development and use of more sustainable and healthier modes of transport."*

From this vision stems the following strategic objectives:-

- To improve access for all to a wide range of services and facilities including employment and business, education and training, health care, tourism and leisure activities.

- To improve the sustainability of transport by improving the range and quality of, and awareness about, transport options, including those which improve health and well being.

- To improve the efficiency and reliability of the movement of people and freight within and beyond South West Wales to support the regional economy.

- To improve integration between policies, service provision and modes of transport in South West Wales

- To implement measures which make a positive contribution to improving air quality and reducing the adverse impact of transport on health and climate change, including reducing carbon emissions.

- To implement measures that help to reduce the negative impact of transport across the region on the natural and built environment, including biodiversity.

- To improve road safety and personal security in South West Wales.

The long term strategy in the Regional Transport Plan developed in conjunction with stakeholders identifies:-

- Improving land use and transportation planning – through the use of Accessibility Planning, to ensure that development is properly located.

- Improving strategic east/west road and rail links – to create more reliable internal connectivity and improved connectivity with rest of Wales, the UK and European neighbours.

- Improving Strategic Bus Corridors – to create more reliable and attractive connectivity between key settlements.

- Promoting integration – to encourage more sustainable travel choices and reduce the barriers to interchange.

- Improving safety in transport – to reduce personal injuries and fears for personal safety.

- Providing more and better information - to raise awareness on the range and use of sustainable transport options.

- Improving linkages between key settlements and strategic employment sites – to create a range of attractive passenger transport and walking and cycling opportunities linking key

settlements with their hinterlands and with strategic employment sites.

- Improving the efficiency of the highway network – through a range of appropriate mechanisms including demand restraint.

Furthermore a range of policies are identified under the following broad headings:-

- Reducing Greenhouse gas emissions and other environmental impacts from transport.

- Integrating local transport.

- Improving access between key settlements and sites.

- Enhancing International Connectivity; and Increasing Safety and Security.

Within the current plan, proposed developments relevant to the Neath Port Talbot area are:-

- Port Talbot to Swansea Bus Corridor.
- Neath (Llandarcy) to Swansea Bus Corridor.
- Port Talbot Parkway Station development.
- Park and Share sites close to M4 junctions.
- Neath Railway Station Improvements.

- Multi Modal Freight Facility - Margam Wharf.
- Coed Darcy southern link.
- Swansea Valley to City Centre Bus Corridor.
- Bus priority corridor between Port Talbot Parkway and Bay Campus
- Port Talbot to Neath Bus Corridor.
- Pontardawe Cross Valley Link Bridge.
- Cymmer bridge and associated works
- Baldwins Bridge – joint scheme with City & County of Swansea
- Port Talbot Modal Interchange
- Relocation of Neath town centre bus station

5 Levels of Service

5.1 Establishment of Levels of Service

Levels of Service are "*the defined service quality (service standards) in respect of particular asset components against which performance can be measured for the benefit of users"*

Levels of Service are composite indicators that reflect the social, economic and environmental goals of the community and may relate to safety, availability, accessibility, condition, environmental impact, customer service and financial performance (cost). Ideally, levels of service should create visible linkages between user needs, corporate objectives and any works undertaken on the asset.

The connection between customer expectations and what can, in practice, be delivered needs to be understood and communicated to stakeholders. It is also important that everyone involved in the process is aware that decisions, which impact on service delivery, need to align with the overall policies and objectives of the Council.

Defined levels of service are the realistic aspirations that a Highway Authority strives to meet reflecting statutory obligations, corporate goals and customer expectations in delivering highway services. Levels of service need to consider the preservation and physical integrity of the asset, and also meet the demands of safety, availability and accessibility.

Key requirements affecting the development of levels of service are:

- **Legislative requirements**: It is a requirement that levels of service comply with the legal obligations and statutory duties incumbent on a Highway Authority. Additionally, the adoption of recognised codes of practice will provide the necessary guidance to align service delivery with national best practice.

- **Policy and objectives**: NPT sets out its policies and corporate objectives in documents such as the Local Transport Plan and Highway Maintenance Plan. Levels of service are not only determined by local objectives as there need also be an acknowledgment of the wider national targets set out by the Government. As a consequence, the budget and asset planning process is designed to enable strategic choices and decisions to be made in an informed manner, so that the council can manage its budgets and services with due regard for prudence, stability, investment and efficiency.

- **Customer expectations**: The expectations of all road users, the community and local businesses need to be recognised as a factor in the service level decision making process. The provision of better information will enable consultation with customers on a more informed level.

- **Best practice guidelines**: A number of best practice guidelines exist that directly influence levels of service. While these best practice guidelines are not always statutory requirements, they represent a description of accepted good practice. This can be particularly important in ensuring that assets are protected against public liability claims. The most significant best practice guidance documents relevant to this Plan are the Code of Practice for Highway Maintenance Management, the Code of Practice for Road Lighting Management and the Code of Practice for Management of Highway Structures.

- **Affordability**: Service options set out to consider the most economically efficient way of delivering an acceptable level of service over the long term. Pressures on council funding and increasing demands on the highway network mean it is not always possible to secure the required funding to deliver the desired solution, and budgets influence what can realistically be achieved. Affordability must therefore be recognised and acknowledged when setting deliverable levels of service

- **Availability of resources**: The availability of suitably skilled resources throughout the construction industry is limited and, because of the proposals to rapidly accelerate delivery, targets can sometimes be difficult to achieve.

5.2 Measurement and Reporting of Levels of Service

An asset management approach provides existing and projected data to support the decision making process. In practical terms this provides the necessary information to make informed choices regarding the identification and assessment of service needs.

Once the requirements driving an asset group's service level have been determined it is necessary to develop service options around these requirements, and evaluate them. This process should clearly identify the service options applicable to the particular asset group.

As noted previously, service delivery can be influenced by a number of demands such as legislation, best practice guidelines, Health and Safety requirements, corporate goals, political influences, customer expectations and financial constraints. The aim is to improve service provision through developing or altering current practices, as part of developing NPT's HAMP, by a process of continued monitoring and review.

In setting its own standards for asset groups NPT has considered the following set of generic service levels:

- **Statutory Minimum:** Meeting statutory or legislative requirements and notes for guidance only.

- **Existing:** The impact on the asset if current funding levels are maintained.

- **Steady State:** To arrest deterioration of the asset and maintain current condition, performance and value.

- **Prescribed Service:** An enhanced standard based on customer expectations and/or political aspirations.

- **Optimum Service:** An optimum level of service based on long term economic lifecycle planning.

- **Attainable Service:** A reinterpretation of the Optimum Service in light of available resources representing the best long term return for available shorter term funding.

Ultimately, the chosen option must be a result of a combination of cost, benefit and risk. Depending on the asset category, the options evaluation criteria include:

- Programmes and planning
- Safety implications and requirements
- Availability of service or asset
- Accessibility to service or asset
- Condition of the asset
- Environmental impact of providing and maintaining the asset
- Customer service, expectations and perceptions

- Risk and benefits
- Finance
- Performance targets

In respect of adopted and specified service standards the asset management process will monitor, review and report on progress and performance. As such, levels of service, where possible will need to be measurable and realistic having performance targets that can be set out and measured using appropriate indicators, including:

- National Indicator Set measures (NIS's)
- Local Performance Indicators (LPI's)
- Recording of Response Times
- Customer Complaints Monitoring Procedures
- Condition Surveys

To inform the monitoring process, the tables on the following pages give examples of asset inspection regimes, maintenance criteria, and response standards, and these along with other information is detailed within the Councils Highway Maintenance Plan:-

Table 5.2.1 Network inspection regime - frequency of Inspections

Classification		Safety Inspection	Technical Surveys
Carriageways			
A Road B Road	Strategic Route, Main Distributor, Secondary Distributor	Safety inspection regime in place	Annual SCRIM (both directions) Scanner (one direction)
C Road	Link Roads / Local Access roads		Annual (25%) SCRIM and Scanner
Unclassified	Local access roads		Annual visual survey
Footways			
	Prestige and Primary Routes	Safety inspection regime in place	Biennial visual survey
	Secondary walking routes		Biennial visual survey
	Link footways & local access footways		Biennial visual survey
	Industrial estates and other footways		Biennial visual survey
Cycleways			
	Adopted as part of C'way / Footway	Safety Inspection regime in place for cycleways	Visual survey
	Remote from		Not undertaken

	C'way / Footway	adopted as part of the Carriageway / Footway.	
	Cycle trails		Not Undertaken
Safety Barriers			
	Safety Barrier	Safety Inspection regime in place	General inventory condition survey carried out every 3 years. Principal condition survey every 6 years by specialist

Table 5.2.2 Criteria for consideration of Maintenance

Planned Maintenance – Carriageways		
Survey Criteria	**Further Investigation Options**	**Action options (*)**
SCRIM: Area below Investigatory Level based on DMRB HD28/04)	visual site assessment / pendulum / sand patch test / GripTest	resurface / monitor / survey following year / erect warning signs
Deflectograph: Area of low residual life (less than 15 years)	visual site assessment / core / trial pit	resurface / reconstruct / monitor
SCANNER: Analysis of individual parameters in accordance with PMS guidelines **Visual**	visual site assessment core / trial pit	resurface / prevention treatment

Inspection: Analysis of 1-5 ratings to create scheme assessment lengths	visual site assessment	resurface / prevention treatment

* Treatment allocated to sites based upon risk assessment

Planned Maintenance - Footways		
Category	**Defects**	**Treatment**
Main Shopping Areas	Coarse cracking Coarse crazing Depressions > 25mm Trips > 20mm	Localised Repair or Restore Surface
Busy Urban (flexible)	As for (i) above	Localised Repair or Restore Surface
Busy Urban Areas (Rigid)	Depressions > 25mm Trips > 20mm Cracks/gaps > 20mm Rocking Flags	Localised Repair or Restore Surface
Other Urban Areas / Rural Footways	As for (ii) or (iii) above	Localised Repair or Restore Surface Localised Repair or Restore Surface

Note: Prioritisation is subsequently undertaken on the basis of greatest risk.

Planned Maintenance - Kerbing		
Category	**Defect**	**Treatment**
All Footways	Severe deterioration	Localised repair or restore upstand
Busy Urban Areas	Up-stand / kerb height 75mm or less	Localised repair or restore upstand
Other Urban Areas / Rural Footways	Kerb deterioration	Localised repair or restore upstand
	Up- stand / kerb height 30mm or less	Localised repair or restore upstand
	Kerb deterioration	Localised repair or restore upstand

Note: Prioritisation is subsequently undertaken on the basis of greatest risk.

Table 5.2.3 Inspection Regime for Highways

Reactive Response Standards	
Defect	**Response Time**
Road pothole or footway trip hazard > 20mm	1 – 35 Days(*) (normally 2hr, 24hr, or 35 days)
Surface depressions which exceed the New Roads and Street Works Act (NRSWA) intervention requirements.	As above (*)
'Knocked Out' Kerb	As above (*)
Hazardous debris or obstruction in the carriageway, missing covers	2 Hours
Flooding or surcharging highway drainage system	2 Hours

(*) Response time prescribed, including any intermediate timescales, at Inspectors discretion based on risk

Table 5.2.4 Inspection Regime For Structures

Bridges, Culverts, Retaining walls and Cattle Grids	
Inspection Category	**Frequency**
General	2 Years
Principal	6 Years
Special	As Required (*)

(*) Special Inspections can be conducted following a collision or flooding or where an abnormal load is to pass.

Other Highway Structures, Culverts, Retaining walls etc	
Inspection Category	**Frequency**
General	2 Years or receipt of report/complaint

When for particular circumstances more frequent inspections are required on individual structures these are identified in the 'Structures Database'.

Table 5.2.5 Cyclic Maintenance Frequencies

Activity	Frequency
Gully Cleansing General 'critical' sites	 Bi-annually Additional clean between April - July
Grass Cutting and Hedge Trimming Adopted R'bouts & Islands Grassed Verges Highway Flail Cutting Sites Safety Cutting	As per detailed schedule but typically, Minimum 4 cuts per year Minimum 4 cuts per year Minimum 1 cut per year Additional cuts where unusual growth has created a hazard
Verge Maintenance Weed Spraying (footways) Application of Retarders Noxious Weed Removal	Programme of spraying twice per year in Summer Not Used Ragwort – As and when required (pulled up) Japanese Knotweed – Selected areas per year (sprayed)
Activity	**Frequency**
Siding General	 Where vegetation encroaches by 300 mm as identified by Inspectors
Cleansing General	 Litter pick –Minimum - 4 times / year - max daily Sweeping –Minimum - 4 times / year -max weekly

Table 5.2.6 Maintenance Of 'Aids To Movement'

Activity	Frequency
Traffic Signal Maintenance*	
Fault Attendance	Urgent fault - 2 hours
Repair Inspection	Non - urgent – 24 to 72 hours
Sign Cleaning	
Class I Roads	
Class II and Class III	As required to preserve safety
Unclassified Roads	
Road Marking	
Reinstatement**	
Class I, Class II	As required to preserve safety
and Class III Roads	
Unclassified	
Reflective Stud Replacement	
All Classes	As required to preserve safety

***** Bulk changes may only be undertaken at certain times during the week at specified locations.

****** Road markings affected by maintenance works or surface dressing are reinstated within 14 days of the works being completed.

Table 5.2.7 Maintenance Of Street Lighting And Illuminated Signs

Repair of Faults	
Category of Fault	**Minimum Attendance and Assessment Time***
Outages	
Illuminated 'Aids to Movement'	4 working days
Lighting unit	4 working days
Section of Lighting	Same day
Emergency	
To make safe potential electric danger	2 hours
Repair of traffic bollards, No Entry – signs and Belisha Beacons	2 hours

Cleaning and Servicing

Installation	Frequency
Signs and Bollards	Every site visit
Lighting Units	On lamp repair

Fault Detection

Approximately 70% of the Council lighting stock is controlled by Computer Management system (CMS) which allows automatic nightly fault reporting.

5.3 Performance Review

Alongside measurement and reporting of Service level performance and the production of periodic Annual Status and Options reports, actual performance can, as appropriate, be compared from time to time with the predicted or targeted performance at the time of establishing the management and investment strategies for a given asset. In any event a summary performance report will be presented annually to the Council's Capital Programme Steering Group and Environment Management Team, in consideration of which any amendments to levels of service and investment will be considered alongside the business planning process for individual service areas.

5.4 Existing Level of Service

A summary of asset performance against the existing level of service is given in Table 5.4.1 below:-

Table 5.4.1 – Performance against existing Level of Service

Level of Service Sub Category	Existing Level of Service
Carriageways (classified)	
Condition	SCANNeR surveys show an improvement in the condition of the Classified network. The condition of the Classified network in NPTCBC is greater than the Welsh national average
Investment	A cut in the level of investment will see deterioration in the highway asset and the value will decline. Reactive maintenance costs will increase as a result.
Safety implications	Deterioration will increase the safety risks to road users, in the absence of increasing reactive maintenance requirements.
Carriageways (unclassified)	
Condition	The in house visual inspections results show a steady increase in the condition of the Unclassified network year on year between 2010 and 2014. The improvement can be attributed to additional

	investment under Welsh Government Local Government Borrowing Initiative. Also, the carriageway works programme has had a period of greater priority following previous investment in dealing with sub-standard footways
Investment	Continuing at base budget levels, without additional funding, will see deterioration in the highway asset and in the asset value
Safety implications	Further deterioration, increasing risks to safety of road users in the absence of increasing reactive maintenance budgets.
Footways	
Condition	In-house visual inspections carried out between 2009 and 2015 indicate an overall deterioration in the footway network, despite an investment programme that targeted areas of heavy deterioration. Carriageway programmes have had a period of greater priority over footway works which is now being reviewed
Investment	A rise is anticipated in claim related costs if decline is allowed to continue.
Safety implications	Deterioration will increase risks to safety of road users' in the absence of increasing reactive maintenance budgets, or greater priority to planned works
Structures	
Condition	Bridge Condition Index indicates average condition as 87-89 (good) however, 19 sub-standard bridges currently remain in service and are monitored in accordance with BD79
Investment	Funding limited to historical budget. 65% of the

	2,290 structures have maintenance or repair works identified in Structures Work Pool.
Safety implications	Sub standard bridges require monitoring as a requirement of Code of Practice Management of Highway Structures.
Street Lighting	
Condition	Aged stock.
Investment	Major £21 million infrastructure renewal project funded from Council resources currently ongoing following asset status report and options consideration.
Safety implications	Risk of column and electrical cabling declining with ongoing investment programme.
Highway Signs	
Condition	'Reasonable', with some signage life expired.
Investment	Essential renewals currently ongoing.
Safety implications	Any missing mandatory signs in particular are a safety concern.
Traffic Signals	
Condition	'Reasonable', with some equipment life expired.
Investment	Essential renewals currently ongoing
Safety implications	Fault repair system operated.
Safety Barriers	
Condition	Repairs and upgrades were carried out following a 2009 inventory/condition survey and following the 2013 Principal inspection/survey. A General in-house follow-up inspection will carried out in 2016 and Principal inspection will be carried out by

	specialists in 2019.
Investment	To be identified.
Safety implications	Specific locations are being looked considered, where the road edge requires engineering works before the barrier can be renewed.
Drainage	
Condition	Inventory of gullies and culverts is held but condition details of individual assets are not recorded. An inventory of connecting carrier drains is being built and is ongoing.
Investment	Reactive maintenance carried out as and when identified.
Safety implications	Reactive/planned works carried out as and when identified.

5.5 Target Levels of Service

Initial target levels of service are given below. However these may need to be revised once the Council's latest Forward Financial Plan has been finalised and its full impact evaluated.

Table 5.5.1 – Initial Target Level of Service

Main Asset Groups	Initial Target Level of Service
Carriageways -Classified	Steady State – with aspirations to move to a prescribed service level of no more than 5.6% of individual road classification requiring maintenance.
Carriageways - Unclassified	Steady State – with aspirations to move to a prescribed service level of no more than 3.0% requiring maintenance.
Footways	Steady State – with aspirations to move to a requested service level of no more than 13.5% of the footway network requiring maintenance.
Structures	Steady State - with resolution of "Cymmer Bridge" issues.
Street Lighting	Prescribed Service – On completion of ongoing Improvement Programme.
Highway Signs	Steady State – with aspiration to move to a requested service level where less than 5% of signs are missing or badly damaged.
Traffic Signals	Steady State.
Drainage	Steady State.
Safety Barriers	Steady State.

6 Lifecycle Planning

6.1 Purpose and Importance of Lifecycle Planning

As part of the development of this plan, we will create lifecycle plans to consider each of the main asset groups. Each lifecycle plan considers:-

- Inventory (amount of asset)
- Condition and trends
- Maintenance options / Service levels / Risk Management and Minimum requirement
- Establishing maintenance strategies / service standards

Periodic updating of the lifecycle plans enables local knowledge to be captured and considered.

6.2 Output from Lifecycle Planning

The output from the lifecycle planning process provides 20 year financial and other projections linked to target levels of service, to inform the Council's 3 year Highway Maintenance Proposals.

Lifecycle plans are essential to Highway Asset Management planning to provide the longer term context with which to consider asset management practices, investment, performance and risk management consistently across all asset groups.

6.3 Lifecycle Plan Contents

Lifecycle plans are working documents, updated periodically as information is gathered and analysed on each asset group. When fully populated each Life Cycle Plan will contain the following information:-

Section	Answers	Contains
The Asset	What assets do the council own?	• Inventory details (type size, etc) • Asset growth statistics
Service Expectations	What is each asset group required to do?	• Customer expectations • Council objectives for transport • Specific user requirements • Safety considerations, • 3rd party use • Environmental requirements, • Network availability, • Amenity considerations
Management Practices	How is this asset group managed?	• Policies • Inspection Regime • Condition Assessment • Asset Acquisition standards • Routine Maintenance standards • Operational/Cyclic Maintenance • Planned Maintenance standards • Disposal standards
Investment	How much is being spent and should be spent over the longer	• Historical Investment • Output from historical investment • Forecast Financial Needs

	term on this asset group?	• Valuation: GRC, DRC & ADC
Works Programme	How are works programmed for this asset group?	• Existing forward works programme • Works programme coordination • Option Appraisal: treatment selection - at a project level - at a budget category level?
Risk	What are the risks associated with this asset group?	• Risk identification • Major asset risks
Works and Service Delivery	How are works delivered or procured on this asset group?	• Approved processes
Performance Measurement	How is the performance of this asset group measured and Managed.	• Performance indicators • Current performance figures • Target performance figures

Section	**Answers**	**Contains**
Strategies	What strategies are there for the future management of this asset group?	• Relevant Strategy Information
Service Improvement actions	What improvement would enhance the council's management of this asset group?	• Asset specific improvement actions

6.4 Status of Lifecycle Plans

Lifecycle plans are being produced for each of the asset groups and their current status is noted in the table below:-

Asset Group	Status	Comments
Carriageways	Update of the Plan approaching Completion	More work required
Footways	Update of the Plan approaching Completion	More work required
Bridges and other highway structures	Update of Plan approaching completion	More work required
Street Lighting	Update of Plan pending	Phase 3 of £21million investment currently underway. Approximately 11,000 units replaced/upgraded with modern luminaire and Central Control Management system. Phase 3 will include some LED luminaire investment. On project completion (expected in October 2017) another lifecycle plan will be produced for the new infrastructure aimed at maintaining the level of service the project set out to

		achieve.
Asset Group	**Status**	**Comments**
Drainage	Not started (Major culverts are covered by the Highway structures lifecycle plan).	Asset inventory for culverts complete. Asset inventory for gullies complete but data required for interconnecting drain systems. Filling this performance gap is the next step in plan development.
Traffic Signals	In progress	Traffic Signals. 65% Plan requires updating.
Highway Signs	In progress	Existing plan requires updating
Safety Barriers	Approaching completion	A Safety Barrier replacement programme has been completed since the last HAMP. A general survey is to be undertaken in 2016 to assess the asset condition and to formulate a Lifecycle Plan.

6.5 Status and Options Report (for Major Asset Groups)

Annual or periodic Status and Options reports are being produced for each of the major asset groups and their current status is noted in the table below:-

Asset Group	Proposed Frequency	Status	Comments
Carriageways	Every 2 years	Final draft completed	Final approval Required.
Footways	Every 2 years	Initial draft completed	Further work Required.
Bridges and other highway structures	Periodic	Final draft completed	Final approval Required.
Street Lighting	Periodic	Completed. Currently on year 3 of 5 year action plan.	Review to be commenced upon completion of 5 year infrastructure renewal project.
Drainage	Every 3 years	Not started	
Traffic Signals	Every 3 years	Not started	
Highway Signs	Periodic	Not started	
Safety Barriers	Every 3 years	Not started	To be produced on completion of April 2016 inventory / condition survey.

Status and Options Reports will provide an update on the relationship between existing / future budget options and the predicted condition

of the asset over a 20 year cycle. Monitoring this relationship will provide data to make more informed decisions going forward.

7 Financial Summary

7.1 Sources of Funding and Budget Allocation

Investment in the Highway Asset is derived from the following funding streams:-

Revenue: Revenue funding is dependent on Council expenditure priorities in the context of available income which is derived from Welsh Government Revenue Support Grant, non-domestic rates, Council Tax and any other specific Grants. The majority of funding is therefore derived from Welsh Government and the total budget allocated to Road Maintenance is split between a number of service headings based, in the past, in large part on historical precedence.

Where additional funds are made available to assist with ongoing maintenance and management of road assets, such as Road Maintenance Grants, individual cases are put forward internally within funding guidelines for consideration following which allocations are made in accordance with Member priorities.

Capital: Capital Investment is generally funded by Welsh Government (WG), who provide a supported borrowing element forming the Authority's base capital budget. WG also include an element within the Revenue Support Grant to cover the debt charge repayments on this borrowing.

The capital base budget allocation is further supplemented by:-

- Unsupported borrowing (prudential borrowing)
- Capital Grants & Contributions
- Capital Receipts
- Direct Revenue Financing

Capital Investment Plans are reviewed by relevant Management Teams and approved by relevant Committees within the Council.

Should there be a requirement to fund additional specific projects from Prudential Borrowing, a full Options Appraisal exercise has to be undertaken for all major projects. The Appraisal normally considers amongst other issues the objectives of the Council, alternative options and the affordability of loan repayments from existing revenue resources.

Grants: The Council submits annual Bids for additional funding to the government in respect of Transport Grant, Safe Routes to Communities and Regional Transport Consortia Grant (RTCG) including Road Safety Schemes and regional transport packages. In addition the council does, from time to time, receive additional Grants such as Special Road Maintenance Grant which is distributed to local authorities based on Road Standard Spending Assessment (SSA) and is governed by strict criteria.

Within the Revenue and Capital allocations determined by Council any virement of funds between Service Headings to reflect need are dealt with at Head of Service level within the Environment Directorate as far as Revenue is concerned, and within the Corporate Capital Programme Steering Group as far as Capital is concerned. Any virement in excess of £100k is dealt with at Corporate Director level.

7.2 Historical Expenditure

Historical investment in roads assets over the last 4 years is as follows:-

Asset	Works	2011/12	2012/13	2013/14	2014/15
Carriageways	Planned	£1,608,223	£1,401,065	£1,136,227	£1,342,000
	Reactive / Routine				
Footways	Planned	£179,000	£224,125	£36,257	£49,264
	Reactive / Routine				
Structures	Planned	£650,000	£319,085	£424,987	£334,190
	Reactive / Routine	£266,623			
Street lighting	Planned	£2,000,000	£2,392,819	£5,474,096	£4,112,188
	Reactive / Routine	£1,448,276			
Signs	Reactive / Routine	£32,911	£32,991	£33,758	£34,445
Drainage	Planned	£401,000	£290,448	£458,854	£253,644
	Reactive / Routine	£1,004,809			
Traffic Signals	Planned	£35,000	£22,682	£90,556	£82,372
	Reactive / Routine	£108,197			
Safety Barriers	Planned	£258,000	£200,000	£10,000	£10,000
Winter Maintenance	Reactive / Routine	£566,390	£852,215	£481,559	£524,360

7.3 Predicted Available Short – Term Funding

Asset	Works	15/16	16/17	17/18
Carriageways	Planned	£888,000	£900,000	£900,000
Footways	Planned	£147,000	£150,000	£150,000
Structures	Reactive	£195,000	£195,000	£195,000
	Planned	£1,850,000	£750,000	£650,000
Street lighting	Reactive	£429,000	£429,000	£429,000
	Planned	£4,100,000	£3,592,000	£900,000
Illuminated Signs	Reactive	£50,000	£50,000	£50,000
	Planned	nil	nil	nil
Signs	Reactive	£33,000	£33,000	£33,000
	Planned	nil	nil	nil
Drainage	Reactive	£1,186,471	£1,186,471	£1,186,471
	Planned	£250,000	£250,000	£250,000
Traffic Signals	Reactive	£67,000	£67,000	£67,000
	Planned	nil	nil	nil
Safety barriers/Post and Rail *	Reactive	£38,500	£38,500	£38,500
	Planned	£30,000	£30,000	£30,000
* Reimbursement costs as a result of vehicular accidents are pursued from insurance companies				

7.4 Long Term Funding Requirement – Planned / Reactive

Asset	Funding Type	Service Level	2015/16	2016/17	2017/18
Carriageways (Predicted Budget)	Planned	Steady State	£2,330,000	£2,330,000	£2,330,000
	Planned	Overall network improvement	£2,600,000	£2,600,000	£2,600,000
Predicted Carriageway funding to maintain existing steady state of 5.6% of the network requiring maintenance and to achieve aspirational state of 4.0% with steady improvement.					
Footways	Planned	Steady State	£375,000	£375,000	£375,000
	Planned	Overall network improvement	£765,432	£765,432	£765,432
Full Footway condition survey completed in summer 2015. Results to be used to predict annual budget required for steady and aspirational state.					
Structures	Planned		£1,195,000	£945,000	£1,445,000
Street lighting	Planned		£4,100,000	£3,592,000	£900,000
Illuminated Signs	Reactive		£50,000	£50,000	£50,000
Signs	Reactive		Not available	Not available	Not available
Drainage	Planned		£250,000	£250,000	£250,000
Traffic Signals	Reactive		Not available	Not available	Not available
Safety Barriers	Planned		£50,000	£50,000	£50,000
Results of safety barrier inventory / condition survey due May 2016 from which future budget requirement can be determined.					

7.5 Asset Valuation

Asset Type	Gross Replacement Cost	Accumulated Consumption	Depreciated Replacement Cost	Annualised Depreciation Cost
Carriageway	888,996,267		821,565,025	4,745,409
Footways	213,000,000		195,000,000	Not available
Structures	251,638,519		247,847,598	708,378
Street Lighting	16,000,000*		Not available	Not available
Signs	Not available		Not available	Not available
Drainage	Not available		Not available	Not available
Traffic Signals	Not available		Not available	Not available
Crash Barriers	£4,309,964**		Not available	Not available

* Based on Prudential Capital sum borrowed to replace 95% of existing stock over a 5 year period.

** Based on actual renewal costs averaged per metre run on sample jobs for removal of old, erect new and traffic management costs.

8 Risk Management

8.1 Corporate Risk Management Strategy

Neath Port Talbot CBC has in place a Risk Management Policy (RMP) that describes a structured, systematic and focussed approach to managing risks and exploiting innovation at a corporate level. It promotes a work environment where innovation is encouraged and supported and is a key enabler of the Council's change programme.

The RMP defines risk as "*The threat that an event, action or inaction will adversely affect the Council's ability to deliver its services"*

This Policy applies to all of the activities of the Council and covers all aspects of Risk Management.

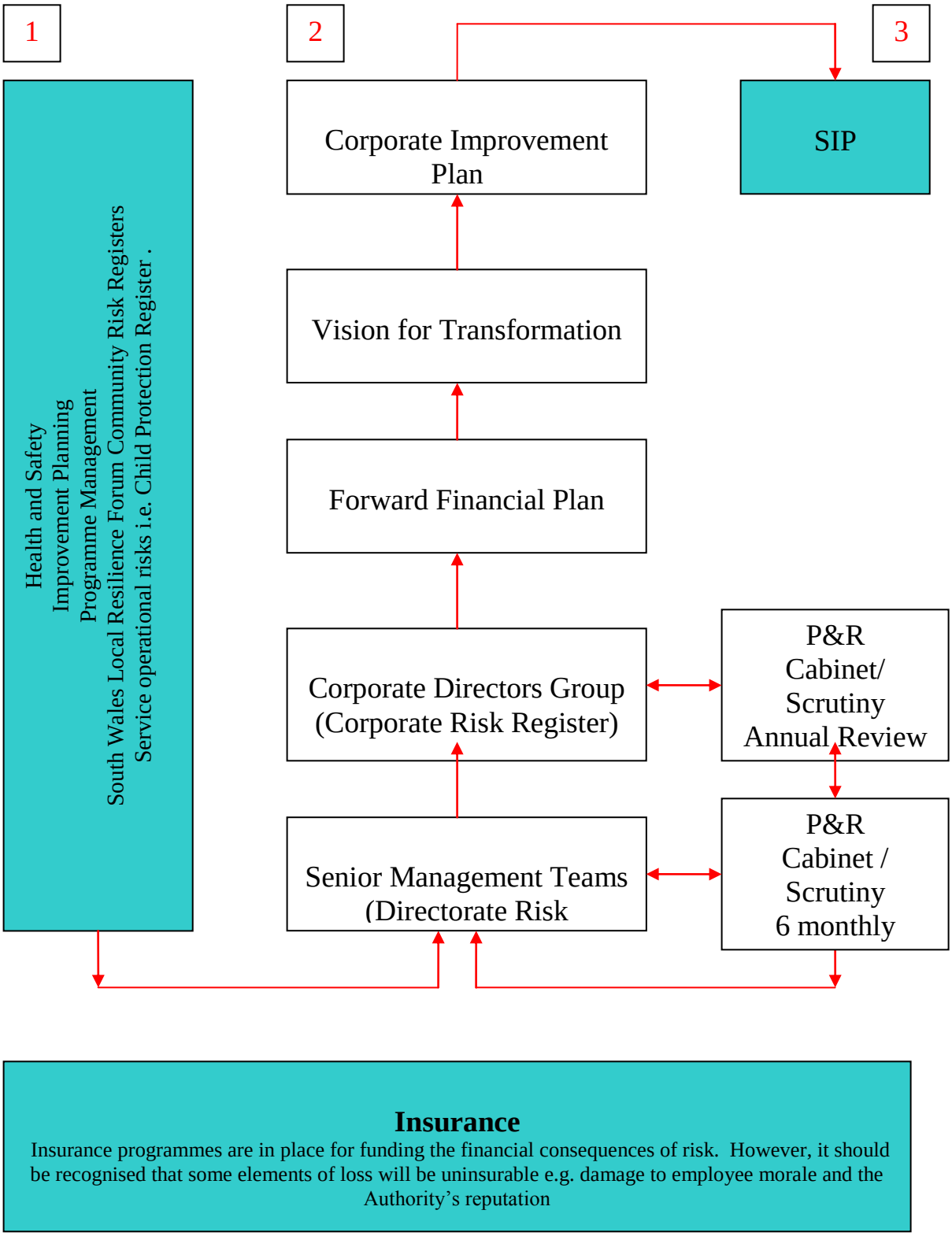
The Council's supporting risk management framework is designed to ensure risk management is effective. Roles and responsibilities for managing risk are clearly assigned and the key risk management business processes are aligned to form a coherent, corporate management system.

The framework (figure 8.1.1 overleaf) illustrates how risk will be managed at different levels in the organisation and how that

information will be used to influence corporate priorities and the allocation of resources:-

- Stage 1 relates to service risk assessments at the operational level
- Stage 2 covers risk assessment at the corporate level which will provide information to inform both the Council's Forward Financial Plan and Strategic priorities for improvement.
- Stage 3 is the mechanism by which risks can be shared with partners via the Local Service Board.

Figure 8.1.1 Neath Port Talbot CBC's Corporate Risk Framework



8.2 Risk Identification

Risk to the Council's business can take a variety of forms such as financial risk, risks to project and service delivery, its reputation, partnerships, employees and Councillors. Those risks could affect the Council's performance, its assets, stakeholders, customers or members of the public. They can also affect the Council's viability.

Risk identification is undertaken by all Officers as part of daily activities such as Safety Survey Inspections which can vary between asset types, customer enquiries or staff appraisals.

The Council's key risk management processes for identifying risk are as follows:

Health & Safety at Work: Processes for evaluating the risk arising from a hazard(s), taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable, are now well-embedded across the Council. External quality assurance of the Council's risk management arrangements is in place and there is clear evidence of risk being prioritised, resourced and evaluated at operational, service and corporate levels.

Improvement Planning: Risk assessments are undertaken as part of the annual business and corporate planning processes. Risks are

analysed, resourced and prioritised for action. These processes are subject of external audit by the Council's regulators.

The Council's Transformation Programme: Risk management is an integral feature of the Council's programme and project management approach which underpins the Transformation Programme. For the Council's priority Tier 1 programmes, risks are actively managed by the relevant Programme Board with a corporate risk register also maintained for the whole of the Transformation Programme. The management of risk across the Transformation Programme is subject of audit by the Council's external regulators.

Business Continuity: Business continuity management is a process which analyses the impact on a business which directly affects the services provided by the Council. Its purpose is to identify critical activities and functions that have to continue at a minimum during a disruption of service delivery or when responding to an emergency.

Operational Risk Management: In addition to those risk processes outlined above there are a number of service / operational risk systems to be considered when identifying corporate risks. Details of significant risks in relation to the individual asset groups can be found in Service Business Plans and/or Lifecycle Plans associated with this HAMP.

This policy builds upon the existing risk management processes but introduces a consistent approach to the management of risk and

describes how processes will be integrated at the directorate and corporate level to produce directorate and corporate risk registers.

8.3 Risk Categorisation

Risk may be categorised in a number of different ways but in the context of the Highways function it is useful to look at:-

- Strategic risks
- Tactical risks
- Operational risks.

This split mirrors the level at which these risks are managed within the Authority, with corporate senior managers looking at strategic risks, tactical risk being managed at network management and Head of Service level, and operational risk being managed at a site and service delivery level.

Strategic risks: These are service wide risks which may be beyond the control of the management team and could include resource availability, finance and political priorities. Although it may not be possible to control all of these, it is appropriate that they are recognised so that, should they occur, they do not come as a complete surprise. In extreme cases the strategic risks could affect the long-term aims and objectives of the Council and will be identified and managed by Corporate Management Team as part of the

corporate risk management process, planning and strategy development and service best-value reviews.

Tactical risks: These are risks that can affect the Council's ability to deliver annual programmes to the approved budgets. Examples of these include adverse weather, changes in customer influences and level of service. Tactical risks are those most likely to be managed through the asset management planning process with actions likely to include, varying levels of service and programme amendment. These are generally risks that could adversely impact on medium-term plans and will be identified and managed by the Environment and Streetcare management team as part of the annual planning process.

Operational risks: These are risks encountered on a day-to-day basis as the authority manages and runs the network. Examples could include service delivery, repair failure etc. Operational risks are those that could adversely affect the service delivery programme in the short term. These will be identified and managed by the appropriate service delivery teams as part of the day-to-day management of the network.

8.4 Risk Evaluation and Control

A manager's risk tolerance level is based on their knowledge, skills and experience which is ultimately subjective to the individual. One of the key aims of this policy is to help managers view risks in a consistent way and ensure the Council has a balanced "risk appetite".

In assessing the risk a standard Risk Matrix is used, as shown in table 8.4.1

Table 8.4.1 Standard 5 x 5 Risk Matrix

Key

Likelihood	Impact
1. Very likely	1. Low
2. Unlikely	2. Low / Medium
3. Likely	3. Medium
4. Very Likely	4. Medium / High
5. Certainty	5. High

Likelihood						
5	5	10	15	20	25	
4	4	8	12	16	20	
3	3	6	9	12	15	
2	2	4	6	8	10	
1	1	2	3	4	5	
0	**1**	**2**	**3**	**4**	**5**	Impact

Low Risk Medium Risk High Risk

There are a variety of options for the control / treatment of identified risks and starting with those with the highest probability consequences rating the appropriate treatment is selected from the following:-

- mitigate
- monitor
- prevent
- insure against
- do nothing

The process is reviewed periodically to ensure that any new risks are properly managed, and documented with supporting documentation as appropriate. When reviews are undertaken these records are kept to provide evidence of the process having been followed correctly and to provide a basis for the next review.

8.5 Monitoring, Reviewing, Reporting and Risk Register

Corporate Risk Register: A review of the Corporate Risk Register by Corporate Directors Group is undertaken biannually (twice a year). The reviews include the production of verifiable evidence to accurately determine and measure the Authority's performance in mitigating / controlling the Corporate Risk Register. Typical inputs include the following although this list must not be considered exhaustive:

- the extent to which the risk is being controlled / mitigated
- follow – up actions from previous management reviews
- changing circumstances including developments in legal and other requirements related to the risk which may need to be added to the register and re-prioritised

Information is collated by the Corporate Director in advance of each review to enable the Group to address the need, if appropriate for changes to the way in which the corporate risk is being controlled / mitigated and the appropriate resources allocated.

The Corporate Risk Register is reported to Policy & Resources Cabinet / Scrutiny Committee on an annual basis.

Directorate Risk Register: Directorate risk registers should be reviewed quarterly by Senior Management Teams. Reviews include the production of verifiable evidence to accurately determine and measure the Directorate's performance in mitigating / controlling the identified risks. Typical inputs include the following although this list must not be considered exhaustive:

- the extent to which the risk is being controlled / mitigated
- follow – up actions from previous senior management teams reviews
- changing circumstances including developments in legal and other requirements related to the risk which may need to be added to the register and re-prioritised

Information is collated in advance of each review to enable to address the need, if appropriate, for changes the way in which the risk is being controlled / mitigated and appropriate resources allocated.

As part of the allocation of resources following production of lifecycle plans, status reports and option appraisals, a risk assessment process at a tactical level is carried out across the main asset groups as part of service business planning which thereby feeds into the Forward Work Programme and budget allocation processes.

8.6 Major Asset Risks

Table 8.6.1 below gives an indication of what have been / are considered to be NPT's Major Asset Risks:-

Table 8.6.1 – Major Asset Risks

Risk	Current Controls in Place
Carriageways	
The Carriageway Lifecycle plan and the Annual Status and Options Report indicates that if current expenditure levels and treatments are maintained the condition of the highway asset will continue to deteriorate and that an additional £500,000 / year is required to stand still.	Regular condition surveys (SCANNER and SCRIM for classified and visual for unclassified) keep engineers informed. The introduction of preventative treatments into the forward works programme whilst not stopping deterioration could help slow it down.
Safety Fencing	
Condition of barriers throughout the County Borough.	Survey identified main risks throughout the County Borough which were dealt with via a 3 year renewal programme, other than those sites associated with edge deterioration that require special funding which are ongoing
Structures	
Cymmer Bridge Deficiency in Principal bridge inspections.	Weight restriction and signal controlled one way working in place. Diversionary route being investigated. New regime implemented resulting in a full cycle of principal bridge inspections being undertaken which may identify unplanned maintenance issues.

Risk	**Current Controls in Place**
Drainage	
Any significant requirements that may arise from the Flood Risk Management Plan. Gap in knowledge on gulley carrier drains.	Mitigating factors will be identified as part of the Plan. Inventory currently being undertaken.
Street Lighting	
Column collapse and electrical system failure.	Problems identified in the 2006/07 Lifecycle Plan led to an options appraisal being undertaken. The preferred option, adopted as a corporate policy and included in the Forward Financial Plan, has resulted in a major infrastructure renewal programme being undertaken, to be completed in October 2017.

9 Improvement Plan

9.1 Milestones

Improvement action plans for each asset group are included in the relevant lifecycle plan. Table 9.1.1 below indicates improvements to date, together with key milestones identified for implementation as part of this plan.

Table 9.1.1: Summary of Performance Gaps and Action Plan

Performance Gap	Milestone / Actions	Target Date
General		
Working practice	Complete gap analysis of working practices vs Codes of Practice	Some areas reviewed and completed – analysis ongoing
Carriageways		
Surface condition data gap	Extend carriageway condition surveys to all thoroughfares on unclassified network Utilise Survey Team to identify condition on scale 1 to 5 Update condition survey	On going Completed Completed 2015
Need to review management of road c'way pavement with respect to skid resistance	Review approach and further develop strategy as necessary, making appropriate amendments to the HAMP and Highway Maintenance Plan as required.	Ongoing.

Performance Gap	Milestone / Actions	Target Date
Improved methods required for targeting of roads for preventative maintenance	Work nationally to develop 'deterioration modelling' to assist with works programming – since previous HAMP, condition data surveys have provided improved means to inform forward work programmes.	2013 - 2016 Ongoing works in line with the Wales – Scots national asset management framework contract.
Risk assessment and pavement management	Continue to explore potential benefits of the application of risk exposure indices in works programming.	Ongoing
Integrated computerised maintenance system for improved efficiencies	Development of in house 'system' using GIS.	Ongoing
Detailed overview of potential road schemes with costs, measurements and inventories	Development of a preparation pool to assist with maintenance planning and prioritisation.	Ongoing
Insufficient coordination with utilities for Forward Works Programme	Develop forward works programme to be coordinated where necessary with utilities.	Gas 5 year works plan received and incorporated into the programme consideration process.
Removal of some sound road surface in maintenance techniques.	Development of 'fit for purpose' preventative maintenance solutions as cheaper, sustainable and more environmentally friendly alternatives.	Trial areas identified through condition survey and incorporated into HAMP

Performance Gap	Milestone / Actions	Target Date
Footways		
Update condition of footway network	Utilise Survey Team to identify condition on scale 1 to 5 condition data used in preparation of annual works programme.	1st survey completed in 2011 2nd survey completed in 2013 3rd survey completed in 2014 4th survey completed in 2015
Improvement in coordination with utilities for Forward Works Programme	Develop forward works programme to be coordinated where necessary with street lighting cable replacement and utilities.	Gas utilities 5 year works plan received with planning underway. Ongoing
Risk assessment and works programme management	Continue to explore potential benefits of the application of risk exposure indicies in works works programming.	Ongoing.
Reduce expensive maintenance costs.	Development of preventative maintenance regime and use of new treatments as cheaper, sustainable and more environmentally friendly alternatives	Ongoing
Implement Inventory Population Strategy.	Gather Bridge element data through biennial general inspection programme.	Ongoing
Structures		
Implement Bridge condition indices	Transfer Condition data into CSS/Atkins Spreadsheet to allow direct comparison with other Welsh Authorities	Ongoing
Incomplete Bridge Detail Drawings/ Records	Transfer Survey and Microfilm details into AutoCAD Drawings	Ongoing
Bridge Key performance indicators	Extend KPI register to include for BCI, Availability, Reliability & Work bank	Ongoing
Retaining wall	Complete survey of retaining	2017

Performance Gap	Milestone / Actions	Target Date
gaps	walls	
Principal inspections on major structures	Principal inspections programmed (52 No.)	Ongoing
Compliance with the UK Bridges Boards Code of Practice for Highway structures	Implementation of the code's recommendations	Ongoing
Formal maintenance selection process	Prioritisation system to be applied to work bank	Ongoing
Drainage		
Some deficiency in Management of culverts	Review asset management arrangements for culverts as part inventory collection	Culvert database is 'substantially complete', line with Flood and Water Management Act 2010. Complete intake and outfall inventory exists and culvert /pipeline inventory is being collected
Lack of cyclic cleaning of 'problem pipe' sections	Cyclic cleaning of problem pipe sections with collection of condition data at same time	High risk areas identified with monitoring undertaken – development ongoing
Lack of detail for connecting drains forming part of gulley / highway drainage systems	Instigate inventory of connecting drains forming part of gulley / highway drainage systems.	On going
Lighting		
Address aged lighting stock	Implement Lighting Renewal Project for street lighting (excludes illuminated signs)	October 2017
Gap in data of underground cabling	Complete inventory of authority owned underground cable	Completed
Gap in data of	Complete inventory &	Ongoing

Performance Gap	Milestone / Actions	Target Date
controlled crossing infrastructure	condition survey of controlled crossing infrastructure	
No long term controller replacement investment profile	Identify investment profile for controller replacement to end of plan period	Ongoing
No long term Signal refurbishment investment profile	Identify signal refurbishment investment profile to end of plan period	Ongoing
Highway Signs		
Inventory out of date – requiring condition data	Completion of inventory data – requiring feedback from Neighbourhood Services.	Completed
Signs missing or need attention	Replacement of absent signs when identified – problems significantly reduced since last HAMP following investment under the Neighbourhood Service initiative.	Ongoing
Cleaning Backlog	Neighbourhood Services to complete cleaning backlog and thereafter continue with cyclical cleaning in accordance with HAMP	Backlog cleared. Routine maintenance on-going.
No rolling programme of replacement	Identify replacement programme starting with life expired stock	Continuous inspection / replacement regime in place
Crash Barriers		
95% of safety barriers data held in inventory	Compile inventory/condition data for safety Fences	Inventory completed 2009. 1st complete condition survey undertaken in 2009, 4 year work programme completed 2nd complete condition survey programmed for 2013. Inventory update is ongoing

Performance Gap	Milestone / Actions	Target Date
Other Assets		
No maintenance programme for other assets	Establish maintenance programme e.g. street furniture	Existing survey data to be rationalised. Development of programme for collection of required asset inventories – 2016

10 Management & Control of the Plan

10.1 Responsibility for Delivery

The following people are charge with the delivery of this Highway Asset Management Plan. Their roles are as follows:

Post / Position	Name	Role
Environmental Management Team	Not applicable	Draft approval of the HAMP
Environment and Highways Cabinet Committee	Not applicable	Approval of the HAMP
Capital Programme Steering Group	Not applicable	Monitoring of financial information relating to the HAMP
Head of Streetcare Services Highways and Drainage Manager Neighbourhood Services Manager	Mike Roberts Steve Owen Andrew Lewis	Allocate and prioritise resources to facilitate implementation of asset management strategies and provide a link to corporate strategies in consultation with other sections as necessary.
Asset / Traffic & Programme Manager Highways Asset Management Officer	Ian Carter Steve Bevan	Co-ordinate asset management, development and updating of the HAMP and associated documents, monitoring and implementation of various improvement actions.
GIS Manager – Senior Assstant	Mike Thomas	Holder of the asset inventory and condition data.

Departmental Finance	Sian Davies	Provision of any financial information required in relation to the HAMP.
Network & Programme Manager Engineering Manager Lighting Manager Drainage Manager Street-Scene Manager	Ian Carter Hasan Hasan Mike Key Glenn Watkins Nigel Waters	Implement / support development of the HAMP and asset management strategy. Input to updates of HAMP documents and production of integrated works programmes and reactive highway maintenance.

10.2 Review and Update

The HAMP document will be reviewed on a three year cycle and the appendices updated periodically as required.

Position	Frequency	Date of Next Update
HAMP	3 yearly	April 2018
Appendices	As required	Not applicable