

**REPORT TO: PLANNING AND TRANSPORTATION COMMITTEE -  
11 SEPTEMBER 2006**

**REPORT ON: WINTER MAINTENANCE POLICY AND LEVEL OF SERVICE  
2006/2007**

**REPORT BY: DIRECTOR OF PLANNING AND TRANSPORTATION**

**REPORT NO: 502-2006**

## **1 PURPOSE OF REPORT**

- 1.1 The purpose of this report is to explain the winter maintenance operations and to seek Committee approval for the proposed winter maintenance policy and level of service for winter 2006/2007.

## **2 RECOMMENDATIONS**

- 2.1 Committee is asked to approve the policy and level of service for winter 2006/2007 as outlined in this report.

## **3 FINANCIAL IMPLICATIONS**

- 3.1 The winter maintenance budget for 2006/2007 is £860,000. The demand on the budget is subject to weather conditions and every effort will be made to contain expenditure within the overall budget. Expenditure will continue to be monitored weekly and reported to the Depute Chief Executive (Finance) during the winter months.
- 3.2 The combination of an Ice Prediction System and Thermal Mapping will continue to result in the most efficient use of resources.
- 3.3 The extended footway service covering selected Housing footpaths by means grit bin provision and the use of "hit squads" with barrow gritters will again result in higher operational costs relative to the previous situation when action was restricted to the adopted network.
- 3.4 The general trend towards milder, wetter winters has resulted in an increased number of marginal nights (road surface temperatures around 0°C rather than substantially below). At such temperatures the air holds more moisture resulting in heavier frosts occurring and a requirement for frequent pre-salting. This situation is exacerbated by more frequent daytime rainfall so that salt is less likely to remain active on the road for a number of days as can happen in dry, cold conditions. Thus, unless road temperatures remain significantly above 0°C for substantial periods, operational costs associated with frosts can be higher during winters perceived as "mild". However, the most significant variations in expenditure relate to the frequency, duration and intensity of snow events which cannot be reliably predicted beyond a few days before.

## **4 LOCAL AGENDA 21 IMPLICATIONS**

- 4.1 The use of salt as a de-icing agent has potentially detrimental effects on the roadside environment due to its capability of damaging vegetation by dehydration.

However, effective control of rate and angle of spread of the salt will minimise the risk of such damage to verges.

- 4.2 Any new developments which may ultimately lead to a reduction in the use of salt within the constraints of the budget, will continue to be monitored by officers of the Department. The nightshift gritter is equipped to spread pre-wetted salt which enables more efficient precautionary salting to be carried out on dry roads when frost conditions are forecast, and further reduces salt bouncing onto roadside verges or being swept into the road channels by traffic. The former property is particularly relevant to nightshift operations when overnight frost preceded by dry conditions is forecast.
- 4.3 Limited use of salt additives has been undertaken on a trial basis in the city during the past two winters. Advantages of treated salt include reduced spread rates, better adhesion to road surfaces and reduced corrosion of gritter parts. Following the publication of national guidance on the storage of salt containing additives, the trial use of this material has been suspended. Through the partnership with Tayside Contracts, consideration is currently being given to the use of covered salt barns which would comply with the new guidance.

## 5 EQUAL OPPORTUNITIES IMPLICATIONS

- 5.1 The winter maintenance policy and level of service will contribute to the continued activity of elderly and mobility impaired citizens within the limits of available resources.

## 6 POLICY

- 6.1 **Dundee City Council will operate a priority system of winter maintenance which, as far as reasonably practicable, will permit the safe movement of vehicular and pedestrian traffic on the more important parts of the road network while minimising delays directly attributable to the adverse weather conditions and will aim to provide a suitable level of service on footways subject to available resources.**
- 6.2 The objective of this policy is to enable the Council to comply with its statutory duty to:-  
  
**“take such steps as they consider reasonable to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads” (Roads (Scotland) Act 1984).**
- 6.3 Tayside Contracts operate and maintain a fleet of dedicated winter maintenance vehicles to carry out winter maintenance operations on the roads and footways maintained by Dundee City Council Planning and Transportation Department.
- 6.4 These roads and footways have been prioritised as high or low depending on their importance etc as referred to later in this report.
- 6.5 The City Engineer will receive a road related weather forecast specific to the City early each afternoon during the winter maintenance period to assist him in deciding if Tayside Contracts should treat the roads and footways. Subject to the nature of the forecast, the instruction to Tayside Contracts can be to pre-treat the roads that

evening and/or instruct the high priority route crews to report to the depot at a specific time the following morning. At that time a more accurate assessment of conditions can be made by the Winter Maintenance Controller using the Ice Prediction System and any updates to the forecast, leading to a decision to either send the crews out or to stand them down.

- 6.6 The Ice Prediction System will also take data from outstations, such as air and road temperatures, precipitation, road wetness and presence of salt, available to the weather forecast provider to refine the accuracy of the forecast, which, in combination with thermal mapping survey information will automatically produce a graphical image of minimum expected road temperatures for the high priority network. This enables selective gritting to be carried out on a route basis when freezing is likely to be restricted to relatively few locations.
- 6.7 Winter maintenance is an expensive operation and the Director of Planning and Transportation will continue to investigate new methods/systems that may offer opportunities to reduce costs.
- 6.8 The future use of a GPS tracking systems attached to gritting plant and other selected vehicles is presently being considered for gritters and footway ploughs, and trials are likely to be undertaken over the forthcoming winter. The use of GPS in this equipment will provide a number of benefits, including the ability to confirm when roads and footpaths have actually been treated in winter conditions. This will assist in dealing with enquiries from the public, as well as defending public liability claims. In addition, the information provided will greatly assist in identifying future efficiency savings through improved route optimisation.

## 7 BACKGROUND

- 7.1 The basis for establishing priority routes is proposed as follows **in relation to the formally adopted road network:**
- i All strategic routes
  - ii Main service bus routes
  - iii Other heavily trafficked roads
  - iv Other adopted roads
- 7.1.1 In order that treatment of major roads (i-iii above) can be provided within an acceptable timescale, the number and length of high priority routes must be held to a level commensurate with available resources.
- 7.2 Night Shift Cover
- 7.2.1 A limited night shift cover will operate on certain routes of major importance within Dundee City because of the need to treat these roads outwith high priority treatment times.
- 7.2.2 The night shift will operate from 21 October 2006 to 31 March 2007 between 21.00 hours and 05.30 hours. With the pre-wetted system, this vehicle can effectively treat strategic roads in marginal conditions.
- 7.2.3 The night shift crew will be based at Fairmuir Depot and can be instructed to patrol or treat these routes, initially based on the early afternoon forecast. Subsequent

forecast updates or changes in actual conditions may result in this instruction being amended by either the Winter Maintenance Controller or a duty standby supervisor (Assistant Controller) depending on the time of this decision.

### 7.3 Priority Routes

7.3.1 The respective categories covered are as follows:

<u>Priority Route Category</u>	<u>Hours of Cover</u>
High Priority Routes	0500-2200
Low Priority Routes	0730-1600

Cover may be extended on low priority routes during snow conditions as authorised by the Director or nominated manager.

### 7.4 High Priority Routes

#### Periods of Cover

1 21 October 2006 - 31 March 2007

The night shift will operate between these dates (1 crew).

2 26 October 2006 - 28 March 2007

The main standby system will operate for all priority routes (14 crews).

3 29 March 2007 – 4 April 2007

A reduced limited standby system will operate for all categories of priority routes (1 crew). In addition, arrangements have been made for suitable staff to be on the first week's summer standby (both the Department and Tayside Contracts) to deal with a "winter" contingency.

7.4.1 As part of the standby system between 26 October and 28 March, Mondays to Saturdays, regular early morning reporting at 0600 hours will operate (with the facility to call the crews out as early as 0500 hours for high priority routes if conditions dictate). During periods of anticipated relatively mild weather an operational decision may be taken daily to temporarily suspend this, though road temperatures will still be monitored.

7.4.2 On Sundays and public holidays reporting of standby personnel will only be carried out if required.

7.4.3 It should be noted that while the standby crews' initial priorities are as detailed above, some flexibility in the deployment of these standby crews throughout the city is operated, depending upon the prevailing weather conditions and the requirements of the service, but high priority routes will still be treated first.

## 7.5 Low Priority Routes

- 7.5.1 All resources will initially be concentrated on high priority routes, and it is only when these high priority routes have been adequately dealt with that resources will be deployed on low priority routes.
- 7.5.2 It is inevitable that many culs-de-sac do not receive prompt treatment because large purpose-built winter maintenance vehicles have difficulty in manoeuvring due to parked cars and unsuitable turning points. It is thus not practicable to include most culs-de-sac within normal gritting routes due to the unacceptable route times which would result.
- 7.5.3 A “small” demount gritter and a small trailer gritter are allocated to clearing culs-de-sac on completion of work on high priority roads with width and weight restrictions. Where practicable, some main gritters are also deployed to culs-de-sac as their through routes are completed.
- 7.5.4 Dundee Contract Services have a small number of large tractors which are made available to Tayside Contracts in snow conditions on the understanding that one of them may be required for commitments to Social Work and/or Education Department prior to being available for roads. In heavy snow conditions, Tayside Contracts will pursue availability of further tractors on hire from other contractors whose normal activities are curtailed by the snow. However, in some conditions the total available plant is still unlikely to be sufficient to treat all culs-de sac prior to a thaw taking effect.

## 7.6 Weight Limited Bridges

- 7.6.1 Mandatory bridge assessments in recent years have led to an increase in the number of weight limited bridges in the City and in some reductions of pre-existing weight limits. While the above “small” demount gritter can be used on several such bridges, it is still too heavy to treat those with 3tonne limits. A trailer gritter attached to a pick-up truck partially loaded with salt is now used at these locations. After treating these bridges this equipment would be allocated to assisting in treating culs-de-sac.

## 7.7 Unadopted (Private) Roads

- 7.7.1 Following discussion at Committee when the 1998/99 Winter Maintenance Policy and Level of Service Report was approved, investigations were carried out on the feasibility of providing a winter maintenance service on unadopted roads. It was established that quite apart from the problem of insufficient resources, the law made no specific provision to undertake this work and any insurance cover may be invalidated if such work was undertaken. While the general legal position has changed since 1 April 2003 with the establishment of the general “Power to Advance Well-Being” under Section 20 of the Local Government in Scotland Act 2003, the use of any new general powers to extend winter maintenance to unadopted roads would be subject to ensuring that private roads were not given unreasonable priority before any adopted roads, otherwise the Council may be found to be in breach of their statutory duties in, for example, a case brought against the Council by someone injured on a public road due to winter conditions.

- 7.7.2 The Director of Finance at that time indicated that inevitable/unavoidable damage to unadopted footways and carriageways from winter maintenance operations due to the vulnerability of unmade and substandard surfaces would not be met by the Insurance Fund. The Public Liability insurance held by the Council responds to unforeseen loss or damage rather than inevitable/unavoidable damage. This is standard insurance market practice for this class of cover. In addition, as the Roads (Scotland) Act 1984 makes no provision to carry out winter maintenance operations on unadopted roads the Council's insurers may question our actions if claims from these areas were brought against the Council.
- 7.7.3 In view of all of the above and the fact that the Council has insufficient resources to deal with the unadopted network, no provision will be made for treating non Council owned roads and footpaths.
- 7.8 Adopted Footways
- 7.8.1 Adopted footways are also categorised into high priority routes and low priority lists. The high priority routes are those which the footway snow ploughs deal with first, namely shopping areas and main bus routes, and the low priority footways are dealt with by the same method once the high priority routes have been treated to a reasonable standard.
- 7.8.2 Whilst the Department's aim is to clear all adopted footways, the total lengths involved mean this can take some days, particularly in recurring snow or when ice has formed and daytime temperatures remain very low. In such circumstances a number of footways may still be untreated when a thaw occurs.
- 7.8.3 The fleet of footway tractor ploughs is available during the winter maintenance period to treat ICE or SNOW. HOAR FROST on footways will not be treated unless prolonged over a number of days, due to the generally more effective result of normal daytime temperatures in such conditions.
- 7.9 Adopted Footways – High Priority Routes
- 7.9.1 During snow or ice conditions these routes will have coverage from 0600 hours to 2100 hours on all days including Saturdays, Sundays and public holidays. Cover outwith normal working hours will be by operatives who participate in the Winter Maintenance Standby Rota.
- 7.9.2 The standby period for footways will be from 23 November 2006 to 14 March 2007.
- 7.10 Adopted Footways - Low Priority Routes
- 7.10.1 These footways will have similar coverage to high priority routes and will be treated after the high priority routes have been adequately dealt with.
- 7.11 Grit Bins (Adopted Road/Footways)
- 7.11.1 Following yearly increases in the provision of grit bins, there are now approximately 600 approved locations throughout the city, including approximately 100 on housing footpaths. This continued increase, together with reductions in manual workforces, has led to the situation where resources to service the bins in snow

conditions are now fully stretched resulting in possible delays in replenishment during severe conditions.

7.11.2 It is the Council's current policy that new grit bins will be provided on request on adopted roads/footways, only at locations where the undernoted criteria are met, and that no further grit bins be provided where the carriageway or footway (as appropriate to the request) is not adopted. On Housing Department footpaths, locations based on similar criteria were initially agreed in 2004/05 and a number of further such locations have subsequently been added.

7.11.3 The criteria referred to above are:

- 1 the location is not on a High Priority gritting route (carriageway or footway as appropriate to the request), **AND**
- 2 the location has a gradient greater than 6%, **OR**
- 3 the location is on a tight bend (if request relates to carriageway) **OR**
- 4 the location incorporates a series of steps (within the adopted road boundaries) **OR**
- 5 the location is within a sheltered housing area and is the main link road to local shops or public transport.

7.12 Footways/Footpaths Maintained by Other DCC Departments

7.12.1 As in previous years, in adverse conditions, communication will be maintained between roads control staff and supervisory staff of Waste Management Department (for Housing), DCS (Ground Maintenance) and Leisure and Communities. This will enable information to be exchanged and the unavoidable misdirected requests from customers to be attended to.

7.12.2 As referred to above, approximately 100 grit bin locations on housing footpaths were agreed with Housing Department in late 2004. In snow conditions five "hit squads" are also deployed at locations with large Housing footpath networks, as recommended in the Winter Maintenance Review Report of August 2004. Like the footway ploughs, these make use of DCS ground maintenance workers through an arrangement with Tayside Contracts. It is considered that this has resulted in a significant improvement to the overall service and that this provision should continue.

7.13 Exceptions

7.13.1 Exceptions to the foregoing paras 7.1-7.10 may be granted for **snow** emergencies but will be subject to approval from the Director, or in his absence the City Engineer.

7.14 Communications

7.14.1 An updated Winter Maintenance brochure was produced in 2004/05 and is sufficiently generic to be relevant for the forthcoming winter.

7.14.2 Up-to-date information similar to the brochure's content is also available on the Council's website, along with full details of the High Priority carriageway gritting routes.

- 7.14.3 During snow conditions, relevant calls from the public to the Council's switchboard and the Customer Services lines, will be redirected to the Dundee control room at Marchbanks salt depot, which will be staffed accordingly. A control room number for snow conditions is also displayed on the A-Z section of the Council's website

## **8 CONSULTATIONS**

- 8.1 The Chief Executive, Depute Chief Executive (Support Services), Depute Chief Executive (Finance), and Assistant Chief Executive (Community Planning), Director of Education, Director of Social Work, Director of Housing, Director of Economic Development, Director of Dundee Contract Services, Director of Leisure & Communities, Head of Waste Management, Head of Environmental Health and Trading Standards, Legal Manager, Principal Insurance and Risk Management Officer, Chief Constable and the Managing Director of Tayside Contracts have been consulted and are in agreement with the contents of this Report.

## **9 BACKGROUND PAPERS**

- 9.1 None.

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KL/MJG/EC

1 September 2006

Dundee City Council  
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**APPENDIX****CHRISTMAS/NEW YEAR PERIOD: DETAILS OF COVERAGE****Adopted Roads**1 Night Shift Route

Night shift will operate as normal throughout the period with standby providing cover at other times to give a 24 hour coverage.

2 Other Routes

The coverage for all other routes will be by standby only as follows:

Friday 22 December	Weekday cover
Saturday 23 December	Weekend/Holiday cover
Sunday 24 December	Weekend/Holiday cover
Monday 25 December	Weekend/Holiday cover
Tuesday 26 December	Weekend/Holiday cover
Wednesday 27 December	Weekday cover
Thursday 28 December	Weekday cover
Friday 29 December	Weekday cover
Saturday 30 December	Weekend/Holiday cover
Sunday 31 December	Weekend/Holiday cover
Monday 1 January	Weekend/Holiday cover
Tuesday 2 January	Weekend/Holiday cover
Wednesday 3 January	<b>WEEKDAY COVER</b>

Cover

	<u>Weekdays</u>	<u>Weekends and Holidays</u>
High Priority	0500 to 2200	0500 to 2200
Low Priority*	0730 to 1600	Nil

(\* subject to provision for exceptions in snow emergencies)

**Adopted Footways**

Cover provided in snow conditions throughout holiday period.

Reduced cover on Christmas Day and New Years Day only