

ANGUS COUNCIL

ROADS COMMITTEE

23 AUGUST 2001

WINTER MAINTENANCE POLICY
AND SERVICE PROVISION FOR 2001/02

REPORT BY THE DIRECTOR OF ROADS

ABSTRACT

This Report re-states the Council's Winter Maintenance Policy, reviews the performance for the winter of 2000/01 and details the proposed service provision for gritting and snow clearing during the winter period 2001/02.

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 2000/01;
- (3) to note the impact of the severe weather experienced during the winter of 2000/01 on the final out-turn costs compared to the initial budget provision;
- (4) to note the proposed changes to the arrangements for the coming winter 2001/02 compared to 2000/01;
- (5) to maintain the level of service and performance standards detailed in Appendix 2;
- (6) that the salt stock holding be topped up to a total of 14,000 tonnes;
- (7) to note the new arrangements for the management of winter maintenance on the A90 Trunk Road through Angus;

- (8) that the Director of Roads be given authority to procure the most favourable arrangements for the provision of the required weather forecasting service;
- (9) to note that new standby arrangements will be put in place to compensate for the loss of the services provided by the Control Centre in Perth;
- (10) that the vehicles and plant to be provided for the coming winter should be as per the proposed list shown in Appendix 3;
- (11) to the proposed prioritisation of carriageways and footways listed in Appendix 4;
- (12) to the proposed service provision for 2001/02.

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 2001/02

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 2001/02 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 Grip 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 2001/02
- Reviews performance in 2000/01 compared to the standards adopted
- Compares out-turn costs with budget provision for 2000/01
- Highlights the differences in the proposed arrangements for the coming winter compared to the previous winter
- Details the proposed service provision for 2001/02
- Updates the Committee on the progress of a Best Value Service Review
- Informs the Committee of the arrangements being made for the provision of weather forecasting services for 2001/02
- Advises on the specification and purchasing of salt supplies for 2001/02
- Draws attention to the new management arrangements put in place by the Scottish Executive for the North East Unit of the Trunk Road Network (including the length of the A90 dual carriageway through Angus)
- Advises the Committee on the arrangements which will be put in place to replace the service previously provided by the Control Centre in Perth

3 DETAILS

3.1 Budgetary Provision and Expenditure Control

The approved budget for Winter Maintenance third party payments for 2001/02 is £1,280,000 (ie unchanged from previous years).

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 2000/01 Winter – Performance and Standards

The winter weather experienced in 2000/01 included snow events of a severity which has not been matched since 1992/93.

There were major snow events on three separate occasions : 28-31 December 2000; 4-6 February 2001; and 26 February – 2 March 2001. The latter two periods were truly exceptional in terms of depth and duration and caused severe disruption to transport throughout Angus. In addition to these major events there were five other occasions when snow covered the whole of Angus and 10 occasions when snow covered roads at higher altitudes, including three days of snow showers as late as 18-20 April. In total there were 33 days with fresh snow lying on Angus roads (compared with an average over the four previous years of 17 days).

Temperatures fell below zero on 71 days out of a total of 184 between 19 October and 20 April as shown below.

Month	No of days with temp below zero	No of days fresh snow lying
October	-	-
November	7	2
December	12	6
January	17	2
February	18	9
March	15	11
April	2	3
Total	<u>71</u>	<u>33</u>

Priority carriageway routes were treated on 76 mornings and 44 evenings.

Non-priority carriageway routes were treated on 67 occasions during normal working hours.

Priority and non-priority footways were treated on 37 occasions.

Auxiliary routes were treated on 59 occasions.

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

3.3 Comparison of out-turn costs with Budgetary Provision for 2000/01

The 2000/01 budget for Winter Maintenance third party payments was £1,280,000. Third party Winter Maintenance out-turn costs for 2000/01 were £1,852,000 (compared to £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 £572,000 (45%).

The impact of this additional expenditure on Winter Maintenance and the mechanisms for financial management to contain this commitment within the overall budget position have been detailed in previous Committee Reports (Report No 331/00 to Roads Committee of 8 March 2001; Report No 513/01

to Roads Committee of 26 April 2001; Report No 773/01 to the Policy and Resources Committee of 19 June 2001).

The imbalance between out-turn expenditure and allocated budget is partly due to the extra cost of dealing with the exceptional snow conditions (£362,000 compared to an allocated budget of £100,000). The remainder was attributable to the higher than average number of days on which treatment was required on priority and non-priority carriageways and footways (see Appendix 5). In summary, the winter of 2000/01 can be classed as “severe” compared to the “average” winter for which the winter maintenance budget is established. In particular the exceptional snow events demanded a considerable allocation of resources to help to minimise the disruption to road transport and traffic.

Standing charges paid to Tayside Contracts in respect of plant provision and maintenance together with standby payments and other fixed costs amounted to £622,476 (34%) of the total expenditure of £1,852,000. This element of expenditure was relatively in line with the budget provision of £600,000.

3.4 Proposed changes to the arrangements for 2001/02 compared to 2000/01

3.4.1 **Salt Supply**

The decision to specify 6mm marine salt (Report No 909/00 to Roads Committee of 24 August 2000 refers) was fully justified and fulfilled the expectation of better value for money and improved operational efficiency. Indeed, neighbouring Councils in Perth and Kinross and Dundee City and the new contractor for the North East Unit of the trunk road network have now followed Angus Council’s lead in specifying 6mm marine salt for the coming winter.

The severe winter of 2000/01 put a strain on the salt stock management arrangements which have until now proved adequate to cope with “average” winters. In the light of experience over the 2000/01 season when it was necessary to order two additional deliveries of salt to supplement severely depleted stock holdings it is now considered prudent to increase the overall salt stock holdings at the start of winter from 12,000 tonnes to 14,000 tonnes. These additional holdings can be accommodated at the Forfar and Arbroath depots and will provide an additional margin of safety in the event of another severe winter and reduce dependence on available market supplies (at premium rates) for any additional supplies required during the course of the winter maintenance period.

As in previous years salt supplies are procured by Tayside Contracts on behalf of the Council through competitive tendering arrangements.

3.4.2 **Grit Bins**

The number of grit bins deployed and serviced now exceeds 500.

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

There have been some complaints that grit bins present an unnecessary eyesore during the summer months but these have been very few compared to the overall number of grit bins. In general however the policy appears to have been accepted by the vast majority of frontagers and the estimated savings of £12,000 per annum are considered to be a worthwhile cost benefit.

3.4.3 **A90 Trunk Road**

The Committee will be aware that the Scottish Executive put in place new contractual arrangements for the management and maintenance of the trunk road network with effect from 1 April 2001. BEAR Scotland Limited are now responsible for the maintenance (including winter maintenance) of the A90 dual carriageway trunk road through Angus. However, BEAR have sub-contracted the winter maintenance work required under this contract to Tayside Contracts who previously provided the service on this section of the A90 for the Tay Premium Unit Consortium. Therefore, for the winter of 2001/02 there will be effectively no change to the operational arrangements for winter maintenance on the A90 through Angus and no requirement to adjust the gritting routes at the interfaces between the local road network and the trunk road.

3.4.4 **Weather Forecasting Service**

The weather forecasting service for the past three winters has been provided by P A Weather Centre Ltd. The service contract required various performance targets for forecast accuracy including a system of penalties/bonuses. PA Weather Centre Ltd have performed to the required targets and generally provided a satisfactory level of service.

This forecasting service was procured through competitive tendering under a joint arrangement with the TPU consortium of authorities - Angus Council, Dundee City Council, Fife Council and Perth and Kinross Council.

Although the Tay Premium Unit Consortium no longer exists the previous tendering arrangements have offered some economies of scale in the provision of the weather forecasting service. There may still be advantages therefore in joint tendering arrangements with neighbouring

Councils and discussions are taking place to determine the level of interest in a joint procurement exercise. There are very few forecasting organisations who can provide the service required for winter maintenance and the service provided from these suppliers is not directly comparable.

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.

3.4.5 **Control Centre**

Since Local Government re-organisation Angus Council has been able to take advantage of the service provided by the Control Centre in Perth. This Control Centre was operated by Perth and Kinross Council primarily to provide 24 hour cover for winter maintenance operations for the Tay Premium Unit consortium. The Control Centre operators had access to Angus Council's Ice Predication System and weather forecasts and were therefore able to keep a watching eye on road surface temperatures, road surface condition, weather forecast updates, etc outwith normal working hours. They were also able to receive diverted telephone calls through the night to screen out non-urgent calls and forward only important calls to the Angus Council Winter Controller between the hours of 23.00 and 04.30.

A large part of the cost of providing this round-the-clock service was covered under the Tay Premium Unit contract and with the loss of the Trunk Road contract the continuation of the Control Centre became unsustainable. The standby rotas for the Roads Department personnel involved in the control and supervision of winter maintenance operations will therefore be re-scheduled to accommodate alternative arrangements for handling overnight calls to minimise disturbance to those staff rostered for early morning duties.

There will be a cost saving of £1,200 per annum resulting from the termination of Angus Council's contribution towards the cost of running the Control Centre. There will, however, be a marginal increase in the standby allowances paid to the Roads Department Staff involved in delivering the service outwith normal working hours.

3.5 Best Value

A Best Value Service Review is currently being undertaken for Road Maintenance activities which include Structural, Cyclic and Winter Maintenance.

This review will consider all aspects of delivery of the winter maintenance service and is due to be completed by October 2001. Therefore, any recommendations arising from the review may affect the arrangements for the delivery of the winter maintenance service for 2001/02.

Any proposals that would affect the policy or level of service proposed in this report would be the subject of further report(s) to the Roads Committee.

4 **FINANCIAL IMPLICATIONS**

A budget provision of £1,280,000 is in place for 2001/02 for third party payments associated with the delivery of the Winter Maintenance service.

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 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.

Dr Bob McLellan
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.

RWM/JSG
1 August 2001
REPORTS/wint.maint.2001-02

APPENDIX 1

ANGUS COUNCIL
WINTER MAINTENANCE 2001/2002
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 2001/2002
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 -18 October 2001

To – 28 March 2002

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 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 three working days between Christmas and New Year 27, 28 and 31 December 2001. Coverage for both priority and non-priority routes will therefore be as follows:-

Day		Priority Carriageways	Priority Footways	Non-Priority Carriageways and Footways
Fri	21.12.01	Normal Service	Normal Service	Normal Service
Sat	22.12.01	05.00 - 23.00	06.00 – 21.00	Nil
Sun	23.12.01	07.00 - 23.00	Nil	Nil
Mon	24.12.01	05.00 - 23.00	06.00 – 21.00	07.30 – 16.00
Tues	25.12.01	07.00 - 23.00	Nil	Nil
Wed	26.12.01	07.00 - 23.00	Nil	Nil
Thurs	27.12.01	05.00 - 23.00	06.00 - 21.00	07.30 - 16.00
Fri	28.12.01	05.00 - 23.00	06.00 – 21.00	07.30 – 15.00
Sat	29.12.01	05.00 - 23.00	06.00 – 21.00	Nil
Sun	30.12.01	07.00 - 23.00	Nil	Nil
Mon	31.12.01	05.00 - 23.00	06.00 – 21.00	07.30 – 16.00
Tues	01.01.02	07.00 - 23.00	Nil	Nil
Wed	02.01.02	07.00 – 23.00	Nil	Nil
Thurs	03.01.02	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 they 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:-

19 Oct 2000 – 29 March 2001

	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 = 3 on 1 in 3 rota)

*Footway Snowplough Drivers and Back-up Crews are put on standby on a day-to-day basis depending on 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. Much of the 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. As discussed in section 3.4.1 of this report it is proposed to increase the salt stock holding at the start of the winter maintenance period to:-

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 2001/2002
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
Heavy 6 x 6 Snowploughs	1 No
Purpose Built 6 x 6 Gritters (9m ³)	4 No
Purpose Built 4 x 4 Gritters (6m ³)	3 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 (6m ³)	6 No
Swap Body Gritter (9m ³)	1 No
Tractors with Trailer Gritters (2m ³)	7 No
Tractor with Trailer Gritters (6.0m ³) (Hired)	2 No
Tractor Loaders with Trailer Gritters (2m ³) (Rec Services)	3 No
Tractor Loaders with Trailer Gritters (2m ³)	3 No
Tractor Loaders with Trailer Gritters (3.5m ³)	3 No
Tractor Shovels	2 No
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 the coming winter 3 Purpose Built Gritters and 3 Old Lorry Based Gritters in the Angus based fleet are being replaced with new vehicles. These new vehicles are all being fitted with wet-on-dry spreaders which allow more efficient use of salt. This renewal of 50% of the “front-line” vehicles should provide a more efficient and reliable fleet for the coming winter.

APPENDIX 4

ANGUS COUNCIL
WINTER MAINTENANCE 2001/2002
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 (see page under “Policy”). 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
 Coulties 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

C1 Part B978 to B961
 C2 Part 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 2001/2002
WEATHER AND OPERATIONAL SERVICE ACTIVITY STATISTICS
FOR 2000/01 AND PREVIOUS YEARS

A WEATHER STATISTICS

	Month	1996/97	1997/98	1998/99	1999/00	2000/01	5 Year Avg.
No of days with temperatures below zero	Oct	1	4	7	2	-	3
	Nov	19	4	16	9	7	11
	Dec	19	10	16	23	12	16
	Jan	21	12	18	14	17	16
	Feb	10	4	18	14	18	13
	Mar	7	12	11	10	15	11
	Apr	-	11	6	7	2	5
	Total		77	57	92	79	71
No of days with fresh snow lying		8	16	22	21	33	20

B OPERATIONAL SERVICE ACTIVITY STATISTICS

	1996/97	1997/98	1998/99	1999/00	2000/01	5 Year Avg.
No of days priority carriageway routes treated (a.m.)	67	53	73	75	76	69
No of days priority carriageway routes treated (p.m.)	32	20	36	36	44	34
No of days non-priority carriageway routes treated	57	39	62	46	67	54
No of days priority footway routes treated	32	21	33	27	37	30
No of days non-priority footway routes treated	14	21	33	27	37	26
No of days auxilliary routes treated	N/A	N/A	N/A	45	59	52