

Roads and Transportation

ROAD ASSET MANAGEMENT PLAN 2023 - 2028









Version: 1.0 June 2023

Foreword

West Lothian Council is committed to helping create strong and sustainable communities. It is the responsibility of the Roads and Transportation service to ensure that West Lothian has the appropriate and safe road infrastructure to support and sustain economic and population growth.

This plan sets out how the council will manage our road assets: carriageways, footways, structures, street lighting, traffic signals, street furniture and water related assets for the next five years. It has been produced in accordance with national guidance from SCOTS (Society of Chief Officers of Transportation in Scotland) and recommended good practices.

It is widely recognised that the application of modern asset management practices can enable improved value for money. In these challenging times is it essential that we embrace these methods and strive to ensure that allocated budgets are invested as wisely as possible.

The plan recognises the views of all users of our public road and footway infrastructure and the importance that is placed upon our road assets. Recent winter weather has shown that our road infrastructure is susceptible to damage when challenging weather occurs. It is essential that allocated investment targets these maintenance issues and support our approved strategies and policies to deliver services as efficiently as possible.

West Lothian has some of the best roads in Scotland and this has been due to the Council's commitment to funding road maintenance. However, recent winter weather has been severe and this has resulted in increased potholes on our roads. This together with ongoing budget pressures is going to make it a considerable challenge to maintain the high standards that the public of West Lothian have come to expect.

The Roads and Transportation service has highly skilled and professional employees who are committed to maintaining our public road assets in a safe and reliable condition for West Lothian. They will also be delivering many active travel initiatives and Scottish Government strategies over the next five years improving the asset network in West Lothian.



Gordon Brown Roads and Transportation Manager West Lothian Council

Document Control

Author	Kenneth Brown
	Roads Network Manager

RAMP#4 Version Control			
Version	Author	Date	Description
1.0	KB	September 2023	First draft for review and input
Next Planned Review/Update		ew/Update	September 2028

Approval	Date
Gordon Brown – Roads &	1 September 2023
Transportation Manager	
Council Executive	3 October 2023

Contributors / Consultees					
Ronnie Fisher	Design Engineering Manager				
David Wilson	Roads Operations Manager				
Victoria Mungall	Development Management & Transportation				
	Planning Manager				
Adeola Bashorun	Senior Engineer - Roads Maintenance				
Stuart Colbron	Senior Engineer - Road Safety				
Brian McDowall	Senior Engineer - Projects				
Gayathri Tella	Senior Engineer - Structures				
Keith Garnett	Senior Engineer - Street Lighting				
Chris Chalmers	Senior Engineer - Flood Prevention				
Ross McDonald	Senior Engineer- Roads Operations				
Keith Willis	Traffic Signals - Technician				

Contents

Forew	ord	l
Docum	nent Control	ii
1. Int	roduction	1
1.1	Overview	1
1.2	Purpose	1
1.3	RAMP Relationship With Other Plans	1
1.4	Quality Management System	2
2.	Road Assets	4
2.1	Network	4
2.2	Road Assets	4
2.3	Assets Not Covered	5
2.4	Inventory Data	5
3. Cu	ustomer Expectations	
3.1	Key Stakeholders	
3.2	Customer Consultation	
3.3	Customer Contacts (Enquiries/Complaints)	9
4. De	emands	
4.1	Asset Growth	
4.2	Traffic Growth and Composition	
4.3	Environmental Conditions	
4.3	People and Competency	
5. Se	ervice Standards	
5.1	SCOTS Performance Indicators	
5.2	Performance Measurement	
	nancial Summary	
6.1	Asset Valuation	
6.2	Historical Expenditure	
6.3	Capital Funding (Planned Maintenance)	
6.4	Revenue Funding (Reactive Maintenance)	
	sset Investment Strategies	
7.1	Carriageways	
7.2	Footways	
7.3	Structures	
7.4	Street Lighting	
7.5	Traffic Signals	22

7.6	Street Furniture	23
7.7	Water Related Assets	23
7.8	Quality Manual	25
8. Ris	k Management	26
8.1	Risk Based Approach	26
8.2	Risks to the Plan	26
8.3	Corporate Risk Management	27
9. Imp	provement Plan	28
10. R	References	29
Append	dix A Asset Management Documentation	30
Append	dix B Annual Updating Regime	32

Note:

The Roads and Transportation asset management plan (RAMP) has been developed in association with the SCOTS Asset Management Project. The plan has of a number of complementary documents, which are summarised in Appendix A and will be reviewed in accordance with the regime outlined in Appendix B.

1. Introduction

1.1 Overview

The Road Asset Management Plan (RAMP) sets out our strategies for the maintenance of the Council's road assets. The road asset comprises carriageways, footways, structures, street lighting, traffic management and street furniture. In addition, the plan covers water related infrastructure such as reservoirs and culverts.

Our Road Asset Management Policy (1) requires the RAMP to be produced together with the Quality Management System Manual & Procedures (QMM) (2). In accordance with the Council's corporate asset management strategy Strategic Outline Business Cases (SOBCs) were produced setting out ongoing capital funding proposals. These were used to inform the Capital Plan for the next five years of investment.

1.2 Purpose

The purpose of the RAMP is to:

- Formalise strategies for investment in road assets;
- Define service standards:
- Improve how the road asset is managed; and
- Support the deliver better value for money across Roads & Transportation.

The plan considers stakeholder expectations; existing and future projected demands on the road infrastructure assets; anticipated resources; and risks, to deliver service standards which provide the greatest benefit against the asset management objectives and the Corporate Strategy.

1.3 RAMP Relationship With Other Plans

Our Road Asset Management Policy confirms our commitment to asset management and aligns our approach with the councils Corporate Plan and the SCOTS Road Asset Management Framework of Recommended Practices.

The RAMP relates to other council plans as illustrated below:

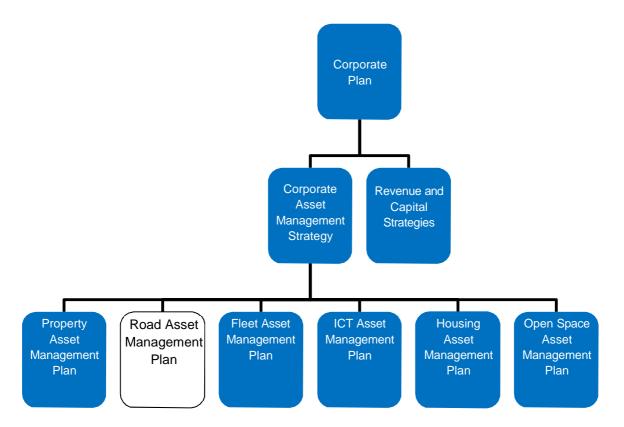


Figure 1: Road Asset Management Plan – Strategic Hierarchy

The RAMP is informed directly by the SOBCs and the Quality Management System Manual & Procedures. The targets and strategies contained in the RAMP and the programme of works have been developed in-line with the council's capital budget agreed in February 2023.

1.4 Quality Management System

From 2018 the Roads & Transportation Service extended its Quality Management System to cover the whole of the service. The Quality Management System Manual & Procedures comply with the requirements of the EN ISO 9001:2015 standard and will be regularly audited by internal and external auditors.

The boundaries, applicability and scope of the Quality Management System has been determined. It covers the provision of regulatory, consultancy, and contracting services in the following service areas:

- Design Engineering
 - Flood Risk Management
 - Projects
 - Structures
- Development Management & Transportation Planning
- Network
 - Public Utilities
 - Roads Maintenance
 - Road Safety and Traffic Management
- Roads Operations

DATA LABEL: PUBLIC

- Operations Street Lighting

2. Road Assets

2.1 Network

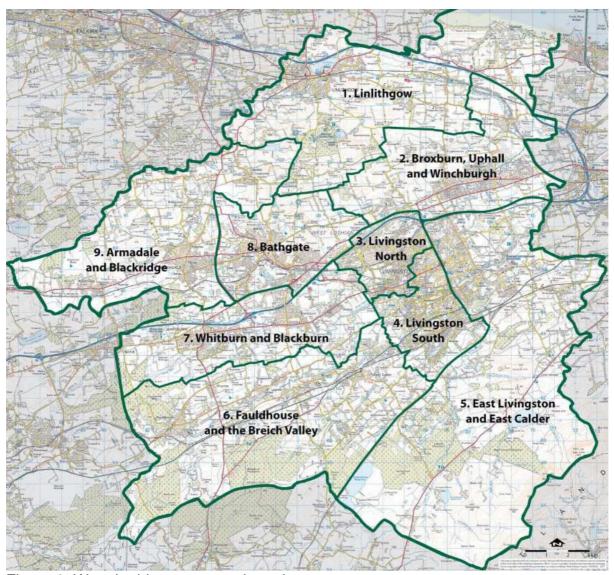


Figure 2: West Lothian extent and wards

2.2 Road Assets

West Lothian Council's road assets covered by this plan are:

Carriageways 1060km (659 miles)

Footways/cycleways 1390km

Structures
 594 bridges, culverts and underpasses

136 retaining walls

Street Lighting
 48,176 Lighting Columns

Traffic Management Systems 171 Traffic Signal junctions & crossings

• Street furniture - traffic signs (non-illuminated), safety fences, pedestrian barriers, street name plates, bins, bollards, bus shelters, grit bins, cattle

DATA LABEL: PUBLIC

- grids, gates, trees / tree protection, seating, verge marker posts and weather stations
- Water related assets including: culverts, road drainage, river training structures, reservoirs, SUDS, ponds and water courses.

2.3 Assets Not Covered

Some roads related assets are the responsibility of other council services and the following are not covered in this RAMP:

- Seats/verges/vegetation
- Open Spaces
- Public Rights of Way

2.4 Inventory Data

This plan is based upon currently available inventory data for the road assets. For some street furniture assets inventory data is not currently held, however, an attempt has been made to incorporate these assets within this plan using local estimates and sample surveys.

A plan to improve asset data forms part of the council's Road Asset Data Management Plan (5). As additional inventory data is collected it will be added to the Confirm database. A full inventory is vital for robust asset management (IA-1).

The mobile working platform, ConfirmConnect is used by all staff. This powerful tool allows us to gather inventory and condition data during visual inspections for all the road assets. In due course this condition data will drive the maintenance programmes for all our assets and ensure that funds are spent where there is most need.

3. Customer Expectations

3.1 Key Stakeholders

Roads and Transportation works with a wide variety of stakeholders, such as:

- customers
 - e.g. pedestrians, cyclists, motorists, commuters, logistics, tourists, businesses, etc
- Transport providers
 - e.g. bus companies, Network Rail, Ferry Companies, etc.
- Statutory Undertakers
 - E.g. Water, gas, oil, electricity, telecommunications, internet, MoD, etc
- Politicians
 - e.g. Local Councillors, MSP, MP, Ministers, etc.
- Senior Council Executive/Management
- Council Road Infrastructure Officers
- Emergency Services
- Industry bodies
 - e.g. RAC, AA, Cycling UK, Scottish Chambers of Commerce, SCOTS, etc
- Other Council Services
 - e.g. Refuse Collections, Social Services, Regeneration, Education, etc
- Delivery partners & Supply chain
 - e.g. Consultants, Contractors, manufacturers, surveyors, etc.
- Other Road Authorities
 - e.g. neighbouring authorities and Transport Scotland

It is our responsibility to ensure that relationships are constructive and support the achievement of our asset management objectives.

3.2 Customer Consultation

National Highways & Transport Network (NHT) Survey

Roads and Transportation use the NHT survey to collect public perspectives on the importance of, and satisfaction with, roads and transportation services in West Lothian. The survey deals with a wide range of themes including: accessibility, public transport, walking and cycling, congestions, road safety, and roads maintenance.

The postal survey is conducted by Ipsos MORI and supported by Measure 2 Improve, the Highways Maintenance Efficiency Programme (HMEP) and the University of Leeds Institute for Transport. Questionnaires were sent to 3300 households in each participating local authority area. In total, 112 authorities took part in this survey of which 5 were in Scotland. West Lothian Council have participated in the survey since 2016.

DATA LABEL: PUBLIC

In 2022 West Lothian Council had a 21.5% response rate amounting to 709 returns. A full report is provided to the authority and the following extracts have been highlighted.

Survey Statistics

- Number of times participated: 7
- Sample size this year: 3,300
- Number of responses this year: 709
- Number of online responses this year: 141
- Number of postal responses this year: 568
- Response rate this year: 21.5%

Best Scores

- Best theme: Accessibility, 68%
- Best satisfaction result: Street lighting, 67%
- Best well informed result: Informed about climate change (CMQI18), 61%
- Best ease of access result: Ease of access to school/college (ABI06), 78%

Worst Scores

- Worst theme: Highway Maintenance, 47%
- Worst satisfaction result: Speed of repair to damaged roads (HMBI30), 27%
- Worst well informed result: Informed about local air quality (CMQI07), 28%
- Worst ease of access result: Ease of access (disabilities) (KBI04), 62%

Best and Worst KBI Satisfaction Scores

- Best KBI: Street lighting (KBI25), 67%
- Worst KBI: Public transport information (KBI08), 30%
- Most improved KBI: Road safety environment (KBI21), 5%
- Most reduced KBI: Local bus services (aspects) (KBI07), -9%

Best and Worst Gap Scores (differences from the NHT average):

- Number of indicators above average: 93
- Number of indicators below average: 56
- Best theme gap: Tackling Congestion, 6%
- Worst theme gap: Public Transport, -2%
- Best satisfaction indicator gap: Trac levels & congestion (KBI17), 10%
- Worst satisfaction indicator gap: Reliability of electronic display info (PTBI19),
 -9%

Best and Worst Trend Scores (change in scores in this year's survey compared with last year):

- Number of indicator improving: 45
- Number of indicators reducing: 98
- Best theme trend: Tackling Congestion, 2%
- Worst theme trend: Accessibility, -7%
- Best satisfaction indicator trend: Speed limits (RSBI01), 14%
- Worst satisfaction indicator trend: Frequency of bus services (PTBI01), -12%

Key Areas of Service – Importance:

- Most important area of service: Condition of roads
- Second most important area of service: Safe roads
- Least important area of service: Good local taxi services
- Second least important area of service: Good cycle routes/lanes

Key Areas of Service - Satisfaction

- Most satisfied service: Street lighting
- Next most satisfied service: Pavements
- Least satisfied service: Condition of roads
- Next least satisfied service: Demand responsive transport

Key Areas of Service - Better or Worse (The key areas of services that the public regard as getting better or worse):

- Most popular area of service 'getting better': Street lighting
- Second most popular area of service 'getting better': Cycle routes/lanes
- Most popular area of service 'getting worse': Condition of Roads
- Second most popular area of service 'getting worse': Low levels of trac congestion

Key Areas of Service - Spend More or Less (The public's view on the level of spending required by key areas of service):

- Most popular service for more spend: Condition of roads
- Second most popular service for more spend: Safe roads
- Most popular service for less spend: Cycle routes/lanes
- Second most popular service for less spend: Local taxi services

Potholes and Damaged Roads Compared to a year ago would you say:

- There are more potholes and damaged roads, there are fewer or no change in the number: More
- The Council is doing more to repair local roads, doing less, or about the same: Less

Provision responses

- Cycle lanes: About the right amount
- Cycle routes: About the right amount
- Bus stops: About the right amount
- Speed control measures: About the right amount
- · Street lights: About the right amount
- Electric vehicle charging points: Far too few
- Pavements, footpaths and pedestrian areas: About the right amount

How well Informed responses

- Local transport and highways: Not Very Well Informed
- Local public transport: Not Very Well Informed
- The transport and highways services provided by the council: Not Very Well Informed

DATA LABEL: PUBLIC

The actions the council is taking to maintain or improve the condition of roads:
 Not Very Well Informed

Contacting the Council

- Which method do you use to contact the council By telephone (during normal office hours)
- How easy is it to get in touch to report a problem Fairly Good
- How easy is it to get in touch to find something out Fairly Good
- The speed of response of council staff- Fairly Good
- The quality of response of council staff Fairly Good

Climate Change and Traffic Pollution (The public were asked... 'How well informed do you feel about the following'):

- Climate change sometimes called 'global warming' Fairly Well Informed
- The level of pollution caused by trac in the local area Not Very Well Informed
- The actions the Council is taking to help tackle climate change Not Very Well Informed
- The actions you can take personally to help tackle climate change Fairly Well Informed
- The quality of air alongside local roads Not Very Well Informed

Car & Van Users - Fuel Type and Parking

- Most popular fuel type: Petrol or diesel
- Most popular parking place; Private Driveway or Garage or Similar

3.3 Customer Contacts (Enquiries/Complaints)

Customer contacts for Roads and Transportation are recorded in the council's customer relationship management system (CRM) and come to the service via our asset management software Confirm. Records for the period 2022/23 show that:

- 6870 customer enquiries were received and 75% were closed off in the identified response time.
- 209 Freedom of Information enquiries were received and 96% dealt with within the allowable time.
- 147 Roads and Transportation Complaints (Stage 1) were received and 73 % were resolved within 5 days.
- 21 Roads and Transportation Complaints (Stage 2) were received and 52% were resolved within 20 days.

4. Demands

4.1 Asset Growth

By 2028 it is anticipated that West Lothian is projected to have the 9th highest population out of the 32 council areas within Scotland. Projected figures estimate that the number of households within West Lothian will increase from 77,953 to 85,634. It is therefore inevitable that the road network in West Lothian will increase significantly to accommodate the growth in housing. Growth is strongest along the M8 corridor and in particular in Armadale, East Calder and Winchburgh. The Local Plan has identified land for both housing and commercial development which will result in significant pressure on the roads infrastructure to accommodate.

Roads built by developers, if they are constructed to the council's standards are adopted by the council. It is estimated approx. 7km of carriageway and 14km of footway will be constructed per annum. Along with this comes the associated lighting columns, drainage and on occasion new structures.

New assets create the need for maintenance, management and associated funding in future years as these additional assets age. The construction of road safety features (such as high friction surfaces and traffic calming) and road improvement works are ongoing and will increase the future maintenance and management needs. Whilst developers are liable for costs relating to infrastructure within any new developments, additional improvement works are often required out-with sites onto the wider area.

4.2 Traffic Growth and Composition

In 2022, 1.14 billion vehicle miles were travelled on roads in west Lothian. With the level of proposed development over the next 5 years, an increase in traffic is inevitable. This will contribute to the accelerated wear and tear of the road assets and means increased levels of maintenance will be required in future.

Current road traffic data can be found here: (https://roadtraffic.dft.gov.uk/local-authorities/27). Following a big decline in 2020, traffic levels in 2021 and 2022 have increased. However, 2022 levels still remain lower than those in 2016. The overall decrease is entirely due to the decline in traffic levels observed during the pandemic and the number of people home working.

4.3 Environmental Conditions

Pressure is also being placed upon our road assets as a result of environmental conditions:

- Flooding: several areas within the district are prone to flooding. There have been several occasions that caused severe flooding difficulties which resulted in damage to property and the road network.
- Rainfall intensity: climate change is changing weather patterns resulting in more intense rainfall in localised areas.

- Harsh winters: this winter was particularly harsh and caused significant damage to road surfaces as a result of freeze/thaw action.
- Warmer Summers: recent warmer summers have caused roads to melt, with excess bitumen bleeding to the road surface and increasing the likelihood of deformation defects (such as rutting) occurring, preventing the road surface from draining effectively.

These pressures are creating a need for additional funding. If such events occur during the plan it may be necessary to revise the standards that are affordable unless additional funding is provide from central government, as occurred during recent harsh winter conditions.

4.3 People and Competency

Constant pressure is placed upon Roads and Transportation due to the everchanging demands upon the road asset and the limited resources available to manage them. The highly trained, experienced, and competent officers prioritise, manage, and deliver the services to support the delivery of the organisational and RAM Objectives.

Insufficient resourcing of the service is likely to have a negative impact on:

- the service's contribution to the corporate plan/strategy
- delivery of the Asset Management Plan and Objectives
- service resilience
- ability to adapt to future challenges
- delivery of improvements
- succession planning

We are committed to staff development supporting people to further their careers through study. Staff are encouraged to undertake qualifications in civil engineering (NC, HNC, degree) that will increase their knowledge and allow them to progress their careers with West Lothian Council.

5. Service Standards

A major part of asset management is measuring performance to ensure constant improvement and for benchmarking against other councils. The SCOTS Asset Management Project has developed a set of 132 performance indicators and management statistics to assist with road asset management.

SCOTS have collected these indicators on an annual basis since 2012 with APSE undertaking bench marking and reporting. Our results are grouped along with eight other semi urban authorities. The collection of this data goes some way to satisfying Audit Scotland, in terms of the requirements of "Maintaining Scotland's Roads: A Follow-Up Report" in that Councils should "make greater efforts to benchmark road maintenance activities with other councils to drive out cost inefficiencies."

The RAMP is based upon delivering the service standards below. The standards reflect the funding levels in section 6 and are the standards that users (customers) can expect during the plan period. Some of the performance indicators are listed below along with the average for the semi urban authorities and the change anticipate during the period of the plan.

5.1 SCOTS Performance Indicators

Asset		Results		
Group	Measured By	2021/22	Average	
	Carriageways			
Sofoty	Percentage of Cat 1 defects made safe within response times.	84.25%*	82.51%	1
Safety	Percentage of safety inspections completed on time	97.64%	97.20%	1
	Percentage of the roads network to be considered for maintenance treatment	29.90%	33.30%	1
	Percentage of "A" Class roads to be considered for maintenance treatment	24.50%	26.22%	1
	Percentage of "B" Class roads to be considered for maintenance treatment	30.30%	31.10%	1
Condition	Percentage of "C" Class roads to be considered for maintenance treatment	39.00%	34.38%	1
	Percentage of "U" Class roads to be considered for maintenance treatment	29.60%	36.46%	1
	Percentage of carriageway length given a maintenance treatment	6.29%	4.29%	1

^{*} Includes footways

Footways				
0.1.1	Percentage of Cat 1 defects made safe within response times.	No Data*	79.14%	1
Safety	Percentage of safety inspections completed on time	91.01%	84.95%	
Condition	Percentage of footway area to be considered for maintenance treatment	4.38%	11.27%	1
	% of footway area treated	0.17%*	0.48%	1

^{*} included above

Structures				
Condition	Percentage of primary inspections carried out on time	98.53%	82.24%	1
	Percentage of general inspections carried out on time	91.23%	79.56%	1
	Bridge Stock Condition Indicator (BCI _{ave})	91.20	85.72	\leftrightarrow
	Bridge Stock Condition Index (BCIcrit)	83.51	76.14	+

Street Lighting				
Customer Service	Percentage of repairs within 7 days	96.70%	87.14%	1
Condition	Routine faults as a % of street lighting stock	1.57%	7.06%	1
Environment	Average annual electricity consumption per street light (kwHrs)	188.14	180.06	1

Table 1: SCOTS Key Performance Indicators

↑ Targeted for improvement ← Performance to be maintained

Anticipated decline in standard

5.2 Performance Measurement

To ensure that performance is being recorded and available corporately, the Pentana Performance Management System is used. It generates performance information scorecards based on the relevant asset objectives. These scorecards show the best and worst expected result for the period and the current level of performance.

Most of the asset management performance data is updated annually, while other Roads and Transportation data is updated monthly or quarterly. Information will be available internally and will be reported quarterly to elected member with a performance report submitted to the Environment and Sustainability Policy Development and Scrutiny Panel.

DATA LABEL: PUBLIC

6. Financial Summary

6.1 Asset Valuation

The Asset Valuation figures provide a financial report of the Road asset.

The Gross Replacement Cost (GRC) represents how much it would cost to construct the Road Infrastructure from a green field site utilising modern materials, technologies, and techniques (Modern Equivalent Asset – MEA)

The depreciated replacement cost (DRC) illustrates the extent to which the asset has been consumed (used up).

The annualised depreciation cost (ADC) represents the average annual investment required in planned maintenance (renewal of the asset) required to maintain the asset. Comparing the annual capital investment against this figure provides an indication of whether long term funding needs are being met (or not).

As at June 2023 the road asset was valued as follows:

Asset Type	Gross Replacement Cost £'000	Depreciated Replacement Cost £'000	Annualised Depreciation Charge £'000
Carriageway	£1,252,585	£1,069,392	£17,306
Footway	£132,676	£93,328	£2,043
Structures	£314,945	£309,967	£1,795
Street Lighting	£96,688	£50,914	£2,182
Street Furniture	£10,632	£5,325	£533
Traffic Management Systems	£9,470	£5,090	£461
Land	£790,297		
Total	£2,607,294	£1,534,016	£24,319

Table 2: Asset valuation

The valuation figures above illustrate the massive financial value of the road asset. In theory, the annualised depreciation represents the average investment required for planned maintenance (renewal of the asset) to maintain the asset in a safe and acceptable condition.

6.2 Historical Expenditure

Historical expenditure invested in works on the road asset for the last five years is shown below. The figures have been supplied by the financial management unit and are used to generate some of the SCOT/APSE performance data detailed in section 5. This shows total client payments to Roads Operations and external contractors.

Asset	Historical Expenditure (£k)				
ASSEL	18/19	19/20	20/21	21/22	22/23
Carriageways	9,230	7,473	6,442	8,715	11,287
Footways	564	513	298	660	588
Lighting	6,457	6,531	5,007	5,459	4,384
Structures	2,383	4,952	2,173	2,757	1,674
Street furniture	211	205	59	160	193
Traffic Signals	233	208	221	218	235
Winter maintenance	2,056	1,987	2,970	1,805	2,239
Totals:	21,132	21,869	17,171	19,775	20,599

Table 3: Historical expenditure (SCOTS/APSE Financial Summary - Total actual net expenditure for financial year)

The ten year span of the capital budget allows a level of flexibility to be built into the maintenance programme. This can be seen in the non-linear nature of the spend profile. The flexibility is important as it allows for emergency repairs, accounts for the size of repair schemes, changes to the overall programme identified during the inspection programme and unforeseen eventualities that might be encountered during works.

6.3 Capital Funding (Planned Maintenance)

The service standard targets shown in section 5 are based upon the following funding levels. The capital funding for the five years from 2023/24 to 2027/28 has been approved by the Council Executive. This decision was informed by the Strategic Outline Business Cases that were prepared by Roads and Transportation. In accordance with Financial Management Unit requirements the first three years has been allocated to named maintenance schemes.

The tables below is extracted from the Roads and Related Assets – Capital Investments Strategy 2023/24 to 2032/33 and may be subject to change.

Asset	Works	Agreed Budgets (£k) (June 2023)				
	23/24	23/24	24/25	25/26	26/27	27/28
	A Class Roads	269	667	663	360	360
	B Class Roads	363	265	240	290	268
Carriageways	C Class Roads	340	289	283	288	288
	U Class Roads	708	540	611	716	645
	Non-Adopted	317	102	102	90	90
Footwore	Capital	203	145	145	145	145
Footways	Non-Adopted	20	20	20	20	20
Structures		1,132	1,479	1,530	1,370	1,217
Street Lighting		2,024	1,328	1,410	1,186	1,235
	Junctions	180	180	180	180	180
Traffic	Pedestrian	90	90	90	90	90
Signals	Polkemmet Road, Whitburn	80	0	0	0	0
	Bus Passenger Infrastructure	49	0	0	0	0
Street Furniture	Conversion of Part Time 20mph Signs to Full Time 20mph Zones	50	0	0	0	0
	Road Traffic Signs	131	60	60	60	60
Totals:	_	5,956	5,379	5,180	4,795	4,598

Table 4: Capital funding for road asset management

Other Roads Projects		Agreed Budgets (£k) (June 2023)			
	23/24	24/25	25/26	26/27	27/28
Road Casualty Reduction Schemes	300	250	250	235	200
Disabled Persons Parking	36	36	36	36	36
Cycling, Walking and Safer Routes / Active Sustainable Travel	1185	879	810	810	810
Community Recycling Centres Refresh		0	0	0	0
Transport Scotland - Pavement Parking Prohibitions	79	0	0	0	0
Purchase of Vehicles	60	0	0	0	0
Town Centre and Villages	2,320	1300	1300	0	0
Flood Prevention & Drainage	494	538	2039	176	176
Totals:	4,524	3,003	4,435	1,257	1,222

Table 5: Other capital funding

In February 2023 the council approved the Corporate Asset Management Strategy and General Services Capital Investment Programme for 2023/24 to 2032/33. Potential capital resources were determined for the ten year investment period, and Strategic Outline Business Cases (SOBC's) were prepared for each asset category for prospective capital investment. Revenue allocation is made by the service manager and is generally based on the proportions of expenditure in previous years.

The actual spend during these five years will depend on the programme of works for each asset group. The programme will be generated in accordance with the strategies set out in Section 7. A three year rolling programme of named schemes has been developed based on the results of condition surveys ensuring funding always goes to the assets in most need.

In line with asset management best practice we intend to start monitoring the spend in terms of reactive and planned maintenance (IA-3). As our asset management planning develops, reactive maintenance should decline as planned maintenance is undertaken on the assets in the worst condition.

6.4 Revenue Funding (Reactive Maintenance)

The Roads and Transportation revenue budget is split between the various teams based on the pattern of historical spending. The table below is extracted from the Roads Services Costing 2023/24 summary provided by the Financial Management Unit.

Service	Total Budget
Network Maintenance (carriageways, footways, drainage)	£968,000.00
Traffic Signals and Road Safety	£155,000.00
Lighting excluding energy	£383,000.00
Flood Prevention	£253,000.00
Structures	£204,000.00

Table 6: Revenue funding

18

7. Asset Investment Strategies

The strategies in this section have been determined using predictions of future asset condition for periods of up to 20years. The predictions enable strategies to be created to look at the whole life cost of maintaining the asset. Investment strategies for the major asset types are summarised below. These strategies are designed to enable the service standards in section 5 to be delivered.

Investment between Asset Types

In comparison to historical investment, future investment (2018/19 to 2027/28) is planned to be:

- Carriageways: level of investment has dropped
- Footways: level of investment has dropped
- Structures: level of investment has dropped
- Street lighting: level of investment has dropped
- Traffic signals: level of investment has dropped
- Water Related Assets: level of investment has dropped

7.1 Carriageways

Our carriageways will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2).

Category	Description	Basis of Strategy
Planned Maintenance Preventative (Capital Funding)	A programme of preventative treatment to carriageways in the initial stages of deterioration.	 From visual inspections and automated condition surveys a programme of works will be developed targeting the carriageways identified as most in need of major works. Maintenance treatments such as surface dressing will be adopted to maximise the life of the carriageway assets. To ensure cost effective implementation of the programme the works will be carried out both by the council workforce and private sector contractors Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent.
Planned Maintenance Corrective (Capital Funding)	A programme of resurfacing where a preventative treatment cannot be applied	 For roads that have severe deterioration more significant repairs are required such as resurfacing or reconstruction. The procurement strategy for these carriageways is as above.

Routine and Reactive Repairs (Revenue Funding)	Repair of carriageway defects considered to be of high priority to current intervention standards and response times.	 Minor carriageway defects are identified during the ongoing routine inspection programmes. Defects are also identified due to customer enquiries and reports from elected members. If the repairs are considered to be of high priority the works will be carried out by the council workforce. Works will be carried out by the council workforce. 	
Planned Maintenance Preventative & Corrective (Revenue Funding)	Minor planned maintenance schemes	 From the routine inspection process, defects identified from customer enquiries and report from elected members a programme of minor preventative and corrective schemes will be developed. Maintenance treatments such as spray injection patching will be adopted to maximise the life of the carriageway assets To ensure cost effective implementation of the programme the works will be carried out both by the council workforce and private sector contractors Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent. 	

Table 7: Carriageway strategy

A skid resistance strategy has also been developed and has been approved by the Council Executive. This strategy will assist the council meet its statutory duties and will aid our prioritisation and decision making for A and B class routes.

7.2 Footways

Our footways will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2)..

Category	Description	Basis of Strategy
Planned Maintenance Preventative & Corrective (Capital Funding)	A programme of preventative treatment (in the initial stages of deterioration), resurfacing and renewal of	 From inspection a programme of works will be developed targeting the footways identified as most in need of major works. To ensure cost effective implementation of the programme the works will be carried out both by the council workforce
	footways.	and private sector contractors

DATA LABEL: PUBLIC

		Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent.
Routine and Reactive Repairs (Revenue Funding)	Repair of Footway defects considered to be of high priority to current intervention standards and response times.	 Footway defects are identified during the ongoing routine inspection programmes. Defects are also identified due to customer enquiries and reports from elected members. If the repairs are considered to be of high priority the works will be carried out by the council workforce.
Planned Maintenance Preventative & Corrective (Revenue Funding)	Minor planned maintenance schemes	 From the routine inspection process, defects identified from customer enquiries and report from elected members a programme of minor preventative and corrective schemes will be developed. To ensure cost effective implementation of the programme the works will be carried out both by the council workforce and private sector contractors Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent.

Table 8: Footway strategy

7.3 Structures

Our structures (road bridges, underpasses, footbridges, culverts, retaining walls and a cattle grid) will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2).

Category	Description	Basis of Strategy
Assessment & Strengthening Of Weak Bridges (Capital Funding)	Strengthening of bridges that have unacceptable weight restrictions or subject to monitoring	 All council owned bridges have been assessed in accordance with BD34/90, BD46/92 and BD50/92. Future assessments and reviews to CS 451 Interim measures applied to substandard bridges in accordance with 'CS470 – Management of Sub-Standard Highway Structures,' Only Kinnenhill Bridge remains to be strengthened/partially replaced Structural reviews and assessments (where required) to be carried out in accordance with 'CS451 Structural

DATA LABEL: PUBLIC

	review and assessment of highway
	structures'
Major Refurbishment of structures that have deteriorated into a poor or very poor condition or require costly maintenance.	 All council owned bridges are regularly inspected and given a bridge condition indicator score (BCI). Defect information is also recorded. A repair programme is developed, generally targeting the structures with the lowest BCI scores, but also taking into account network criticality. Defect information is also reviewed to identify components that need replaced. Similar works are grouped to ensure cost effective procurement. Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using Public Contracts Scotland.
Urgent minor repairs to structures: Potholes Accident Damage Vandalism	 During bridge inspections defects are identified. If repairs are simple and considered to be a high priority, these are arranged immediately through Operational Services. More complex repairs are tendered using a Quick Quote through PCS or existing framework contracts (TRIPS etc)
Maintenance works including: Carriageway Patching and Joint Repairs Fencing and Guardrails Minor Masonry Repairs Minor Concrete Repairs Maintenance Painting Scour Repairs Graffiti cleaning	 Defect information is reviewed to identify bridge components at the end of their service life. Sites are identified during bridge inspections. Similar works are grouped to ensure cost effective procurement. Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using Public Contracts Scotland or existing framework contracts (TRIPS etc).
	Refurbishment of structures that have deteriorated into a poor or very poor condition or require costly maintenance. Urgent minor repairs to structures: Potholes Accident Damage Vandalism Maintenance works including: Carriageway Patching and Joint Repairs Fencing and Guardrails Fencing and Guardrails Minor Masonry Repairs Minor Concrete Repairs Maintenance Painting Scour Repairs

Table 9: Structures strategy

7.4 Street Lighting

Our street lighting will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2).

Category	Description	Basis of Strategy
Backlog and Lifecycle Investment (Capital Funding)	Replacement of ageing equipment which has exceeded its life expectancy.	 A replacement programme is developed based on age profile, condition of equipment and fault levels. Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent.
Planned Maintenance Activities (Revenue Funding)	 Electrical Testing Mandatory & Regulatory sign cleaning. 	 To comply with BS 7671 Requirements for Electrical Installations. In accordance with the Well-managed Highway Infrastructure - Code of Practice
Reactive Maintenance	Repair of "non routine" defects such as dark lamps, cable faults and vandalism.	Defects are recorded via night inspections, reports from the Public, or identified during other operations. Response times are set dependent on nature of defect, with emergency works attended within a 2hr period. This work is carried out by our own operatives within "Roads Lighting".

Table 10: Street Lighting strategy

7.5 Traffic Signals

Our traffic signals will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2).

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times as per current maintenance contract	Design Manual for Roads and Bridges, TA84/06-Code of Practice for Traffic Control and Information Systems for all purpose roads
Refurbishment / replacement of signalised junctions	Refurbishment of junctions that have deteriorated or the equipment has become obsolete / unreliable	Based on a minimum service life of 15 years as stated in Highways Agency document TR2500a section 3.2-Specification for Traffic Signal Controller
Refurbishment / replacement of signalised crossings	Refurbishment of junctions that have deteriorated or the equipment has become obsolete / unreliable	Based on a minimum service life of 15 years as stated in Highways Agency document TR2500a section 3.2-Specification for Traffic Signal Controller

Table 11: Traffic signal strategy

7.6 Street Furniture

The street furniture asset is made up of fourteen components, all associated with the road network, but maintained by various council departments. Those managed by Roads and Transportation will be maintained in accordance with the Well-managed Highway Infrastructure - Code of Practice (6) and the Quality Manual (2).

Category	Description	Basis of Strategy
Routine and Reactive Repair	Street furniture assets replaced when they are damaged or at the end of their useful life.	 Cyclic maintenance activities such as sign cleaning and bus shelter washing will be ongoing. There are no formal inspections of street furniture, but works required will be identified during carriageway and footway inspections. Replacement and repair works will generally be completed by the council's workforce or specialist contractors if required. Works are tendered in accordance with the 'Standing Orders for the Regulation of Contracts' using The TRIPS Term Contract or equivalent.
Planned Maintenance Preventative	N/A	N/A
Planned Maintenance Corrective	Replacing street furniture assets because of legislation change or council priorities	 Where changes in legislation or the design codes come into force assets may need to be replaced. Town centre development schemes may require signs and street furniture to be replaced.

Table 12: Street furniture strategy

To better manage these assets the inventory information will be gathered into the Confirm Database (IA-1).

7.7 Water Related Assets

Water-related infrastructure (open watercourses, flood prevention schemes, river revetments, flood storage devices, drains, culverts, headwalls and trash screens) will be inspected regularly in accord with the current inspection and maintenance regimes and cleaned and repaired as and when required. The council's duties under the Flood Risk Management (Scotland) Act 2009 extend to the maintenance of some privately owned assets as well as those owned and adopted by the council.

Category	Description	Basis of Strategy							
Assessment of assets leading to planned capital investment	Open watercourse assessment, culverted watercourse assessment, flood prevention schemes, river revetments, culvert headwalls and screens and environmental mitigation schemes.	 To meet the Council's legal obligations under the Flood Risk Management (Scotland) Act 2009. The frequency of inspection is dictated by the history of flooding, the impact of flooding and condition. Works arising from the inspection will be undertaken by the council's own Road Operations team, term contractors and framework consultants procured through Public Contracts Scotland. 							
Backlog and lifecycle capital investment	Refurbishment of assets that have deteriorated into a poor condition or require costly maintenance.	 Regular assessment of condition in terms of cleanliness and structural integrity. The assessment work is undertaken by specialist contractors procured through Public Contracts Scotland. Works arising from the inspection will be undertaken by term contractors and framework consultants procured through Public Contracts Scotland. 							
Reservoir specific capital investment	Responding to guidance and demands detailed in the annual report of the ICE All Reservoirs Panel Supervising Engineer and the ten year report following inspection by the ICE All Reservoirs Panel Inspecting Engineer	 Large Raised Reservoirs are subject to statutory inspection by ICE All Reservoirs Panel Engineers. Supervising Engineers (Annually) and Inspecting Engineers every ten years. The Engineers findings from time-to-time dictate actions required in the interests of safety. An Asset Management Report prepared by external consultants to plan investment to avoid mostly non-safety related significant maintenance backlog and for reservoirs that do not fall within the ambit of the Reservoirs (Scotland) Act 2011. 							
Water-related infrastructure General - Routine and Reactive Repair (Revenue	Urgent minor repairs to assets often following severe weather or to repair damage.	 During asset inspections, defects are identified. If repairs are simple and considered a high-priority, these are arranged immediately through relevant term contractors. More complex repairs are tendered using 							
Funding) Planned Maintenance Activities	Maintenance works including:	 a Quick Quote through PCS. CCTV reports are reviewed to identify components at the end of their service life as well as cleansing requirements 							

DATA LABEL: PUBLIC

(Revenue Funding)	 Culvert inspection & clearance Removal of obstructions Minor repairs to revetments, masonry or concrete. Scour Repairs Clearance and Repairs to trash screens 	 Similar works are grouped to ensure cost-effective procurement. Works are undertaken by term contractors Larger projects may be tendered in accordance with the 'Standing Orders for the Regulation of Contracts' through Public Contracts Scotland.
----------------------	---	--

Table 13: Water Related Assets strategy

7.8 Quality Manual

Each of the asset groups above will have a range of dedicated process maps in the Quality Manual, which will provide full details of how these strategies will be implemented (IA-2).

DATA LABEL: PUBLIC

8. Risk Management

8.1 Risk Based Approach

The 'Well-Managed Highway Infrastructure: A Code of Practice' (6) has specific recommendations regarding inspections of all road elements. Recommendation 7 of the code of practice is that Road Authorities should adopt a Risk Based Approach to all aspects of road maintenance. Full details can be found in the Road Asset Safety Inspection Manual.

8.2 Risks to the Plan

The risks that could prevent achievement of the standards specified in this plan (section 5) are:

Plan Assumption	Plan Risks	Action If Risk Occurs					
The plan is based upon winters being normal	Adverse weather will create higher levels of detects and deterioration than have been allowed for.	Budgets and predictions will be revised and this plan updated if abnormally harsh winters occur.					
Available budgets have been assumed as shown in section 6	External pressures mean that council reduce the funding available for roads	Target service standards will be revised to affordable levels. The budget for capital is set for five years. Therefore low risk during plan period.					
Construction inflation will rise further	Construction inflation will increase the cost of works (particularly oil costs as they affect the cost of road surfacing materials)	Target service standards will be revised to affordable levels.					
Levels of defect and deteriorate are based on current data which is limited for some assets (e.g. footways)	Assets deteriorate more rapidly than predicted and the investment required to meet targets is insufficient. The footway inspections now ongoing are a case in point.	Split between planned and reactive maintenance budgets will be revised.					
Resources are available to deliver the improvement actions	Pressures on resources mean that staff are not allocated to improvement actions	Target dates will be revised and reported.					

Table 12: Risks to the Plan

8.3 Corporate Risk Management

Roads & Transportation also have an established set of business risks, which were comprehensively reviewed corporately in 2018. The risks are recorded in Pentana, along with the assessment of likelihood/probability, impact and actions being taken to mitigate the risk. These risks have been developed in accordance with the councils Risk Management Strategy (8).

Risk Title	Risk Description
RTS001 - Failure	Extreme severe weather event or loss of staff due to
to deliver a winter	pandemic leading to a failure to deliver the winter
service in	maintenance service for public roads and footpaths.
accordance with	Resulting in priority routes being impassable, reputational
council policy	damage, and an adverse impact on the council's ability to deliver key services.
RTS002 - Death or	Failure of inspection process and/or lighting renewal
injury due to	programme leading to unsafe lighting column falling on
ageing lighting	passer by, resulting in death or injury. Note that death or
column	injury due to a column being electrically unsafe is covered by RTS003.
RTS003 - Death or	Vandalism or accidental damage to a lighting column or
injury due to	traffic light rendering it electrically unsafe and resulting in
electrocution by	death or injury to passer by.
unsafe lighting	
column or traffic	
light	
RTS004 - Damage	Failure of safe working systems in relation to excavation
to underground	work leading to cable strike or cut. Resulting in injury or
services by council	death to an operative, power cut, gas leak, or telecoms
employees or	outage.
contractors	
RTS005 - Failure	Failure of inspection and maintenance programme, leading
to maintain roads	to deterioration of infrastructure, i.e. roads, footways,
and related	structures, signage. Resulting in death or injury of users, or
infrastructure	reputational damage due to the state of disrepair. Note that
	deterioration of lighting columns is covered by risk RTS002.
RTS006 - Flooding	Severe weather causing flooding and resulting in damage to
causing damage to	residential properties, operational properties, roads and
roads, buildings	infrastructure. May also result in reputational damage to the
and infrastructure	council if the response is ineffective.

Table 13: Risks recorded in Pentana

9. Improvement Plan

Service Improvement Actions

Service improvement actions have been identified for all the asset groups and can be found in the Maintenance Manual. The main improvement actions are as follows:

Ref.	Action	Proposed Timescale and Review	Estimated Cost of Implementation	Responsible Officer			
IA-1	Ensure that full inventory data is collected for all assets and added to Confirm.	2023 – 2028 / Annual	Minor cost implication	All asset managers			
IA-2	Continue to develop the Quality Manual and procedures.	2023 – 2028 / Annual	Minor cost implication	All asset managers			
IA-3	Monitor spend in terms of reactive and planned maintenance	2023 – 2028 / Annual	Minor cost implication	All asset managers			

Table 14: Improvement Actions

Progress Reporting

Reporting against the improvement action milestones will be undertaken by the Network Manager; a review of progress will be undertaken on a monthly basis along with the asset lead engineers, who will provide an estimate of the percentage completion towards each milestone.

A Road Asset Management & Performance Update will be submitted to the Environment and Sustainability Policy Development and Scrutiny Panel annually. Performance data is in Pentana and is reviewed and reported to the Performance Committee.

10. References

- 1. Road Asset Management Policy West Lothian Council 2023
- 2. Quality Management System Manual & Procedures (Complying With The EN ISO 9001:2015 Requirements) West Lothian Council May 2018
- 3. West Lothian Council Corporate Plan 2023 to 2028 West Lothian Council 2023
- 4. Corporate Asset Management Strategy 2018/19 to 2027/28 West Lothian Council 2018
- 5. Road Asset Data Management Plan 2020 West Lothian Council 2020
- 6. Well-managed Highway Infrastructure Code of Practice (Published by TSO October 2016)
- 7. Road Asset Safety Inspection Manual West Lothian Council 2023
- 8. Risk Management Strategy 2018/19 to 2022/23 West Lothian Council 2018

Appendix A Asset Management Documentation

The documentation required to support asset management processes are:

1. Asset Management Policy Statement

The asset management policy statement confirms the council's commitment to:

- applying asset management systems to manage road assets;
- publishing an Asset Management Plan; and
- reporting achievements and performance annually;

Updating: Reviewed annually and updated if required.

2. Quality Management System Manual & Procedures

The Quality Manual will record the systems and methods used to manage the road assets. The manual should define how and when the authority:

- Inspect.
- Categorise and prioritise reactive repairs.
- Assess condition.
- Identify and prioritise sites for resurfacing (or strengthening / replacement).
- Prepare works programmes.
- Procure and manage works.
- Records and respond to customer contacts.

Updating: Reviewed annually and updated if required. It is not expect to require extensive change year to year.

3. Road Asset Safety Inspection Manual

The Road Asset Safety Inspection Manual (7) has been developed with the primary aim of providing operational guidance to those officers responsible for managing road asset inspections. This manual is based on the SCOTS Risk Based Approach (RBA) guidance and compiled using their Road Safety Inspection Strategy template.

4. Reinstatement Quality Plan

To drive road works performance improvements, the council has decided to prepare and lodge a Reinstatement Quality Plan (RQP) (8) with the office of The Scottish Road Works Commissioner. The Transport (Scotland) Act 2019 does not make provision for the mandatory production of RQPs by Roads Authorities. However, it is considered to be best practice and that Roads and Transportation considers it to be a useful tool.

5. Annual Status and Options Report (ASOR)

Specific investment strategies should be compiled for the major asset groups of carriageways, footways, structures, street lighting, drainage and traffic signals. Each strategy should define how the target service standards are to be delivered. In particular they should address the types of works that are planned and state the approach to be taken for example if a "prevention is better than cure" approach has

DATA LABEL: PUBLIC

been adopted. In line with the Council's corporate asset management strategy the latter document has been replaced with Strategic Outline Business Cases (SOBCs).

Annual status reports will be prepared for the Environment and Sustainability Policy Development and Scrutiny Panel annually and performance data is reported to the Performance Committee.

6. Road Asset Management Plan (RAMP)

The RAMP will record the service standards that the council is aiming to deliver for each asset group. These standards should be based upon detailed predicted budget levels in the short term (5yrs) and general budget level predictions over the longer term (10yrs). The plan should identify any risks that may prevent the plan being realised. The plan should reflect local context in terms of traffic levels, customer preferences and the council's corporate strategies. The RAMP should be in a format suitable for public use.

7. Annual Programme (Planned Maintenance)

A detailed three year rolling programme will be prepared for each asset group. Asset lead officers will maintain "work banks" of proposed schemes. They will identify schemes, roads to be surfaced, bridges to be maintained, streets where lighting it so be changed etc.

Appendix B Annual Updating Regime

	SCOTS RAMP - Annual Programme												
	The asset management planning documentation will be updated as shown below:												
	Task	Jan	Feb	Mar	Apr	May	Jun	Inc	Aug	Sep	Oct	Nov	Dec
1	Data Assessment												
2	Road Asset Valuation												
3	Performance Indicator Return												
4	RAMP Review & Update												
5	Annual Status Reports and Environment and Sustainability PDSP Update												
6	Quality Manual Update										,,,,,,,		
7	Asset Inspection Records												
8	Works Programme			,,,,,,,,,		***********			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>,,,,,,,,,,</i>		,,,,,,,,,,	

Roads & Transportation Road Asset Management Plan 2023-2028

Gordon Brown
Roads and Transportation Manager

September 2023

For more information:

Kenneth Brown, Roads Network Manager Roads and Transportation Email address: kenneth.brown@westlothian.gov.uk

Telephone number:01506 284818

West Lothian Council, Roads & Transportation Whitehill Service Centre, 4 Inchmuir Road, Bathgate West Lothian, EH48 2HA

DATA LABEL: PUBLIC