

Roads Operations

Report by Kevin Anderson, Executive Director - Place

Report for Decision

1 Recommendations

It is recommended that Council:

- i. Notes the process and scope of designating embargoed road works on traffic sensitive roads;
- ii. Notes the recent investment in resources, including apprentices, to improve the efficiency and effectiveness of the Roads Operations team;
- iii. Approves the Pothole Repair Policy, making fullest use of the new Pothole Pro equipment;
- iv. Notes the progress to date of the capital funded Residential Streets Resurfacing programme.

2 Purpose of Report/Executive Summary

This report provides an update to roads maintenance policy. It seeks approval to embargo roadworks on certain designated traffic sensitive routes at times of expected high traffic volume, including holiday periods, such as Christmas.

The report lays out Council policy to repair road defects, including potholes, using newly acquired state of the art equipment such as Pothole Pro to best effect.

The report details the residential streets that have been resurfaced so far as part of a capital investment programme, previously approved at Council, to improve user safety and visual amenity of local areas which has received positive resident feedback.

Date: 01 March 2023
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3 Background

- 3.1 Traffic Sensitive Roadworks: Midlothian Council does not authorise road works by utility companies which operate under their own government licences. As long as there are no co-ordination issues and they have legally registered their works in the Scottish Road Works Register, the company can proceed unhindered with its works. However, a Roads Authority can restrict the timing of works under section 115 of the New Roads and Street Works Act 1991. This gives Road Services the ability in the guise of an embargo to restrict the timing of works at certain times and / or on certain dates.
- 3.2 The Council currently uses powers delegated to the Executive Director - Place to control road works over the Christmas period around shopping areas and traffic sensitive routes. Powers are also used for certain large events such as concerts. The road work restriction is for designated streets only and does not apply to all of the Council area. Appendix B1 provides a list of current designated streets which is reviewed annually.
- 3.3 Pothole Repairs: Potholes on roads, pavements and paths regularly feature in the top ten of issues that the public would like local authorities to address. Potholes are usually isolated failures in a bituminous surfaced road, footway or cycleway that have an abrupt difference in level and may impact the safety of the user.
- 3.4 Failure mechanisms that result in a pothole are typically described as 'top down' or 'bottom up' failures. A top down failure is essentially a localised fault that develops into fretting of the surface and becomes progressive over time. A bottom up failure results from a fault at depth, usually involving the presence of water, which causes cracking and leads to a block of material breaking away.
- 3.5 Potholes can develop over short periods of time, particularly during periods of inclement weather such as prolonged wet conditions or winter freezing and thawing. Depending on the size, depth and location of the pothole there may be a greater or lesser risk to the general public. The safety risk is assessed by engineers using an algorithm who then prioritise repairs.
- 3.6 The Roads Operations team has recently been the subject of a structural reorganisation to improve its efficiency and effectiveness. As part of the process, four road worker apprentices have been recruited which invests in our young people and supports our communities. Recruitment of a further two apprentices is planned for late summer 2023.
- 3.7 To replace outdated road maintenance equipment. there has been a significant capital investment of £780,000 in modern equipment. The equipment includes a road planer to remove the surface of roads, specialist rollers, road tar hot box and mobile welfare facilities for staff. The purchase of a JBC Pothole Pro (PHP) has been strongly supported by elected members and community councils. The PHP will play a key

part in recovering our road and path network following the damage over winter.

- 3.8 Residential Streets Resurfacing: Council approved a £5m accelerated capital investment over two years to resurface residential streets including pavements, as necessary. The purpose was to repair worn out and broken surfaces in unclassified roads to improve road and pavement safety and the visual amenity of the local areas.

Main Report

Traffic Sensitive Roadworks Embargo

- 3.9 Section 115 of the New Roads and Street Works Act 1991 permits Midlothian Council as a Road Authority to restrict the timing of road works under an embargo. Council policy is that typically road work embargos in Midlothian are over the Christmas and New Year period from last Friday in November to 2rd January inclusive or for one-off large events such as Let's Rock Scotland which was planned a few years ago.
- 3.10 The embargo, which in the Scottish Road Works Register (SRWR) is designated a type of event, must be in place three months prior to the start date otherwise the embargo becomes advisory and the Council has to rely on the road works undertakers' voluntary compliance. The Council usually lodge notice with SRWR in the January/February period to give as much notice as possible.
- 3.11 The policy outcome of embargo in Midlothian is to ensure that there is as little disruption as possible to traffic flow during the festive period when there is usually more traffic and a higher use of public transport. It is also to safeguard the businesses in the area so that access and footfall is not restricted by road works in town centres or at retail parks.
- 3.12 The list of roads affected by the most recent embargo are listed at Appendix B1. The Council follows the processes and procedures designated by the Office of the Scottish Road Works Commissioner including the advice note on embargoes available at this internet link. [Procedure for Embargoes on Road Works | Scottish Road Works Commissioner](#)
- 3.13 It is important to note the road works embargo typically only covers the main traffic sensitive routes and shopping areas and not the whole of Midlothian. The embargo only covers planned road works not urgent or emergency works.
- 3.14 Some planned works are authorised by the Council during the embargo period on roads included on the embargo notice if the undertaker can provide exceptional reasons for the works to take place.
- 3.15 Outwith the Christmas period, some roads are also designated 'traffic sensitive' at certain times of the day such as morning and evening rush hours.
- 3.16 Members are requested to note the process and scope of designating embargoed works on traffic sensitive roads and approve the continued delegation of powers to the Executive Director - Place to take the necessary measures to implement the policy.

Pothole Repairs Policy and Procedures

- 3.17 The purpose of the Pothole Repair Policy is to demonstrate that the Council has taken such steps as to operate within the non-statutory framework of “Well-Managed Highway Infrastructure: A Code of Practice”. Link to Code of Practice [Code of Practice | CIHT](#)
- 3.18 Potholes on roads, pavements and paths regularly feature in the top ten of issues that the public would like local authorities to address. Potholes can develop over short periods of time, particularly during periods of inclement weather such as prolonged wet conditions or winter freezing and thawing. There is no nationally agreed definition for a pothole. But it is generally accepted that a definition of a pothole includes the depth, lateral measurements and area.
- 3.19 The Council defines a pothole as either a) having a depth of 40mm or greater and extending in any one direction more than 250mm or b) a rapid change of profile of more than 25mm and extending in any one direction more than 600mm’ in the footway or cycleway.
- 3.20 Photograph 3.20A shows an example of typical pothole in carriageway which is approximately 250mm diameter with an abrupt difference in level of 40mm depth. Photograph 3.20B shows areas of carriageway exhibiting fretting and surface erosion which are not defined as potholes since they exceed 600mm in length.



Photo 3.20A



Photo 3.20B

- 3.21 In common with other local authorities when assessing defects Council roads engineers assess the safety risk from a pothole using a Risk Based Approach (RBA) algorithm as guided by the Road Safety Inspection Manual (RSIM). The team then prioritise repairs based on categorisation of the defect.

Risk Matrix		Probability (Risk)			
		Very low (1)	Low (2)	Medium (3)	High (4)
Impact (Hazard)	Little or negligible (1)	1	2	3	4
	Minor or low (2)	2	4	6	8
	Noticeable (3)	3	6	9	12
	Major, high or serious (4)	4	8	12	16

- 3.22 Using the value from the risk matrix the road or path defect is then categorised according to the following definition.

Risk values and categories

Risk Value	12+	8-11	5-7	1-4
Defect Category	Category 1	Category 2	Category 3	Category 4

- 3.23 The following table describes the various defect categories and the proposed response times. Repairing category 1 defects is very challenging within a 24 hour response time which means the repair is likely to only be temporary in nature. If the repair fails soon after repair due to volume of traffic this leads to negative customer feedback.

Defect Category	Description	Target Response Time
Category 1	Major defects that could result in serious damage and pose an immediate risk to users.	Make safe or temporary repair: within 24 hours
Category 2	Significant defects that represent a hazard and require attention before likely degradation.	Make safe or temporary repair: within 5 working days
Category 3	Defect that are less serious and are unlikely to present danger / hazard to users	Temporary repair: within 28 days
Category 4	Minor defects that are considered not to be a danger/hazard	No action. Review on next routine safety inspection

- 3.24 The table below provides a guideline treatment matrix. This will vary dependant on staff, plant and material availabilities. For example during the festive close down we are unable to obtain hot materials from quarries for two weeks.

Defect Category	Initial response	Secondary response
Category 1	<ul style="list-style-type: none"> Defect temporary repaired with hot material or cold material. If above unachievable signing and guarding of defect. 	<ul style="list-style-type: none"> Defect added to patching schedule for permanent repair either by Pothole Pro or surfacing squad dependant on magnitude of works required on road
Category 2	<ul style="list-style-type: none"> Defect temporary repaired with hot material or cold material. or Repair by Pothole Pro if available. 	<ul style="list-style-type: none"> Defect added to patching schedule for permanent repair either by Pothole Pro or surfacing squad dependant on magnitude of works required on road
Category 3	<ul style="list-style-type: none"> Defect added to patching schedule for permanent repair either by Pothole Pro or surfacing squad dependant on magnitude of works required. 	<ul style="list-style-type: none"> N/A
Category 4	<ul style="list-style-type: none"> Defects monitored by council road network inspectors. 	<ul style="list-style-type: none"> N/A

- 3.25 The operational systems that manage and track the defect reporting and treatment workflow have been reviewed and require significant

upgrade. The legacy software is an in-house server based solution rather than more modern Cloud based solution which limits its use for inspectors out in the field to accurately record locations of defects. The current system is text based to describe a defect location so as a consequence inspectors often have to revisit site to identify the defect to operational teams. A new software solution has been identified which uses tablet handhelds on site and allows inclusion of photographs and GPS co-ordinates to provide operational teams with an easily identifiable location saving considerable time. This is subject to the technical design assessment for implementation.

Residential Streets Resurfacing Programme

- 3.26 Council approved £5m accelerated capital funding (£2.5m each year for two years) to resurface residential streets including pavements as necessary. The purpose was to repair worn out and broken surfaces to improve road and pavement safety and the visual amenity of the areas.
- 3.27 With a team restructure, the programme commenced in October 2021 and is now more than 90% complete. The remainder of the budget is anticipated to be spent by summer 2023 and within the stipulated 24 month period. An additional capital budget of £2.5m has been approved by Council and allocated for the next 5 financial years.
- 3.28 A list of streets and the areas resurfaced to date, currently in progress and the programme for 2023-24 (subject to impacts of any extenuating circumstances) is provided at Appendix B2.
- 3.29 Feedback on the project from residents has been excellent.

4 Report Implications (Resource, Digital and Risk)

4.1 Resource

Traffic sensitive road works embargoes are part of the routine workload and will be contained within existing service budget.

Annually, £2m of capital is set aside for road maintenance and a further £0.5m of capital is set aside for pavements and footpaths. The pothole policy will work within current service budgets for the next 10 months. Its operational success will be reviewed at that time to determine if a request via a further report to Council should be made for injection of additional capital.

As part of introduction of a wider Neighbourhood Services cloud based asset management and scheduling software tool, subject to the technical design assessment for implementation, it is estimated the contribution required to introduce the pothole repair elements would be approximately £20k for implementation and £10k for annual licence subscription. This would be contained within current service budgets as the legacy software solution is terminated.

The capital budget for Residential Streets Resurfacing programme on current performance rate is likely to conclude in summer 2023, with additional capital resource of £2.5m allocated for the next five financial years.

4.2 Digital

Introduction of a Neighbourhood Services cloud based asset management and scheduling software tool, subject to the technical design assessment for implementation, would allow the pothole repair elements to be introduced which would significantly improve the efficiency and effectiveness of the team.

4.3 Risk

Not implementing road work embargoes on traffic sensitive streets such as town centres and retail parks around Christmas risks loss of trade for local businesses if consumers choose to go to other areas with less congestion.

Failure to detect and repair road defects such as potholes risks significant injury to road and path users and subsequent insurance claims against the Council at significant financial cost

4.4 Ensuring Equalities (if required a separate IIA must be completed)

The subject of this report does not have a significant impact on equality.

4.4 Additional Report Implications

Appendices

Appendix A – Additional Report Implications

Appendix B – Background information/Links

APPENDIX A – Report Implications

A.1 Key Priorities within the Single Midlothian Plan

The route map outlines the phases of service recovery and transformation which will underpin the Single Midlothian Plan.

A.2 Key Drivers for Change

Key drivers addressed in this report:

- Holistic Working
- Hub and Spoke
- Modern
- Sustainable
- Transformational
- Preventative
- Asset-based
- Continuous Improvement
- One size fits one
- None of the above

A.3 Key Delivery Streams

Key delivery streams addressed in this report:

- One Council Working with you, for you
- Preventative and Sustainable
- Efficient and Modern
- Innovative and Ambitious
- None of the above

A.4 Delivering Best Value

The project will deliver Best Value.

A.5 Involving Communities and Other Stakeholders

MTRAP, Community Councils and stakeholder groups have been briefed and involved in the process.

A.6 Impact on Performance and Outcomes

The report aims to measure progress through outcomes.

A.7 Adopting a Preventative Approach

The report is based on the creation of a wellbeing economy which prioritises prevention, fairness for people, the economy and the environment.

A.8 Supporting Sustainable Development

The improvement and enhancement of our environment.

APPENDIX B

Appendix B1 – Designated Streets

Town / Locality	Road	Traffic Sensitive
BILSTON	MOORFOOT VIEW	Yes
BONNYRIGG	BIG BRAE	No
BONNYRIGG	CAMPVIEW ROAD	Yes
BONNYRIGG	DOBBIE'S ROAD	Yes
BONNYRIGG	DUNDAS STREET	Yes
BONNYRIGG	ESKBANK ROAD	Yes
BONNYRIGG	HILLHEAD	Yes
BONNYRIGG	PARK ROAD	Yes
BONNYRIGG	POLTON STREET	Yes
BONNYRIGG	HIGH STREET	Yes
BONNYRIGG	LOTHIAN STREET	Yes
DALKEITH	ESKDAILL COURT	No
DALKEITH	JARNAC COURT	No
DALKEITH	KOMAROM COURT	No
DALKEITH	WHITE HART STREET	No
DALKEITH	BUCCLEUCH STREET	Yes
DALKEITH	EDINBURGH ROAD	Yes
DALKEITH	ESKBANK ROAD	Yes
DALKEITH	ESKDAILL STREET	Yes
DALKEITH	HIGH STREET	Yes
DALKEITH	LAUDER ROAD	Yes
DALKEITH	LOTHIAN ROAD	Yes
DALKEITH	LOTHIAN STREET	Yes
DALKEITH	NORTH WYND	Yes
DALKEITH	OLD EDINBURGH ROAD	Yes
DALKEITH	SOUTH STREET	Yes
DALKEITH	A7 FROM SHERIFFHALL ROUNDABOUT TO MURDERDEAN ROAD	Yes
DALKEITH	BRIDGEND	Yes
DALKEITH	LONDON ROAD	Yes
DALKEITH	NEWMILLS ROAD	Yes
DALKEITH	OLD DALKEITH ROAD	Yes
DANDERHALL	MILLERHILL ROAD	No
DANDERHALL	U64 - CAULDCOATES ROAD	No
DANDERHALL	NEWTON CHURCH ROAD	Yes
DANDERHALL	THE WISP	Yes
DANDERHALL	OLD DALKEITH ROAD	Yes
ESKBANK	LASSWADE ROAD	Yes
ESKBANK	MELVILLE ROAD	Yes
GOREBRIDGE	MAIN STREET	No
GOREBRIDGE	A7 FROM B6372 AT HARVIESTON TOLL TO U52	Yes
GOREBRIDGE	A7 FROM WHITEHOUSE ROAD TO KIRKHILL TERRACE	Yes
GOREBRIDGE	HUNTERFIELD ROAD	Yes

GOREBRIDGE	KIRKHILL TERRACE	Yes
GOREBRIDGE	STATION ROAD	No
GOREBRIDGE	A7 FROM B7007 INNERLEITHEN ROAD TO SCOTTISH BORDERS BOUNDARY	Yes
GOREBRIDGE	A7 FROM B704 AT NEWTONLOAN TOLL TO WHITEHOUSE ROAD	Yes
GOREBRIDGE	A7 FROM C50 TO B7007 INNERLEITHEN ROAD	Yes
GOREBRIDGE	A7 FROM KIRKHILL TERRACE TO B6372 AT HARVIESTON TOLL	Yes
LASSWADE	ELM ROW	Yes
LASSWADE	HIGH STREET	Yes
LASSWADE	LASSWADE ROAD	Yes
LOANHEAD	COSTKEA WAY	No
LOANHEAD	STRAITON PARK	No
LOANHEAD	A768 FROM HIGH STREET LASSWADE TO WADINGBURN ROAD	Yes
LOANHEAD	CLERK STREET	Yes
LOANHEAD	FOUNTAIN PLACE	Yes
LOANHEAD	HAWTHORN GARDENS	Yes
LOANHEAD	HERD TERRACE	Yes
LOANHEAD	HIGH STREET	Yes
LOANHEAD	LASSWADE ROAD	Yes
LOANHEAD	LAWRIE TERRACE	Yes
LOANHEAD	LINDEN PLACE	Yes
LOANHEAD	MAYBURN TERRACE	Yes
LOANHEAD	A701 FROM B7006 TO C36 PENTLAND ROAD	Yes
LOANHEAD	LOANHEAD ROAD	Yes
LOANHEAD	NIVENSKNOWE ROAD	Yes
LOANHEAD	STRAITON ROAD	Yes
LOANHEAD	THE LOAN	Yes
MAYFIELD	MAYFIELD PLACE	No
MILLERHILL	WHITEHILL ROAD	No
NEWTONGRANGE	A7 FROM MURDERDEAN ROAD TO STOBHILL ROAD	Yes
NEWTONGRANGE	BRYANS ROAD	Yes
NEWTONGRANGE	DALHOUSIE ROAD	Yes
NEWTONGRANGE	MAIN STREET	Yes
NEWTONGRANGE	MURDERDEAN ROAD	Yes
NEWTONLOAN	A7 FROM STOBHILL ROAD TO B704 AT NEWTONLOAN TOLL	Yes
NORTH MIDDLETON	A7 FROM BORTHWICK CASTLE ROAD TO C50	Yes
NORTH MIDDLETON	A7 FROM C52 OLD CARLISLE ROAD TO BORTHWICK CASLTE ROAD	Yes
OLD PENTLAND	PENTLAND ROAD	Yes
PENICUIK	IMRIE PLACE	No
PENICUIK	CARLOPS ROAD	Yes
PENICUIK	HIGH STREET	Yes
PENICUIK	PEEBLES ROAD	Yes
PENICUIK	ST KENTIGERN WAY	Yes
PENICUIK	WEST STREET	Yes
PENICUIK	A701 FROM MILTON BRIDGE TO MOORFOOT VIEW	Yes

PENICUIK	BRIDGE STREET	Yes
PENICUIK	EDINBURGH ROAD	Yes
PENICUIK	JOHN STREET	Yes
PENICUIK	MILTON BRIDGE	Yes
ROSEWELL	CARNETHIE STREET	No
ROSLIN	MAIN STREET	No
ROSLIN	PENICUIK ROAD	Yes
WADINGBURN	WADINGBURN ROAD	Yes

Appendix B2 – Residential Streets Programme 2021-2024

Residential Streets Scheme Re-surfacing Programme

Settlement	Street name	Area Road resurfaced (m2)	Area Footway resurfaced (m2)
Completed Works			
Dalkeith	Gibraltar Terrace	690	
	Gibraltar Court	667	
	Shadepark Crescent	886	
	Shadepark Drive	1932	97
	Gibraltar Gardens	1210	39
	Allan Terrace	1260	
	Total areas(m²)	6645	136
Bonnyrigg	Hazel Drive	1061	400
	Cherry Road	1296	165
	Almond Crescent	2223	546
	Holy Terrace	573	127
	Rowen Gardens	620	363
	Willow Avenue	810	249
	Lime Place	311	0
	Beech Loan	518	234
	Chestnut Grove	495	203
	Poplar Terrace	318	794
	Campview car park	1717	27
	Campview Road	148	0
Total areas(m²)	10089	3108	
Mayfield	Buckie Road	1613	
	Andrew Dodds back lane	1857	
	Andrew Dodds Avenue	1330	23
	Myrtle Grove	274	
	Ash Grove	242	
	Holly Bank	906	
	Elm place	661	
	Total areas(m²)	6883	23

Roslin

Springfield Place	1557	0
Wallace Crescent	261	0
Manse Road	2146	637
Pentland View Road	329	86
Pentland View Crescent	318	51
Rosabelle Road	2204	565
Marmion Avenue	821	15
Station Road	7741	18

Total areas(m²)	15377	1372
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Penicuik

Craigiebiel Crescent	2911	33
Broomhill Road	240	0
Broomhill Avenue	1438	6
St James Gardens	240	5
Cairnbank Gardens	1438	15
St James View	2815	1
Cairnbank Road	429	0
St Mungo's View	766	145
Salamanca Crescent	1636	
Blenheim Court	502	
Ramillies Court	585	
Inkerman Court	574	11
Namur Road	2304	
Corunna Terrace	743	
Arras Grove	467	
Grieve Court	439	
Fletcher Grove	857	
Muirhead Place	1848	
MacCormack Terrace	987	
Ewing Street	1058	

Total areas(m²)	22277	217
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Gorebridge

Juner Place	824	
Barleyknowe Crescent	3079	43
Barleyknowe Lane	3227	31
Jubilee Crescent	1600	2
Barleyknowe Gardens	1596	3
Barleyknowe Place	759	
Barleyknowe Street	1595	14
Barleyknowe Terrace	1653	81
Newbyres Avenue	1214	
Hillside Crescent South	2051	5
Braeside Road South	1778	43
Vogrie Place	496	
Arnprior Road	806	289

Vogrie Crescent South	1389
Hunter Square	1019

Total areas(m²)	23086	512
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**Project to
date**

Total areas complete (m²)	84357	5368
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Current Operations

Bilston

Park Avenue	1193	1139
Myrtle Crescent	400	
Stanley Avenue	100	624
Burnbank Terrace		73
Brookfield Terrace	166	151
Eskgrove Drive	1017	
Meadow Place	1145	442
Castlelaw Crescent		
Allermuir Avenue		

Loanhead

MavisBank	2855	
Traprain Terrace	1003	180

Programmed works 2023-2024

Easthouses

Roanhead Road
Carrick Crescent
Newton Street
Lothian Drive
Parkhead place
Maryburn Road

Dalkeith

Elmfield Park
Elmfield Road
Gibraltar Road
Gibraltar Gardens
Shadepark Gardens

Gorebridge

Birkenside
Glen View Place
Glen View Walk
Roseberry Crescent

Mayfield

Ramsay Crescent
John Humble Street

Newtongrange

Gardiner Place
Beechwood Park
Bryans Avenue
Mansfield Avenue
Mansfield Place
Lady Road Place
Reed Drive

Bonnyrigg

Waverly Terrace
Waverly Crescent
Waverly Road
Waverly Park
Waverly Drive
Mayfield Place
Dundas Park
Pentland Road
Dalhousie Place
Dalhousie Avenue West

Roslin

Moat View
Charlton Grove
Knowetop Place
Lockhart Terrace
Nobel Place

Penicuik

Mauricewood Avenue
Mauricewood Rise
Mauricewood Grove
Mauricewood Bank
Mauricewood Park