

ANGUS COUNCIL

ROADS COMMITTEE

29 AUGUST 2002

WINTER MAINTENANCE POLICY
AND SERVICE PROVISION FOR 2002/03

REPORT BY THE DIRECTOR OF ROADS

ABSTRACT

This Report re-states the Council's Winter Maintenance Policy, reviews the performance for the winter of 2001/02 and details the proposed service provision for gritting and snow clearing during the winter period 2002/03.

1 RECOMMENDATIONS

It is recommended that the Committee agree:-

- (1) to continue with the established policy for Winter Maintenance stated in Appendix 1;
- (2) to note the review of performance for the winter of 2001/02;
- (3) to note the final out-turn costs compared to the initial budget provision for winter 2001/02;
- (4) to note the proposal to carry out a review of the winter maintenance revenue budget provision as part of the 2003/04 budget setting process;
- (5) to maintain the level of service and performance standards detailed in Appendix 2;
- (6) that the Director of Roads be given authority to procure the most favourable arrangements for the provision of the required weather forecasting service;
- (7) that the vehicles and plant to be provided for the coming winter should be as per the proposed list shown in Appendix 3;
- (8) to the proposed prioritisation of carriageways and footways listed in Appendix 4;
- (9) to the proposed service provision for 2002/03.

2 INTRODUCTION

- 2.1 The Roads (Scotland) Act 1984 places a duty on the local roads authority to take such steps as they consider reasonable to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads. It is therefore incumbent on Angus Council to determine the measures which it deems appropriate for Winter Maintenance on its public roads taking into account its overall priorities and available resources.

In order to ensure that the Council can demonstrate that it is meeting its legal obligations and is doing so in a way which ensures that its resources are being deployed in the most economic, effective and efficient way an essential pre-requisite is a clear statement of policy endorsed by elected members. This policy statement then provides a framework for planning the preparatory arrangements and operational procedures to be implemented and allows clear guidelines to be given to all those involved in the delivery of the service.

- 2.2 Elements of Winter Maintenance for which there will be a continuation of service in 2002/03

The Roads Committee of 6 June 1996 approved the Winter Maintenance Policy for Angus Council (See Appendix 1). This policy has proved to be robust and effective and no change to the existing policy is therefore proposed.

The Roads Committee of 26 August 1999 approved Report No 842/99 which, subsequent to the election of the new Council in May 1999 and for the benefit of newly elected members, re-stated the background detail and practice of operational procedures, performance standards and level of service provision which had evolved over the previous three winters.

There are no significant changes in operational procedures for the coming winter 2002/03 from previous reports. Any minor changes are outlined in the detail of this report. It is therefore intended to continue the service provision approved for 2000/01 over the coming winter for the following elements of Winter Maintenance (as detailed in previous Reports No 472/96 and 842/99).

- Assistance from other Department (see Appendix 2)
- Radio Telephones
- Liaison with the Police
- Publicity
- Salt/Sand Mixtures
- Grit Bins
- Roadside Grit Heaps
- Farmers' Snowploughs
- Snow Conditions
- Snow Fencing

- Roads Department Supervision of Winter Maintenance Operations
- Weather Forecasts

2.3 Present Report

This Report:-

- Outlines budget provision for 2002/03
- Reviews performance in 2001/02 compared to the standards adopted
- Compares out-turn costs with budget provision for 2001/02
- Highlights the differences in the proposed arrangements for the coming winter compared to the previous winter
- Details the proposed service provision for 2002/03
- Updates the Committee on the results of a Best Value Service Review
- Informs the Committee of the arrangements being made for the provision of weather forecasting services for 2002/03

3 **DETAILS**

3.1 Budgetary Provision and Expenditure Control

The approved budget for Winter Maintenance third party payments for 2002/03 is £1,280,000 (ie unchanged from previous years), and this together with a £30,000 contribution from Education in respect of the treatment of Auxiliary Routes gives a total budget for winter maintenance of £1,310,000.

In the event of a sustained period of severe winter weather and the likelihood of the budgetary provision being exceeded the Director of Roads would report the situation to the Director of Finance and the Roads Committee in accordance with Financial Regulations.

If the severity of the winter weather is such that other works cannot be carried out then it is sometimes possible to transfer the “underspend” from these works to Winter Maintenance operations, thus assisting in containing the total expenditure within the overall Roads Department revenue budget. Conversely, if all the indications are that expenditure on Winter Maintenance operations will be less than the budget allocation the “underspend” can be transferred to other works.

In exceptional circumstances (for example in the event of heavy and prolonged snow conditions such as occurred in 2000/01) the availability of the Roads and Transport Renewal and Repair Fund in conjunction with potential Revenue Budget virement provide options for some flexibility in dealing with what would otherwise be unmanageable burdens on the cash-limited Roads Revenue Budget.

3.2 Review of 2001/02 Winter – Performance and Standards

Overall the winter weather experienced in 2001/02 was relatively mild and closer to the average compared to the extremes of 2000/01.

In particular the number of days of fresh lying snow was 22 compared to the average of 20 over 6 years (and 33 for 2000/01). The snow events of 21st December 2001 and 26th December 2001 took time to thaw but the remaining snow events were short lived.

Despite the milder weather the road temperatures were below zero on some 101 occasions which was the highest number of events since records have been maintained for Angus Council. In particular December had 26 days of temperatures below freezing with January and February both having 23 days of sub-zero temperatures. For many of these events the temperatures were only 1 to 2 degrees below zero and for only a short period during the early hours of the morning.

Combined with frequent rain resulting in washing off residual salt, the priority routes were treated on some 106 occasions which is slightly higher than the calculated average winter (104).

During the winter 2001/02 there were more frequent problems of flooding and the region experienced the worst gales for 20 years on the 28th January 2002.

Month	No of days with temp below zero	No of days fresh snow lying
October	-	-
November	12	1
December	26	6
January	23	5
February	23	8
March	14	2
April	3	0
Total	<u>101</u>	<u>22</u>

Priority carriageway routes were treated on 71 mornings and 35 evenings.

Non-priority carriageway routes were treated on 51 occasions during normal working hours.

Priority and non-priority footways were treated on 20 occasions and 16 occasions respectively

Auxiliary routes were treated on 55 occasions.

Comparisons of these statistics with previous years are shown in Appendix 5.

3.3 Comparison of out-turn costs with Budgetary Provision for 2001/02

The 2001/02 budget for Winter Maintenance third party payments was £1,280,000 with an additional £30,000 contribution from Education in respect to treating of Auxiliary Routes (school bus routes) giving a total budget of £1,310,000. Third party Winter Maintenance out-turn costs were £1,385,554 (compared to £1,852,000 in 2000/01, £1,315,000 in 1999/00, £1,265,000 in 1998/99, £1,119,600 in 1997/98 and £1,315,000 in 1996/97).

The out-turn expenditure for Winter Maintenance thus exceeded the allocated budget by £75,554 (6%).

The additional expenditure on Winter Maintenance was contained within the Roads Revenue Budget as reported to Committee on 2nd May 2002 (Report No. 514/02).

The imbalance between out-turn expenditure and allocated budget was detailed in Report No. 514/02 which noted that it is becoming increasingly difficult to cover the increasing costs of standing charges and the operational costs for an average winter within current budget allocations for winter maintenance.

The winter maintenance budget is however already established for 2002/03, and the level of service provision is being maintained as for previous years. Depending on the weather, even for an average year, there may be an imbalance between expenditure and budgetary provisions. Any such imbalance will as in previous years, be dealt with as detailed in Paragraph 3.1 above.

It is however proposed to carry out a review of the winter maintenance revenue budget provision as part of the 2003/04 budget setting process (see paragraph 3.5 below).

3.4 Proposed changes to the arrangements for 2002/03 compared to 2001/02

3.4.1 **Grit Bins**

The policy of leaving grit bins in place all year round (Report No. 909/00 to the Roads Committee of 24th August 2000 refers) continues to prove cost effective.

However it is necessary to establish a policy when the grit bins are the subject of repeated vandalism.

On an experimental basis the Director of Roads has removed bins when they have suffered vandalism on three separate occasions. Since the grit bins are provided for community use, where the community is unable to look after the bins or where they have suffered from the effects of repeated vandalism the bins have been removed.

It is proposed that, where new bins are provided, a standard letter be issued to the person(s) requesting the bin stating that the bin is provided for community use but will be removed if subject to repeated vandalism.

Similarly for existing bins, following vandalism, a standard letter will be issued to adjacent residents stating that repeated vandalism will result in the grit bin being removed.

3.4.2 **A90 Trunk Road**

The Committee are reminded of the details of Report No. 1345/01 presented to Committee on 22nd November 2001 authorising operational decisions at Officer level taking into account all prevailing circumstances where assistance may be provided to BEAR Scotland Limited in clearing snow from the A90.

There was no requirement to assist BEAR during the season 2001/02.

It has not been deemed necessary to change the current policy detailed in Appendix 1 to take account of the possible provision of assistance to BEAR as any such assistance would be consistent with the stated intent of the policy to “endeavour to use the resources available in the most efficient, effective and economic way to prevent as far as the Council considers reasonably possible, snow and ice endangering the safe passage of pedestrians and vehicles over public roads and to minimise the inaccessibility of public roads and temporary disruption of traffic directly attributable to adverse weather conditions”.

3.4.3 **Weather Forecasting Service**

The weather forecasting service for the past four winters has been provided by P A Weather Centre Ltd who have won the orders for this work through competitive tendering in 1998 and 2001. PA Weather Centre Ltd have satisfactorily performed and achieved the requested targets during these periods.

This forecasting service has been procured through competitive tendering under a joint arrangement between some of the constituent Councils of the former TPU consortium - Angus Council, Dundee City Council and Fife Council

It is proposed to continue this arrangement as it offers best value to the Council in reducing tendering costs and giving economies of scale.

It is proposed therefore that the Director of Roads be given authority to procure the most favourable arrangements for the provision of the required weather forecasting service taking into account cost, level of service, quality and accuracy, including the option of joint procurement arrangements with other Councils.

A provision of £15,000 for the cost of obtaining a weather forecasting service for winter maintenance has been allowed for in the winter maintenance budget.

3.4.4 **Tayside Contracts Working Hours**

In December 2001 Tayside Contracts introduced revised working arrangements which included a period of reduced working hours during the winter period.

For seven weeks each side of the winter solstice (i.e., 14 weeks in total) the working hours are reduced to 32½ hours per week, from 37 hours per week. The change of hours was trialled in January and February of 2002.

In general the arrangements have overall long term benefits for Tayside Contracts and some benefits for Angus Council. For winter maintenance there is little effect on the workforce which is on standby but there is some effect on the remaining work force. Minor operational changes have been made to overcome these issues. It is proposed to monitor the situation over the coming winter and discuss any issues which may arise with Tayside Contracts.

3.4.5 **Best Value**

The Best Value Service Review for the Roads Maintenance Unit has been completed and was considered by the Monitoring Group on 25th June 2002. It is due to be resubmitted with amendments for final approval at the next meeting of the Monitoring Group.

In respect of Winter Maintenance the service was benchmarked with Scottish Borders, Clackmannanshire and East Dunbartonshire Councils and it was concluded that whilst the service is bespoke for each Council there were some opportunities for improvement. In particular the Service Improvement Plan includes:-

Service
Improvement No

Timescale

1	Examine timing of provision of winter service outside current working day prior to winter 2003	October 2003
4	Examine possible partnership arrangements for winter maintenance operations	December 2002
10	Examine winter maintenance depot requirements in light of trunk road contract with a view to reducing standing charge costs	October 2002
11	Progress use of wet/dry gritting techniques to reduce salt use, cost and environmental impact	October 2002

The progress on Service Improvements 4,10 and 11 are detailed below.

Overall customer satisfaction of winter services varied from 80% satisfied with the service on main roads to 48% dissatisfied with the service on footways.

3.4.6 Partnering with Tayside Contracts

As detailed in the Best Value Service Review it is proposed to examine a partnering arrangement with Tayside Contracts with respect to the provision of winter maintenance.

It is considered that the current arrangements with Angus Council acting as “client” and Tayside Contracts serving as “contractor” can be improved by a partnering arrangement to reduce duplication of effort and provide better value.

The initial partnering meeting was held on 9th August 2002 and the action points are being progressed. Further reports to Committee will detail the progress on this issue.

3.4.7 Depot Requirements

The depot requirements for winter maintenance have been examined both in the light of the award of the trunk road contract to BEAR (Scotland) Limited and operational charges.

Depot costs form part of the standing charges paid to Tayside Contracts.

As a result of the study two Depots, Slade Road at Kirriemuir and Tealing Depot are considered surplus to requirements. At Kirriemuir a small area of the re-cycling centre in Bellies Brae has been utilised with a view to declaring Slade Road Depot surplus to requirements. At Monifieth a small area adjacent to the Recycling Centre has been

utilised with the facilities in the storage area at Tealing being returned to Tayside Contracts.

Whilst both changes have resulted in initial costs in the order of £10,000 in the current financial year, there will be a year on year reduction in the standing charges in the order of £12,000 per annum in subsequent years.

3.4.8 Use of Wet on Dry Gritting

Wet on dry gritting (whereby the salt is wetted with a brine solution prior to being spread on the road) has been used in the Forfar Area for several seasons when weather conditions are conducive to its use. The benefits are that the salt forms a solution on the road surface quicker and is therefore effective in preventing the formation of ice. With dry gritting moisture (from the atmosphere or precipitation) is required before the salt turns into brine and starts to act.

Other benefits are that the salt is less prone to “bouncing” off the carriageway due to either the spreading process itself or the action of vehicular traffic. Overall this method allows a reduction in the amount of salt required for effective treatment, leading to cost benefits and reducing the environmental impact of winter services.

Following the installation of brine mixing tanks in the Arbroath depot and the replacement of an old 6 x 6 gritter with a new gritter fitted with wet on dry equipment, the use of this technique will be extended to some of the Arbroath gritting routes.

3.5 Budget Provision 2003/04

Based on actual winter maintenance expenditure over the last 5 years, (which includes the heavy snow events of 2000/01 which was considered to be the most severe winter since 1992/93) the day-to-day operational costs of snow clearing/gritting show an average of £747,000 compared to a budget of around £600,000 per annum. This suggests a shortfall of £147,000 per annum on operational costs for an “average winter”. Although Members will appreciate that this shortfall is largely notional given the theoretical nature of the average winter assumption, and indeed may be distorted by the events of the 2000/01 winter, the figures do highlight that because of inflationary pressures the resources available for day to day winter maintenance operations are gradually being eroded.

However given the efficiency and other measures being implemented in respect of winter maintenance, as described in paragraphs 3.4.4 to 3.4.8 above, it is considered appropriate that, through the 2003/04 budget setting process, the opportunity be taken to undertake a detailed review of winter maintenance funding requirements with a view to establishing a suitable budget baseline.

This review will also need to take in account the service delivery implications arising from budget decisions.

4 FINANCIAL IMPLICATIONS

A budget provision of £1,310,000 (including a £30k contribution from the Education department) is in place for 2002/03 for third party payments associated with the delivery of the Winter Maintenance service.

As in previous years the intention is to provide the best level of service possible within the available budget based on an "average winter". In reality of course there is no such thing as an "average winter" and Winter Maintenance operations are dictated by the prevailing weather and the response required in accordance with the Council's policy and agreed level of service. Some costs (related primarily to ensuring a state of "being prepared") are fixed and will be predictable once the relevant charges and rates have been agreed with Tayside Contracts. Other costs are variable and are proportional to the severity of the winter and, as detailed above, a severe winter can greatly increase the expenditure required to maintain the approved level of service.

The Director of Roads will therefore monitor costs closely as the winter progresses, and if there are indications that the projected expenditure is likely to be at variance with the budget will, in conjunction with the Director of Finance, report to Committee with proposals for any necessary budget virement adjustments.

5 HUMAN RIGHTS IMPLICATIONS

There are no human rights implications arising from the proposals in this report.

6 CONSULTATION

The Chief Executive, the Director of Law and Administration, the Director of Finance, the Director of Education, the Chief Constable and the Managing Director of Tayside Contracts have been consulted in the preparation of this Report.

7 CONCLUSION

7.1 The Council has a statutory duty to take such steps as they consider reasonable to keep public roads safe during adverse winter weather. Notwithstanding the difficulty in predicting the severity of winter it is necessary to have a clear policy and an agreed level of service to allow the planning and preparation necessary for the delivery of a Winter Maintenance service to proceed.

7.2 If during the course of the winter abnormal or particularly extreme weather conditions are experienced the Director of Roads in conjunction with the Director of Finance will report the position to the Committee and will recommend appropriate contingency arrangements and any necessary compensatory budgetary adjustments.

R W McNeil
DIRECTOR OF ROADS

NOTE

The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing the above Report:-

Report No 472/96 - Winter Maintenance Policy and Service Provision for 1996/97 - Roads Committee of 6 June 1996.

Report No 455/97 - Procurement of Ice Prediction System and Thermal Mapping - Exemption from Financial Regulations - Roads Committee of 24 April 1997.

Report No 883/97 - Procurement of Ice Prediction System - Phase 1 - Roads Committee of 28 August 1997.

Report No 1060/97 - Winter Maintenance Service Provision for 1997/98 - Roads Committee of 16 October 1997.

Report No 1071/97 - Procurement of Ice Prediction System - Phase 2 - Thermal Mapping - Roads Committee of 16 October 1997.

Report No 667/98 - Winter Maintenance - Service Provision for 1998/99 - Roads Committee of 11 June 1998.

Report No 897/98 – Winter Maintenance – Service Provision for 1998/99 – Roads Committee of 27 August 1998.

Report No 842/99 – Winter Maintenance – Policy and Service Provision for 1999/2000 – Roads Committee of 26 August 2000.

Report No 909/00 – Winter Maintenance – Policy and Service Provision for 2000/01 – Roads Committee of 24 August 2000.

Report No 930/01– Winter Maintenance – Policy and Service Provision for 2001/02 – Roads Committee of 23 August 2001

Report No. 514/02 – Winter Maintenance Expenditure For 2001/02 – Roads Committee of 2 May 2002-07-24

Report No. 1345/01 – winter Maintenance Policy and Service Provision for 2001/02 – Supplementary Report 27th November 2002-07-24

IC/AS
24 July 2002
REPORTS/wint.maint.02-03

APPENDIX 1

ANGUS COUNCIL
WINTER MAINTENANCE 2002/2003
POLICY

Angus Council will endeavour to use the resources available for winter maintenance in the most efficient, effective and economic way to prevent, as far as they consider reasonably possible, snow and ice endangering the safe passage of pedestrians and vehicles over public roads and to minimise the inaccessibility of public roads and temporary disruption of traffic directly attributable to adverse weather conditions.

The Council will therefore operate a system of winter maintenance which gives priority to the more important and heavily trafficked sections of the public road network (both carriageways and footways).

The Council will encourage the use of self-help measures.

The Council will not provide winter maintenance on private roads or prospective public roads. The Council will however carry out winter maintenance on effectively adopted public roads (ie roads which have been constructed to the Council's standards and have been accepted for adoption at the end of the one year maintenance period but which have not yet been added to the List of Public Roads).

APPENDIX 2

ANGUS COUNCIL
WINTER MAINTENANCE 2002/2003
LEVEL OF SERVICE AND PERFORMANCE STANDARDS

(a) Period of Cover

Based on past experience the probability of wintry weather is very low before the last week in October and after the first week in April. Personnel will therefore be required to standby to provide cover outwith normal working hours for priority routes

From -24 October 2002

To – 27 March 2003

Outwith these dates personnel will be called out if required. However without a standby arrangement the number of personnel and vehicles available to respond is likely to be limited and response times will be slower. This reduction in performance is however considered reasonable given the reduced and ever-decreasing likelihood of wintry conditions away from these dates.

The proposed coverage during the Christmas/New Year Holiday Period is detailed in Appendix 2(c).

(b) Hours of Cover

To be fully effective salt spread on road surfaces requires the action of traffic to aid dispersal and to assist the break-up of ice and snow. There is therefore little benefit and high cost in treating roads at times when traffic is very light. Also, by definition, the risk of accidents reduces as traffic volumes decrease. The following hours of cover are therefore considered reasonable:-

Day	Priority Routes Carriageway	Auxiliary Routes	Priority Routes Footways	Non-Priority Routes Carriageway and Footways
Monday - Thursday	05.00 – 23.00	06.00 – 16.00	06.00 - 21.00	07.30 - 16.00 *
Friday	05.00 – 23.00	06.00 – 15.00	06.00 - 21.00	07.30 - 15.00 *
Saturday	05.00 – 23.00	Nil	06.00 - 21.00	Nil
Sunday	07.00 – 23.00	Nil	Nil	Nil
Public Holidays	07.00 – 23.00	Nil	Nil	Nil

* = **Tayside Contracts normal working hours**

When snow or icy road surfaces are forecast standby crews will be required to report to their depots at pre-set times within the above hours of cover. If circumstances change or adverse conditions occur unexpectedly standby crews will be called out from home in which case longer response times will delay the commencement of treatment. However, given the

increased sophistication of weather forecasting and the ice prediction system the probability of unforeseen adverse conditions is low. Therefore compared to the alternative "fail-safe" option of having men standing-by in their depots at all times outwith normal working hours even during clement weather (with associated cost implications) this increase in response time in a call-out situation is considered reasonable.

Likewise on Sundays and Public Holidays standby crews will only be called out if required (ie no pre-arranged reporting requirement). Again given the reduced levels of traffic on these days the anticipated increase in response time is considered reasonable.

(c) Christmas and New Year Holiday Period Hours of Cover

During the Christmas and New Year Holiday period Tayside Contracts operate normal working on the working days between Christmas and New Year 27, 30 and 31 December 2002. Coverage for both priority and non-priority routes will therefore be as follows:-

Day	Priority Carriageways	Priority Footways	Non-Priority Carriageways and Footways
Tues 24.12.02	Normal Service	Normal Service	Normal Service
Wed 25.12.02	07.00 - 23.00	Nil	Nil
Thurs 26.12.02	07.00 - 23.00	Nil	Nil
Fri 27.12.02	05.00 - 23.00	06.00 - 21.00	07.30 - 15.00
Sat 28.12.02	05.00 - 23.00	06.00 - 21.00	Nil
Sun 29.12.02	05.00 - 23.00	Nil	Nil
Mon 30.12.02	05.00 - 23.00	06.00 - 21.00	07.30 - 16.00
Tues 31.12.02	05.00 - 23.00	06.00 - 21.00	07.30 - 16.00
Wed 01.01.03	07.00 - 23.00	Nil	Nil
Thurs 02.01.03	07.00 - 23.00	Nil	Nil
Fri 03.01.03	Normal Service	Normal Service	Normal Service

(d) Standby Requirements

In order to ensure availability of drivers, mechanics and supervisory staff it is necessary to put personnel on "standby" on a rota basis - ie to require personnel to remain available and contactable by 'phone at all times outwith normal working hours. To compensate for this restriction of freedom standby allowances are paid. These costs are fixed costs (whether or not the operatives are called out) and have to be allowed for in the budget. Taking into account the resources available and the need for a guaranteed response on priority routes outwith normal working hours the following standby arrangements are considered reasonable:-

24 Oct 2002 – 27 March 2003

	No of men per week	
Gritter Drivers	11	(Total No = 33 on 1 in 3 rota)
Footway Snowplough Drivers	16*	(= Total No)
Footway Snowplough Back-up	8*	(= Total No)
Mechanics	2	(Total No = 7 on separate 1 in 4 and 1 in 3 rotas)
Supervisors (ie TC Supervisors)	1	(Total No = 5 on 1 in 5 rota)

*Footway Snowplough Drivers and Back-up Crews are put on standby on a day-to-day basis depending on the weather forecast.

(e) Salt Stocks

The rules of "supply and demand" apply to the purchase of salt as much as any other commodity. Advance orders for salt delivered during the summer months can be purchased at much more favourable rates than salt ordered during the height of winter. However this cost saving has to be offset against the increased cost of storage and protection from wind and rain. The marine salt used is imported and delivery (by boat) is fairly slow and not geared up to urgent orders. It is prudent therefore to store supplies in advance of winter in sufficient quantity to meet the anticipated need for the whole of the Winter Maintenance period. It is proposed to maintain the salt stock holding at the start of the winter maintenance period at:-

14000 Tonnes

(f) Response Time

The "response time" is the period between a decision being taken to begin treatment and vehicles leaving the depot. This must take into account distance between operatives' homes and depots in a call-out situation, pre-start checks on vehicles, and time required to load up with salt and fuel.

A maximum response time of:-

One Hour

is considered reasonable.

(g) Treatment Time

The "treatment time" is the period between vehicles leaving the depot and the completion of treatment on all priority routes for salting and gritting. (Treatment times for snow-clearing will vary considerably depending on the depth and persistence of the snow fall). The aim is to complete salting and gritting of priority carriageways by 07.30 hrs and of priority footways by 08.30 hrs.

Treatment times will depend on route length, distance to start of route from depot, carrying capacity of gritter, speed limits, prevailing weather conditions, driver experience etc. Unrealistically short target treatment times will have disproportionate cost implications. Relaxed (long) target treatment times will mean either completion after traffic has built up or extended working at overtime rates (with associated cost implications). A target treatment time of:-

2 Hours

is therefore considered reasonable.

(h) Assistance From Other Departments

Other departments have responsibility for Winter Maintenance over areas for which they are responsible (eg schools, parks and cemeteries, council owned housing schemes, day-care centres, etc) in the interests of public safety. However winter weather and in particular snow conditions can prevent normal work activities (eg street sweeping, ground maintenance etc) from being carried out. In these circumstances sections of the Contract Services workforce can be usefully employed to assist with snow clearing on public roads. Normal payroll costs are allowed for within individual departmental budgets. Overtime payments however would have to be charged to the Winter Maintenance budget. It should be noted that the increased use of mechanisation for snow clearance on footways should allow moderate isolated snow falls to be dealt with by Tayside Contracts. If however it proves necessary to supplement these resources with Contract Services labour and plant in severe conditions or prolonged periods of snow and/or outwith normal working hours and the anticipated additional cost can be contained within budget then these available resources will be drawn on subject to the approval of the departmental directors concerned.

APPENDIX 3

ANGUS COUNCIL
WINTER MAINTENANCE 2002/2003
PLANT AND VEHICLES

Depending on the prevailing conditions effective Winter Maintenance requires a range of specialised plant, adapted operational vehicles, and normal operational vehicles. The level of service which can be provided is directly related to the plant available and the costs (both fixed and variable) of providing this plant, keeping it in serviceable condition, and operating it when required accounts for roughly one-third of the overall cost of running a Winter Maintenance service. Because of the hostile environment (freezing temperatures, slippery road conditions, high exposure to salt, heavy loading and traction etc) in which this plant operates maintenance costs are significantly higher than for normal vehicles. Efficiency and reliability deteriorates rapidly with age and allowance must be made for renewal of worn out plant. Taking into account the resources available and experience of winter weather encountered in previous years provision of the following vehicles and plant is considered reasonable:-

Snow cutters/blowers	2 No
Purpose Built 6 x 6 Gritters (9m ³)	5 No
Purpose Built 4 x 4 Gritters (6m ³)	2 No
Old Lorry Based 6 x 4 Gritters (9m ³)	4 No
Old Lorry Based 4 x 2 Gritters (6m ³)	1 No
Operational Lorries with Demountable Gritter (9m ³)	1 No
Operational Lorries with Demountable Gritters (6 m ³)	6 No
Hired Tractors with Trailer Gritters (2m ³)	6 No
Hired Tractor with hired Trailer Gritters (6 m ³)	3 No
Tractor with Trailer Gritters (2 m ³) (Rec Services)	3 No
Hired Tractor with Trailer Gritters (2.4m ³)	2 No
Hired Tractor with Trailer Gritters (3.5 m ³)	3 No
Tractor Shovels	1No
Loading Shovels	2 No
Tractor Digger/Loaders	3No
Footway Tractor Snowploughs	17 No
Operational Lorries with ploughblade	2 No

Tayside Contracts manage and maintain the winter maintenance fleet on a Tayside-wide basis. Vehicle replacements are prioritised on the basis of age, condition, cost of repair, serviceability, etc.

For winter 2002/03, one old 6 x 6 gritter with dry spreader is being replaced on a like-for-like basis and one old 6 x 4 gritter is being replaced with a new 6 x 6 wet on dry gritter giving an increased capacity and enabling operational benefits. 2 Trailer gritters are being replaced with higher capacity trailers and one footway tractor is being replaced to renew older plant and maintain an efficient fleet.

APPENDIX 4

ANGUS COUNCIL
WINTER MAINTENANCE 2002/2003
PRIORITY ROUTES

(a) Carriageways

Priority gritting routes have to be carefully planned to minimise the “unproductive travel” (distance from depot to start/end of route, sections of route covered twice, one-way traffic systems, sections of route overlapping with other gritting routes, etc). Routes must also be practical for the size and type of plant deployed. Optimum gritting routes have been drawn up to maximise the inclusion of strategic routes. However these will inevitably include lengths of less important roads linking strategic routes and necessarily covered for overall routing efficiency. For obvious reasons the gritting route is treated (unless already covered) over its full length (including these less important roads).

The following roads including both strategic routes and non-strategic roads required for routeing efficiency are therefore proposed as PRIORITY CARRIAGEWAYS:-

ARBROATH

Abbey Park	Emislaw Drive	Kirkton Road
Abbey Path	East Abbey Street	Ladyloan
Abbey Street	East Grimsby	Lamley Terrace
Abbot Street	East Muirlands Rd	Leonard Street
Academy Lane	Fisheracre	Ladybridge Street
Addison Place	Flairs Avenue	Lochlands Drive
Alexandra Place	Gallowden Road	Lochlands Street
Arbirlot Road	Glenogil Drive	Lordburn
Arbirlot Road West	Guthrie Port	Millgate
Barngreen	Grant Road	Millgate Loan
Benedict Road	Gravesend	Montrose Road
Bloomfield Road	Greenbank Brae	Ness Drive (Part)
Brechin Road	Great Micheal Road	Newton Avenue
Bruce Road	Hamilton Green	Nolt Loan Road
Brothock Bridge	Hamilton Street	Ponderlaw
Brothock Way	Hayshead Road	Rosemount Road
Burnside Drive	Hill Street	Seaton Road
Cairnie Road	Hill Place	Springfield Terrace
Cairnie Street	High Street	St Ninians Road
Catherine Street	Horologe Hill (part)	St Vigeans Road
Charles Avenue	Hospitalfield Road	Tarry Road
Clova Avenue	Infirmary Brae	Viewfield Road
Cliffburn Road	Keptie Road	West Abbey Street
Commerce Street	Keptie Street	West Port
Culloden Terrace		

BRECHIN

Airlie Street
 Bridge Street
 Caledonian Road
 Castle Street
 Church Street
 Clerk Street
 Commerce Street
 Cookston Road
 Distillery Road
 Drumachlie Loan
 Duke Street
 East Mill Road
 High Street

Infirmiry Road
 Infirmiry Street
 Latch Road
 Market Street
 Montrose Street
 North Latch Road
 Panmure Street
 Park Place
 Park Road
 Park View

Pittendreich Road
 Provost Buchan Road
 Provost Millar Avenue
 River Street
 St David Street
 St Mary Street
 Scott Street
 Southesk Street
 Swan Street
 Trinity Avenue
 Union Street
 Wards Road
 Witchden Road

CARNOUSTIE

Arbroath Road
 Balmachie Road
 Barry Road
 Carlogie Road
 Church Street
 Dundee Street

Ferrier Street (top half)
 High Street
 Ireland Street
 Kinloch Street
 Newton Road
 Panbride Road

Queen Street
 Station Road
 Thomas Street
 Victoria Street
 West Path
 West Haven Park

FORFAR

Academy Street
 Airlie Crescent
 Castle Street
 Coutties Wynd
 Brechin Road
 Craig O' Loch Road
 Dundee Loan
 Dundee Road
 East High Street
 Gallowshade Road
 Glamis Road
 Glenclova Terrace
 Glenmoy Terrace
 Glenogil Terrace

Gordon Street
 Jamieson Street
 Jeanfield Road
 Lilybank Crest/Road
 Market Street
 North Loch Road
 North Street
 Old Brechin Road
 Old Halkerton Road
 Orchard Loan
 Prior Road
 Queenswell Road
 Restenneth Drive

Robertson Terrace
 St James Road
 South Street
 Station Road
 Strang Street
 Strathmore Avenue
 Taylor Street
 Threewells Drive
 Turfbeg Road
 Victoria Street
 Westfield Loan (Whole)
 West High Street
 Yeaman Street

KIRRIEMUIR

Angle Road
Bank Street
Bellies Brae
Breachin Road
Cortachy Road
Easthill Road
Forfar Road
Glamis Road
Glengate

Golf Road
Gordon Park
High Street
Kinnordy Road
Lindsay Street
Lochmill
Marywell Brae
Morrison Street
Reform Street

Roods
St Malcolm's Wynd
School Wynd
Shielhill Road
Slade Road
Tannage Brae
West Hill Road
Whiteside

MONIFIETH

Albert Street (part) Maule Street to Durham Street
Bank Street
Broomhill Drive
Buddon Drive
Church Street
East Navarre Street
Durham Street (part) Bank Street to Albert Street
Ferry Road
Grange Road (part)
West Grange Road to Ferry Road
High Street
Hill Street
Lorne Street
North Balmossie Street
North Union Street
Panmurefield Road
Panmure Street
Reform Street
South Street
The Fairway
Union Street
Victoria Street
West Grange Road

MONTROSE

Academy Square
Annat Road
Basin View
Breachin Road
Bridge Street
Broomfield Road
Caledonia Street
Charleton Road
Christies Lane
Dorward Place
Dorward Road
Erskine Place
Erskine Street
Faulds Road (Part)
Ferry Street
Garrison Road (Part)

High Street
Hill Street
Hume Street
John Street
India Street
Links Avenue
Lower Hall Street
Medicine Well Drive
Murray Street
Newhame Road
New Wynd
North Esk Road
North Street
Panmure Place
Panmure Terrace
Provost Reids Road

Provost Scott Road
Rosehill
Rosehill Road (Part)
Rossie Island Road
St Peter's Place
St Peter's Road
Traill Terrace
Union Place
Union Road
Union Row
Union Street
Waterside Road
Wharf Street
Western Road
Whites Place

PRIORITY GRITTING ROUTES**A CLASS**

A92
 A94
 A923
 A926
 A928
 A930
 A932
 A933
 A934
 A935
 A937

B CLASS

B954
 B957
 B961
 B962
 B965
 B966
 B978
 B9113
 B9127 (Part Arbroath to B961)
 B9127 (Douglastown to A90)
 B9128
 B9134

C CLASS

C1Part B978 to B961
 C2Part A92 to A930
 C4 Part A92 to B961
 C5
 C6
 C7
 C8
 C9
 C11
 C13
 C16
 C12
 C22
 C29 Part B9128 to B957
 C32 Part A90 to B957
 C35 Part A90 to B966
 C37
 C38
 C39 (Dubton)
 C44
 C45
 C46
 C47
 C48
 C51
 C53 Bractullo Mill
 C54
 C61
 C62 Part A92 to A930

UC

UC 302
 UC 307
 UC 324
 UC 329
 UC 334
 UC 336
 UC 338
 UC 357
 UC 359
 UC 375
 UC 376
 UC 462
 UC 463
 UC 485
 UC 489
 UC 494
 UC522
 UC552

(b) FOOTWAYS

As for priority carriageways above, the following footways including both busy and less heavily trafficked footways required for routeing efficiency are proposed as PRIORITY FOOTWAYS:-

ARBROATH

Abbey Street	Dundee Road	Lochlands Street
Abbey Park	Emislaw Drive	Lochlands Drive
Abbey Path	East Muirlands Road	Lordburn
Abbot Street	East Abbey Street	Mayfield Shops
Applegate	Ernest Street	Millgate Loan
Academy Street	Fisheracre	Montrose Road
Addison Place	Gallowden Road	Ponderlaw
Almeria Close	Grant Road	Rosemount Road
Allan Street	Gravesend	Seaton Road
Arbirlot Road West	Hamilton Green	Spink Street
Barngreen	Hayshead Road	Springfield Terrace
Bloomfield Road	Hays Lane	Stanley Street
Brechin Road	Hays Terrace	St Abbs Road
Brothock Bridge	Hayswell Road	St Ninians Road
Bruce Road	Hill Place	St Vigeans Road
Burnside Drive	Hill Street	Stuart Street
Cairnie Loan	Hill Terrace	Viewfield Road
Cairnie Road	High Street	Warddykes Avenue
Cairnie Street	Horologe Hill	Warddykes Road
Catherine Street	Keptie Street	Walker Place
Charles Avenue	Keptie Road	Wesley Gardens
Cliffburn Road	Kirk Square	West Abbey Street
Commerce Street	Kirkton Road	West Port
Convent Street	Ladyloan	Westway
Culloden Crescent	Leonard Street	
Culloden Terrace	Linton Road	

BRECHIN

Airlie Street	Drumachlie Loan	Panmure Street
Bridge Street	Duke Street	Scott Street
Castle Street	Gallowhill	Southesk Street
Church Street	High Street	St Davids Street
City Road	Infirmery Road	St Mary Street
Clerk Street	Infirmery Street	St Ninians Square
Commerce Street	Latch Road	Swan Street
Cookston Road	Market Street	Trinity Road
Dalhousie Street	Montrose Street	Union Street
Distillery Road	North Latch Road	Witchden

CARNOUSTIE

Anderson Street	Church Street	Kinloch Street/Park
Arbroath Road	Dalhousie Street	Lochty Street
Balmachie Road	Dundee Street	Queen Street
Barry Road	Ferrier Street	Station Road
Bonnella Street	High Street	Thomas Street
Carlogie Road	Ireland Street	West Path

FORFAR

Academy Street
 Arbroath Road
 Bankhead Road
 Boyles Close
 Brechin Road
 Castle Street
 Craig O'Loch Road
 Dundee Loan
 Dundee Road

East High Street
 Glamis Road
 Market Street
 Montrose Road
 Myre Road (part)
 New Road
 North Street
 Prior Road
 Queenswell Road

Robertson Terrace
 South Street
 St James Road
 Station Road
 Taylor Street
 The Cross
 Victoria Street
 West High Street

KIRRIEMUIR

Bank Close
 Bank Street
 Bellies Brae
 Brechin Road
 Clova Road
 Crofthead
 Cumberland Close
 Forfar Road
 Glamis Road
 Glengate
 Gordon Park
 High Street

Isla Road
 Jamieson Close
 Kirkton Court
 Knowehead
 Knowehead Crescent
 Lesser Roods
 Lindsay Street
 Manse Close
 Marywell Brae
 Middlefield
 Morrison Street
 Ogilvy's Close

Pathhead
 Prosen Road
 Reform Street
 Rogers Close
 Roods
 School Wynd
 Shielhill Road
 Sidlaw Range
 St Malcolm's Wynd
 St Colme's Close
 Tannage Brae
 Whiteside

MONIFIETH

Albert Street (Maule Street to Hill Street)
 Church Street
 East Navarre Street
 Ferry Road
 Grange Road

High Street
 Hill Street
 Lorne Street (Hill Street to High Street)
 Maule Street
 North Balmossie Street

North Union Street
 Panmure Street
 Panmurefield Road
 Tay Street
 Victoria Street

MONTROSE

Baltic Street
 Brechin Road
 Bridge Street
 Castle Place
 George Street
 High Street
 Hume Street
 John Street

Kincardine Street
 Lower Hall Street
 Market Street
 Mount Road
 Murray Street
 Newhame Road
 New Wynd

North Street
 Northesk Road
 Rosehill Road
 The Mall
 Upper Hall Street
 Victoria Bridge
 Western Road

AUXILIARY ROUTES
MONDAY – THURSDAY – 06.00 - 16.00
FRIDAY – 06.00 – 15.00

Route K39

B955
C30
U412
C31
C32
C31
U400
C31
C29
C29

Route K42

B951
C25
B951
U90
U389
C26
U92
U388

Route K43

B954
C24
U391
U392(1)
U392
C24
U388
U388(2)
U388(1)
B954

Route K44

B955
B955
U405
B955

Route K45

C25
C25
C27
U394
C25
C27
U404
C27
C28

Route M 48

C35
C40
C41
U433
U434
U435
U437
U442
U444
U444(1)
U519

Route B21

C30
U406
C31
U415
U416
C33

Route B24

C35
C34
Church Street, Edzell
Dalhousie Street, Edzell
U428
U419
U420
U422

Route B25

C36
U424
U425
U426
U427
U429 (C30 to C35)

Route A19

B9127
C52
U301
U308
U308(1)
U308(3)
U310
U499
U499(2)
U501

APPENDIX 5

WINTER MAINTENANCE POLICY AND SERVICE PROVISION FOR 2002/2003
WEATHER AND OPERATIONAL SERVICE ACTIVITY STATISTICS
FOR 2001/02 AND PREVIOUS YEARS

A WEATHER STATISTICS

	Month	1996/ 1997	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002	6 Year Avg.
No of days with road surface temperatures below zero	Oct	1	4	7	2	-	-	2
	Nov	19	4	16	9	7	12	11
	Dec	19	10	16	23	12	26	18
	Jan	21	12	18	14	17	23	18
	Feb	10	4	18	14	18	23	15
	Mar	7	12	11	10	15	14	12
	Apr	-	11	6	7	2	3	5
	Total		77	57	92	79	71	101
No of days with fresh snow lying		8	16	22	21	33	22	20

B OPERATIONAL SERVICE ACTIVITY STATISTICS

	1996/ 1997	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002	6 Year Avg.
No of days priority carriageway routes treated (a.m.)	67	53	73	75	76	71	69
No of days priority carriageway routes treated (p.m.)	32	20	36	36	44	35	34
No of days non-priority carriageway routes treated	57	39	62	46	67	51	54
No of days priority footway routes treated	32	21	33	27	37	20	28
No of days non-priority footway routes treated	14	21	33	27	37	16	25
No of days auxilliary routes treated	N/A/	N/A/	N/A/	45	59	55	53