M6 DBFO
National Border to Millbank

WINTER MAINTENANCE PLAN 2017/2018

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August 2017

WORKING WITH AUTO LINK

M6 ROM

WINTER MAINTENANCE PLAN 2017/2018

Contract :

M6DBFO

NATIONAL BORDER TO MILLBANK

August 2017

RECORD OF REVISIONS

Date	Type of Change	Revision No.	Prepared by
21/08/17	First edition	00	P Burlison
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REGISTER OF CONTROLLED COPIES

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022	Highways England - Area 13	
023	MeteoGroup	
024	Capita Symonds	
025	Amey – South East Trunk Road Unit	
026	Reception	Duty Officers

Note: A controlled copy of this Winter Maintenance Plan will be held on the site specific Share Point Intranet on a 'read only' basis and as such no paper Controlled copies will be issued except to people who do not have access to Share Point and those listed on the register above. Any revision to this Winter Maintenance Plan will be notified to the Document Controller who will have access to make changes to the Controlled copy.

CONTENTS:

Section 1 INTRODUCTION

1.1 This document describes the Winter Maintenance procedures on the A74(M)/M74 between Gretna and Millbank and is compiled in conjunction with the requirements of Section 3 of Schedule 4 Part 2 of the DBFO Agreement and the Scottish Ministers' Variation SMV OM/007 for Pre-wetted Salt

1.2 Routine maintenance including Winter Maintenance is carried out by the Routine Operation and Maintenance Contractor, M6 ROM, of Sir Robert McAlpine Ltd.

1.3 The Contract road is shown in Appendix D. Actual interfaces have been agreed with the adjoining Authorities listed in Appendix M. Direct communications links are as detailed in Appendix J. Notes of any meetings held will be available for inspection.

1.4 Every member of the M6 ROM staff who is involved with Winter Maintenance will be inducted into this Plan and will have access to copies of this Manual.

Section 2 OBJECTIVES

M6 ROM on behalf of Autolink aim to provide a service which will ensure as far as is reasonably possible, the safe movement of vehicles on the A74(M) and M74 between the National Border and Millbank (Junction 12 of the M74). The M6 ROM will aim to ensure that delays and inconvenience caused by adverse weather are kept to a minimum.

The Winter Maintenance arrangements include amongst other operations the provision of night time patrols, personnel and plant available 24 hours a day to enable precautionary salting to be carried out within 3 hours of a decision to begin treatment.(ie 1 hour to commence treatment once a decision has been made and 2 hours to complete the treatment). The operations will be carried out from two depots located at Eaglesfield and Crawford using "latest technology" spreaders supplemented by other plant as necessary.

The period of the year during which the process of Winter Maintenance will normally be undertaken is from 1st October to 15th May.

Section 3 ORGANISATION / DECISION MAKING

3.1 ORGANISATION

3.1.1 In order to provide the required response to weather conditions staff from M6 ROM will operate a combination of standby at home, standby at compounds, normal and continuous shifts. Manning arrangements are defined as follows :

(i) Call – out - available off – duty personnel if demand arises, contactable via the Duty Officer.

(ii) Standby - personnel available at home or at a compound for immediate duty outside normal working hours or shifts.

(iii) Normal Shifts - maintenance compounds manned during normal working hours.

(iv) Continuous Shifts - 24 hour manning at the maintenance compounds.

3.1.2 In all cases a Duty Engineer, Duty Officer and labour are provided to ensure that treatment of the whole Project Road can be completed within 2 hours of work starting on precautionary salting runs.

3.1.3 Personnel involved with Winter Maintenance are listed in Appendix E and their responsibilities are listed in Appendix F of the M6 ROM Quality Plan No. QMP/01.

3.1.4 The Duty Engineers will work a rota system as detailed in Appendix F and will be available 1 week in 4. They will be issued with a portable telephone and will be available to take calls night or day. If the Duty Engineer is unable to make a decision he/she will report it to his/her manager.

3.2 DECISION MAKING

3.2.1 The decision to carry out treatment will be made by the Duty Engineer who will instruct the Duty Officer to mobilise resources. The Duty Officer will then telephone the required operatives who will call back to the Duty Officer for their instructions. All decisions will be recorded using the 'RoadDSS Manager' system (during office hours a copy of the record sheet will be e-mailed to the Works Manager and Supervisor so that resources can be effectively programmed). The Vaisala RoadDSS Manager is a web based piece of software used to create winter road maintenance action plans. It allows the user to view observational data, archive data, forecast data, maps and camera images through the same web interface.

3.2.2 A rota for the operatives will be held at the Reporting Centre and depots, and will be updated by the depot supervisor.

3.2.3 To assist the Duty Engineer in their decision making as to whether some form of treatment is required a guide has been produced in the form of a Table in Appendix G.

3.2.4 It is important to note that the Table is meant as a general guide only and that the weather forecast together with prevailing weather conditions may warrant actions different to those listed.

3.2.5 The procedure for general weekday and weekend precautionary salting decision making is as detailed in Appendix G.

3.3 COMMUNICATIONS

3.3.1 Full use will be made, wherever possible, of cellular telephone communication and all personnel will be thoroughly conversant with the use.

Section 4 THE REPORTING CENTRE

4.1 Winter maintenance operations are administered from the Reporting Centre at:

M6 ROM
M6 DBFO Project Office
Nethercleuch
Lockerbie
DG11 2SQ

Tel. No. [redacted]
Fax No. [redacted]

4.2 The Reporting Centre is manned on a 24 hour basis.

4.3 The Reporting Centre is responsible for :

i) receiving and disseminating weather forecasts from the Forecast Provider;
ii) keeping the Project Manager and Works Manager informed of the current status;
iii) liaison with the relevant Police Headquarters;
iv) keeping a log book of all messages and the status and movements of operational plant;
v) recording road conditions and any lanes blocked;
vi) providing the Press, local radio, BBC, ITV, AA, RAC and public enquiries with factual information on road conditions via the Police;
vii) dealing with any difficulties or complaints from the general public which may arise.
viii) receiving and disseminating information from Vaisala.

4.4 Contact Points

4.4.1 Contact with Maintenance Staff during and outside normal working hours is made through the cellular telephone system operated by the Reporting Centre. Staff are available at all times, day and night, throughout the year on the telephone numbers listed in Appendix E. The Duty Rota is also available to interested parties.(Appendix F).

4.4.2 All initial contact by the public or enquiries through the Customer Care Line [redacted] shall be directed to the Duty Engineer.

4.5 Operations Map

4.5.1 During periods of prolonged severe weather the Reporting Centre will keep up to date Operations Maps showing road conditions. These maps will be kept at the Reporting Centre and will be updated on a regular basis. These maps are for single time use for the weather event in progress and no permanent records will be retained in this format. However, records will exist of the runs carried out by means of the Global Positioning System (GPS).

4.6 Reports to Outside Organisations

4.6.1 In addition to reporting to Autolink, for forward transmission to Transport Scotland, on completion of a Road Condition Report the Reporting Centre may, if requested, forward details to the Police, AA Roadwatch, the RAC, the media and the general public.

4.6.2 By 1st October each year a Winter Maintenance Policy Statement will be drawn up by Autolink. This will be issued to the public via the Press and will be kept available for inspection at the Lockerbie Office.

4.6.3 By 31st August each year a Winter Maintenance Strategy in the form of a procedure will be drawn up by Autolink.

4.7 Road Condition Report

4.7.1 When requested, or during emergencies, reports of road conditions shall be given by the Reporting Centre personnel, via Autolink, to Transport Scotland by 10.00 hours daily. If requested by Transport Scotland these reports will be supplemented by subsidiary reports.

Section 5 OPERATIONAL PERIODS

Three winter maintenance periods are defined for normal operational purposes:

5.1 High Period

The High Period is defined as December, January and February when Severe conditions might reasonably be expected.

During the High Period, the operation provides essential operatives on standby to ensure that treatment of the Project Road is commenced within 1 hour of receiving an instruction to carry out treatment. Occasions may arise when actual or forecast conditions are severe enough to require that operatives are placed on normal or continuous shifts to ensure that treatment of the Network can commence immediately or indeed to provide continuous treatment.

5.2 Low Period

The Low Period is defined as November and March when severe conditions may occasionally occur.

During the Low Period, standby procedures operate to start treatment of the Project Road as quickly as possible after an instruction to treat has been given but, in any event, this will be not later than 1 hour after such instruction. Occasions may arise however, when conditions are so severe that High Period arrangements are needed.

5.3 Marginal Period

The Marginal Period is defined as part or all of October, April and May when severe conditions are generally not to be expected.

During the Marginal Period, standby procedures or call out may be in operation dependant on forecast to enable treatment of the Project Road to commence as quickly as possible after an instruction to treat has been given but in any event this will be not later than 1 hour after such instruction.

Section 6 TREATMENT METHODS (see Appendix G and K for tabulated guide)

6.1 Precautionary Salting

6.1.1 The philosophy behind Winter Maintenance operations is, wherever possible, to carry out pre-salting before ice forms or snow settles on the road. To enable this to be undertaken effectively depends on a mixture of local knowledge and experience, good local weather forecasts and a knowledge of the state of the road at the time (i.e. is it wet or dry, salt covered or not etc).

6.1.2 If no forecast is available for whatever reason and the temperature has fallen to plus 1^0c, then precautionary salting shall take place unless :

i) no moisture is or is expected on the road.
ii) there is enough residual salt on the road to deal with the expected conditions.
iii) there is enough cloud cover to suggest that temperatures will not fall any further.

6.1.3 As instructed in SMV OM/007 pre-wetted salt is to be used for all precautionary de-icing treatments and for ice and snow clearance for all treatments on the Project Road.

6.2 Rates of Spread for Precautionary Salting

6.2.1 The minimum requirements for de-icing material spread rates are given in Table 2 of Appendix K for various scenarios of forecast weather and road condition status.

6.3 Treatment of Ice already on the Road

6.3.1 If ice has already formed on the road salt shall be spread up to 40gms/m2 depending on the amount of ice present and the air temperature to ensure a rapid melt. Particular attention will be made to lengths of road which are known to be susceptible to run-off of water from verges or central reservation.

6.4 Treatment of Snow already on the Road after Precautionary Salting

6.4.1 Snow ploughing shall commence as soon as snow depths on the Network or part thereof exceed 30mm or as directed by the Duty Engineer. Each pass of the plough shall be supplemented by an application of salt at a rate of 20-40gms/m2 depending upon the temperature trend. Information from the Ice Prediction System together with temperature measurements at the depots will be available. Special salting may be necessary to deal with melted water from snow which may freeze at night and watch will be kept for such conditions.

6.5 Treatment of Hard-Packed Snow and Ice

6.5.1 If the above procedures are carried out successfully then the formation of hard-packed snow and ice should be rare. However, should these conditions occur provided it is no more than 20mm thick and the air temperature is above minus $5\ ^0$c, then removal shall be carried out by successive salt applications of 20-40gms/m2.

Below minus 10 ^{0}c or where the snow is more than about 20mm thick salt application will be 40gms/m2.

6.5.2 Where snow depths reach 120mm or when drifting occurs ploughing may be undertaken without salting so that the weight of the loaded vehicle may aid traction. Salting shall, however, be resumed as soon as possible thereafter.

6.6 Operations

6.6.1 Winter Maintenance Operations will take place from two maintenance depots (Eaglesfield and Crawford) the locations of which are shown in Appendix D.

6.6.2 The salting and snow ploughing routes from these depots are shown and described in Appendix C.

6.6.3 All slip roads will form part of the overall salting and ploughing routes in accordance with liaison arrangements with the other operating roads authorities.

Section 7 WINTER PATROLS

7.1 From 1st November to 31st March inclusive patrols shall be carried out on all parts of the Project Road during the hours of darkness and only during daylight hours in periods of adverse weather.

7.2 Priority shall be given to the mainline carriageway. Where it is not possible to assess the condition of slip lanes and slip roads from the mainline carriageway the patrol shall be so arranged to cover these.

7.3 Individual sections of route within the Project Road shall be patrolled at intervals not exceeding three hours. This patrol interval will be monitored using the Global Positioning System (GPS) which is fitted to the spreader patrol vehicle.

7.4 During the patrol period Patrols shall be carried out using loaded spreaders when the temperature is forecast to be 3 ^{0}C or below in order that treatment may commence immediately should a problem area be encountered. At other times the patrol shall be carried out in another vehicle equipped with a cellular telephone communication system in order that assistance may be called out. The driver of the patrol vehicle will keep a log sheet ('Spreader Log' sheet shown in Appendix H) detailing the time and duration of patrols and any action taken.

7.5 There will be two patrol routes (one from each depot). These routes may be altered to suit the prevailing weather and road conditions.

7.6 Spreaders being used as Patrol vehicles are fitted with temperature probes to assist the driver in ascertaining the road temperatures.

7.7 Space blankets, energy bars and water will be available for the public from the spreaders in periods of difficulty.

Section 8 FORECASTS AND ICE DETECTION

8.1 Forecasting Services

8.1.1 24 hour weather forecasts and forecast updates are provided by the M6 ROM Forecast Provider:

MeteoGroup UK Ltd
PA NewsCentre
292, Vauxhall Bridge Road
London
SW1V 1AE

Tel. No. [redacted]

Fax No.

8.1.2 An Ice Prediction System has been supplied by :

Vaisala TMI Ltd
Vaisala House
349 Bristol Road
Birmingham
B5 7SW

Tel. No. [redacted]
Fax No.

8.1.3 Road sensors are installed on the Project Road at the following outstation positions :

Beattock
Norwood

Appendix D details precise locations. Regular inspections of the Ice Prediction Equipment will be carried out at Beattock and Norwood.

8.1.4 Both weather forecasts and road sensor data are received by the Vaisala TMI Ice Prediction System central computer in Birmingham. Graphs and text forecasts are received by either the office workstation or a portable computer and modem utilised by standby personnel from home.

8.1.5 Definitions of terms used in meteorological forecasts are shown in Appendix A.

8.1.6 Thermal mapping of the Project Road has been carried out by Vaisala and is installed on the Ice Prediction computer. This will be updated as and when necessary.

8.2 Forecasts

24 Hour Weather Forecasts

8.2.1 A 36 hour forecast with an extended outlook for 10 days and 9 nights will be issued at approximately 08:00 hours, 12.00 hours and 17.00 hours, 7 days a week.

8.2.2 A site specific forecast including a graphical prediction of road surface temperatures for particular outstations will also be given. There will be additional text to accompany these on occasions where clarification of assumptions is required.

8.2.3 A paper copy will be taken from the Ice Prediction Computer to be kept in the Reporting Centre.

8.3 Forecast Updates

8.3.1 Forecast updates will be issued between 17.00 and 21.00 hours 7 days a week but may be issued at any time of the day or night as the need arises. Notification of any amendment to the textual or graph forecasts will be by the cellular telephone system.

8.3.2 Forecast updates may also be supplied on request by telephoning the Forecast Provider, 24 hours a day,7 days a week.

8.3.3 Weather forecast, actions taken etc are retained and archived on the Vaisala system.

Section 9 PLANT AND RESOURCES

9.1 Routine Salting and Snow Ploughing Fleet

9.1.1 The size and configuration of the fleet of spreaders will be reviewed after each Winter Maintenance season and any recommendations put into practice having regard to available finance.

9.1.2 The current spreader fleet is as shown in Appendix I.

9.1.3 The spreaders will be fitted with equipment which complies with BS1622: 1989 Class A1.

9.1.4 Five spreaders will operate from the Eaglesfield depot and three from the Crawford depot. A vehicle from Eaglesfield may be sent to the Crawford depot should it be required during periods of severe weather.

9.1.5 The spreaders will be mechanically maintained by the manufactures agents and there will call upon local resources. The agent for repairs is located at Dumfries. The drivers will be responsible for daily maintenance and for washing the vehicle.

9.1.6 The spreaders will be fitted with on-board electronic data loggers fitted with or connected to a global positioning system all of which provide and accurate record of time and distance travelled and capable of spreading salt and pre-wetted salt.
The GPS will tell times when de-icing materials have been spread, the rate of spread and the width of spread all continuously referenced to the Ordnance Survey grid. The GPS used is the ACP System through Vaisala.
The onboard electronic data loggers are capable of downloading their data to a personal computer and the data from the electronic data loggers will be downloaded on a daily basis and shall load and retain such data on an electronic database. In the event of an onboard electronic data logger malfunction a similar written record will be prepared within 12 hours.

9.1.7 The spreaders will be

(i) Capable of delivering a constant supply of brine of the correct amount
(ii) Comply with the requirements of para 3.4 g) of Schedule 4 Part 2 where such requirements are not inconsistent with the spreading of pre-wetted salt and
(iii) Comply with any other requirements to ensure effective distribution of pre-wetted salt to comply with the requirements of SMV OM/007.
(iv) The M6 ROM has provided to Autolink in writing the method that is employed to ensure that the quantity of brine being applied during each route treatment is correct.

9.1.8 The salt reconciliation system will be developed based on the information gained from the on board data collection equipment, on board weighing facility of each gritter, individual driver logs and tight controls on material deliveries.

9.1.9 To obtain and retain the most economical rates of spread every Spreader will be calibrated and checked annually. Spread patterns and widths of spread will be checked to avoid wastage.

9.1.10 All equipment shall be checked and be in a state of readiness by 30 September each year.

9.1.11 Winter grade fuel will be stored at each of the operating depots.

9.2 Hire of Plant in an Emergency

9.2.1 If prevailing weather conditions are such that extra or more appropriate plant is required, the Autolink Operations Manager will be advised by the Project Manager accordingly.

9.2.1 A list of proposed additional plant to be used in an emergency is given in Appendix I.

9.2.2 During the winter maintenance period a standby generator may be brought to site if a snowfall in excess of 150mm is forecast by MeteoGroup.

9.2.3 If a snowfall of in excess of 200mm is forecast snow blowers will be brought to the site if available.

9.3 Operatives

9.3.1 Two drivers will be employed per operational spreader and they will be deployed to suit the machine requirements. The drivers will be on a 7 day stand by rota system so that they will be available every other week for standby duty. They will be on call to return to the depot for gritting duties and will be contactable by mobile phone.

9.3.2 All Winter Maintenance operatives, prior to undertaking operations, will have attained the City & Guilds Certificate for Winter Maintenance Operations issued by The City and Guilds of London Institute or equivalent recognised qualification awarded by a state of the European Union. Records will be available for inspection at the Reporting Centre.

9.3.3 A minimum of 24 no. qualified drivers will be employed in total.

Section 10 SALT. (De-Icing Materials)

10.1 General

10.1.1 Salt will be the prime material used for combating snow and ice. It is, however recognised that salt is also environmentally unfriendly. Therefore, to gain the most economic and environmentally satisfactory solution, the minimum amount of salt will be used to obtain the best effect.

10.1.2 Pre-wetted salt is to be used for all precautionary de-icing treatments and for ice and snow clearance for all treatment routes on the Project Road.

10.1.3 The minimum requirements for de-icing material spread rates for precautionary treatment are provided in Appendix K.

10.1.4 Where the spread rate is greater than 20 grammes per square metre two separate precautionary treatments shall be undertaken.
In this case the first precautionary treatment will be undertaken at a spread rate of at least 20 grammes per square metre and within the timescale required by the Agreement.

The second precautionary treatment shall commence within 3 hours of the completion of the first treatment unless the trend from a range of road sensors indicates that the road temperature shall remain at least 1degC higher than the intervention level in Table 1 of Appendix K.

10.1.5 The minimum requirements for de-icing material spread rates for ice and snow clearance are shown in Table 3 of Appendix K.

10.1.6 Precautionary salt spreading rates will be reduced by 30% for the pre-wetted applications; Brine will make up the other 30%. Rock Salt for the production of brine will be stored at our Eaglesfield and Crawford depots and will be managed so that there is sufficient stocks in place to enable contract requirements to be fulfilled.

10.1.7 The salt saturators to be used at our depots have a capacity of 10,000 litres and an hourly production rate of 2,500 litres. They will also act as storage vessels. Storage tanks will also be available at each depot.

Table 1 – Salt Usage per route at 20 grammes per square metre (dry salt application)

	Route tonnage (dry salt)	Depot tonnage	70% of Dry Salt Tonnage	Brine Used per Treatment (Litres) 30%	Brine Salt per depot used per treatment (T)
Route 1	6.25	C	4.38	1,875	
Route 2	5.74	C – 11.99	4.02	1,722	7.19
Route 3	3.85	E	2.70	1,155	
Route 4	3.76	E	2.63	1,128	
Route 5	4.31	E	3.02	1,293	
Route 6	3.61	E – 15.53	2.53	1,083	9.32
Totals	**27.52**	**27.52**	**19.28**	**8.256**	**16.51**

C – Crawford depot E – Eaglesfield depot

10.2 Salt Specification

10.2.1 Salt for de-icing material as part of pre-wetted salt Operations not including the salt to be used in producing brine shall be 6.3mm grading particle size complying with BS 3247 or equivalent and treated with an anti-caking agent.

10.2.2 Salt for de-icing material as part of pre-wetted salt Operations to be used in producing brine shall be suitable for the production of brine

10.2.3 At loading points salt storage shall ensure that the moisture content of the stored salt shall not exceed 4%.
Should the moisture content of the salt used for de-icing exceed 4% spread rates shall be increased by 100% for spread rates up to and including 20 grammes per square metre except where the moisture content has been increased above 4% in accordance with 10.2.4.

10.2.4 When the conditions of road surface temperatures of less than or equal to plus 1degC and relative humidity levels of less than or equal to 80% are forecast or present prevail, the salt moisture content for precautionary treatment shall be 5% .

10.3 Pre-wetted Salt

10.3.1 Salt for de-icing material as part of pre-wetted salt Operations to be used in producing brine shall be suitable for the production of brine.

10.3.2 For pre-wetted salt spreading Operations the spread rates set out in Appendix K means the total weight of the spread material.

10.3.3 Brine added to salt during spreading Operations as a pre-wetted agent shall be 30% of the total spread material by weight (70% salt / 30% brine solution). For example, for a spread rate of 20 grammes per square metre the proportions shall be 14 grammes salt and 6 grammes brine.

10.3.4 The sodium chloride content of the pre-wetting brine solution shall have a minimum concentration of 20% and a maximum concentration of 23%.
Where temperatures are forecast to fall below minus 15degC the fully saturated brine shall be diluted by the addition of water to prevent re-crystallisation of the salt. This addition of water shall not reduce the concentration of sodium chloride below the minimum value of 20%.
The addition of water shall be undertaken in such a manner that shall ensure that the water and brine shall be thoroughly mixed to produce a consistent concentration of brine.
As soon as temperatures rise above minus 15degC a fully saturated solution (ie 23%) shall be used.

10.4 Salt Supplier

10.4.1 Rock Salt will be supplied by :

Cleveland Potash Ltd
Boulby Mine
Loftus
Saltburn-by-the-Sea
Cleveland
TS13 4UZ

10.4.2 Salt for brine solution will be supplied by;

JC Peacock & Co Ltd
North Harbour
Ayr
KA8 8AE

10.5 Salt Stock Levels

10.5.1 The Salt Stock Levels will be maintained as follows in purpose built salt barns at the two depots with the approximate storage volumes prior to the start of the Winter Maintenance season being :

Rock Salt -	Eaglesfield	2000 tonnes
	Crawford	2000 tonnes
Brine Salt –	Eaglesfield	26 tonnes
	Crawford	26 tonnes

In addition up to 2000 tonnes of Rock Salt will be available for M6 ROM use at Dovedale Farm, Stonehouse, off the M74.

10.5.1 As a minimum sufficient brine shall be stored at each depot to treat simultaneously at a maximum spread rate all precautionary treatment routes serviced from that depot with an additional quantity of 20% brine above that quantity held in reserve.
The brine within the storage facilities shall be replenished within 2 hours of being depleted.

10.5.2 Sensors with digital readouts shall be fitted to the storage facilities to measure automatically the salt concentration of the brine.

Weekday checks will be carried out using a saturation meter and the results to be stored electronically.

10.6 Salt Stockpiles

10.6.1 Salt will not be stored more than 5 metres high and will be stored so that it is possible to use salt left from previous years before using new stock. Angle of repose /> 40^0

10.6.2 Salt will be taken from the barns and loaded over the sides of the spreaders by high lift front end loading shovels until the required amount of salt is loaded to suit the gritting route.

10.6.3 The salt barns will be constructed on concrete bases and shall be encircled by a cut off drain. They will be constructed in such a manner that run-off from other parts of the site will not underwash the base, the water content of the stockpile shall not increase from ground water rising and that any drainage moisture shall run to the perimeter.

10.7 Measurement of Salt Stockpiles

10.7.1 Salt stockpiles will be checked a minimum of once per month and, during high usage, at shorter intervals as appropriate. The salt will be supplied by Cleveland Potash Ltd. who will be responsible on behalf of the M6 ROM for ensuring that stockpiles of salt are maintained at a level to give a minimum stock of 500 tonnes.

10.8 Testing

10.8.1 Within 10 days of delivery salt shall be tested at loading points all in accordance with BS 812 or equivalent and results recorded to ascertain

(i) Moisture content (1 test per 500 tonnes)
(ii) Particle size distribution (1 test per 500 tonnes)
(iii) Chloride content (1 test per 1500 tonnes
(iv) Soluble sulphate compounds (1 test per 1500 tonnes)

10.8.2 Salt stocks will be tested for salt moisture content at monthly intervals throughout each winter period and the results recorded.

10.8.3 An electronic database will be maintained for the storage of materials test data.

Section 11 RECORDS AND REPORTING

11.1 General

11.1.1 In order to regularly assess the cost effectiveness and performance of the Winter Maintenance operation the following monitoring exercises will be carried out during the winter period.

11.1.2 Performance monitoring will be undertaken throughout the winter period to establish the standard of forecasting and the incidence of abortive actions and failures to salt.

11.1.3 All records and performance monitoring reports will be kept for 5 years.

11.2 Records

11.2.1 Key issues which will be monitored are :

i) response time ('RoadDSS Manager'/daily action/Spreader log)
ii) treatment times / runs (Spreader log)
iii) fleet downtime due to breakdown (Spreader log)
iv) salt usage / grit usage (Salt reccon)
v) forecast performance / daily action ('RoadDSS Manager'/daily action)
vi) road blockages (road blocks.)
vii) weekly statistical returns (Weekly report)
viii) level and validity of public complaints (Complaint form)
ix) the incidence of road traffic accidents (Weekly report)
x) third party claims
xi) software faults (Hardware/software fault report form)
xii) communications (Duty Officer Log)

11.2.2 Examples of the record sheets are given in Appendix H. They may however be kept as an electronic copy.

11.2.3 The Vaisala 'RoadDSS Manager' system was introduced for the 2014/2015 winter period and will be used this season.

11.2.4 Data from the Vaisala Ice Prediction System is automatically archived by the system. A hard print copy of the forecast for every day of the Winter Maintenance Period will be kept for 5 years.

11.2.5 Other documentation to be read in conjunction with this Plan is listed in Appendix L.

11.2.6 Records of the runs carried out will not be retained as hard copies but will be retained electronically on the GPS computer. This information will be archived weekly.

Section 12 POLICE DEPARTMENTS AND NEIGHBOURING AUTHORITIES

12.1 Police Departments

12.1.1 Co-operation and full contact with the Police will be maintained at all levels regarding the calling out of personnel, manning of depots etc. The Winter Maintenance Patrols will report by telephone to the Duty Engineer whenever snow begins to fall.

12.1.2 In difficult conditions, when requested, a Police car may accompany the snow clearing or salt spreading plant. The Police car will only operate until a reasonable passage for traffic has been obtained. All requests for a patrol car will be made by the Duty Engineer to the appropriate Police Force Control Room. Gritter and snowplough drivers will not however, wait for patrol cars but will commence work immediately.

12.1.3 A list of relevant Police Departments and contact telephone numbers is given in Appendix J.

12.1.4 Movement of Abnormal Loads: When conditions due to ice and snow become too severe for the safe movement of abnormal or heavy loads and it is known that a movement is imminent or in progress, the appropriate Police Force Control Room will be informed by the Reporting Centre. A request will be made for Police co-operation in advising the driver of the abnormal load of the conditions in order to encourage him to cease travelling until the road is considered safe. If the move has not commenced or is due on the motorway network within 24 hours, the haulage contractor will be informed of the conditions by the Networks Management Abnormal Loads Officer who is listed in Appendix E.

12.1.5 The Police will be advised that snow ploughing has commenced and request activation of the motorway warning signals.

12.1.6 During periods of prolonged severe weather and when requested by the Police, a Duty Engineer, when resources allow, may be stationed in the Control Rooms of both Dumfries & Galloway and Strathclyde Police Departments to co-ordinate Winter Maintenance operations on the Project Road.

12.1.7 Liaison with Traffic Scotland to display a special message on the Variable Message Signs if required.

12.2 Neighbouring Authorities.

12.2.1 A list of relevant Local Authorities and contact telephone numbers is given in Appendix J.

12.2.2 Details of the interface arrangements with other road authorities is given in Appendix M.

Appendix A

Meteorological Forecasts – Definition of terms

Appendix A

METEOROLOGICAL FORECASTS - DEFINITION OF TERMS

A.1 Precipitation

A.1.1 A collective word for all the various types of rain, snow, hail etc. In forecasts the following are the definitions used:

Drizzle:	Very small, generally very numerous, raindrops.
Rain:	Raindrops of appreciably size.
Snow:	Crystals of white ice apparently opaque, generally in small or large flakes of light feather structure.
Slight Accumulations:	Undisturbed less than 25mm deep.
Moderate Accumulations:	Undisturbed reaching a depth of 25 - 100mm.
Heavy Accumulations:	Undisturbed reaching a depth over 100mm.
Hail:	Pellets of ice, usually hard, partly transparent, but collectively of white appearance. There is also a form of pellet not hard but white and opaque like snow which is called soft hail or graupel.
Sleet:	Snow and rain together or snow melting as it is actually falling.

A.2 Fog

A.2.1 Obscurity in the surface layers of the atmosphere caused by particles of condensed moisture or smoke held in suspension in the air. Fog is officially that condition of obscurity in which objects at a distance of one kilometre are not visible. Above this limit, but below two kilometres, it is officially "mist". Haze enjoys the same limits as mist but is reserved for dry air in which the obscuration is due to dust or smoke.

A.2.2 The following scale of fog intensity is used in official forecasts:

	Visibility
Dense Fog	less than 44 yards
Thick Fog	less than 220 yards
Fog	less than 440 yards
Moderate Fog	less than 1100 yards
Mist or Haze	less than 2200 yards

Fog can occur whenever a surface is cooler than a moist air stream which crosses it.

A.3 Frost

A.3.1 The following terms are used to denote the degree of frost:

Term	Wind less than 10 Knots	Wind more than 10 Knots
Slight Frost	0 to -2.5 C	0 to -0.5 C
Moderate Frost	-3.5 to -6.0 C	-1.0 to -2.0 C
Severe Frost	-6.5 to -11.5 C	-2.5 to -5.0 C
Very Severe Frost	Below -11.5 C	Below -5.0 C

A.4 Other Terms used in Forecasts

A.4.1 When periods of precipitation are expected, the following terms are used:

Shower: Brief precipitation with more or less definite clearances between the falls.

Occasional: Not continuous. The periods of precipitation are relatively short and occupy only a small fraction of the total time.

Intermittent: Not continuous over a considerable period; but the period of precipitation are of substantial duration and the sky remains overcast.

Thundery Rain: Occasional or intermittent rain of varying intensity, but heavy at times. Usually but not necessarily accompanied by thunder.

Thundery Showers: Showers of rain, hail, sleet or snow, usually heavy and accompanied by thunder.

Thunderstorm: Thunder and lightning with or without precipitation, which may be continuous over a considerable period, and heavy at times.

A.4.2 When it is expected to be dry then the following terms are used, during daylight:

Fine: No precipitation or thick fog. Some sunshine.

Dry: No precipitation or thick fog.

Sunny: Sunshine most of the time.

Sunny Periods: Fairly continuous sunshine for an hour or two at a time, and in all more sunshine than cloud.

Sunny Intervals: Intermittent sunshine for less than half the period.

Bright: Considerable diffused sunshine and perhaps some direct sunshine.

Bright Periods: Bright sky for more than half the time.

Bright Intervals: Intermittent occurrences of a bright sky which are too brief to be termed bright periods.

Cloudy:	Cloud nearly or completely covering the sky so as to reduce daylight to the extent that bright is inappropriate.
Dull:	A complete cloud cover so dark as to justify a stronger term than cloudy.

A.4.3 When it is expected to be dry then the following terms are used, during darkness:

Fine:	No precipitation or thick fog.
Dry:	No precipitation or thick fog.
Clear:	No fog, little or no cloud.
Cloudy:	Cloud nearly or completely covering the sky.
Variable Cloud:	Cloud cover varying between about one-quarter and three quarters.

Appendix B

Road Conditions

Appendix B

ROAD CONDITIONS

B.1 Road Conditions

B.1.1 According to the Road Research Laboratory road icing depends more on the state of the road i.e. the 'degree of wetness' than on actual temperature. However, the circumstances in which roads become icy may be classified into the following broad categories, in order of frequency of occurrence.

The Freezing of Wet Road Surfaces

B.1.2 In most cases the road will have become wet because of rain which fell when air temperature was above freezing point; the road may also become wet by a heavy deposit of dew or from a wet fog, by the melting of hoar frost which may have formed during the previous night, or by melting snow. A subsequent fall in temperature of the road surface, usually due to radiation of heat to a clear night sky, causes the water film remaining on the surface to freeze.

A Heavy Deposit of Hoar Frost

B.1.3 Sometimes this is preceded by a deposit of dew. With little traffic the surface is not very slippery, but heavy traffic, causing the partial melting and packing of the ice crystals, eventually produces a treacherous surface if the temperature is near to the freezing point.

The Freezing of Deposited Moisture on a Cold, Dry Road Surface

B.1.4 When there is a sudden change in the weather, from a relatively long period with temperatures below freezing point, to one where the temperature is high, then water which condenses on the cold road surface, may freeze. This condition is most severe if the onset of the warmer conditions is accompanied by drizzle. It does not occur frequently (about once every two winters on the average), but it leads to treacherous road conditions because freezing takes place from below and the ice layer will have a lubricating film of water on its surface.

Glazed Frost

B.1.5 This is the most dangerous of weather phenomena associated with frost which is caused by the re-freezing of super cooled rain drops on impact with the cold surface. This is an infrequent occurrence in the British Isles.

B.2 Action on Receipt of a Forecast Predicting Freezing Temperatures

B.2.1 On receipt of the 24 hour Forecast or a Forecast Update the Reporting Centre, or the appropriate maintenance personnel, will decide on the appropriate action and make the necessary arrangements for treatment.

B.2.2 Table 1 indicates possible appropriate actions for many combinations of forecast and existing situations. **In the event of a border line situation, action should be on the side of safety.**

Notes to Action Table (Table 1)

B.2.3 The action table should be read in conjunction with the following notes:

i) Particular attention should be given to the possibility of water running across carriageways, eg. off adjacent grassed areas after heavy rains, washing off salt previously deposited. Such locations should be kept under scrutiny and may require treating in the evening and morning, and possibly on other occasions.

ii) When a forecast contains reference to expected hoar frost considerable deposits may occur. Hoar frost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset may be dispersed before it can become effective. Particular vigilance is required under this forecasted condition which is ideally treated just as the hoar frost is forming. Such action is usually not practicable and salt may have to be deposited on a dry road before the condition forms. Hoar frost may be forecast to occur at other times in which case the timing of salting operations should be adjusted accordingly.

iii) If, under conditions where rain is expected before freezing and rain has not ceased by early morning, crews must be called out and action should be initiated as rain ceases (Action 5).

iv) Under circumstances where rain is expected during freezing conditions rain will freeze on contact with the road surface and full pre-salting must take place even on dry roads. Constant vigilance must be maintained throughout the danger period.

v) Forecasts are often qualified by altitudes in which case differing action may be required from each depot.

Appendix C

Treatment Routes and Descriptions

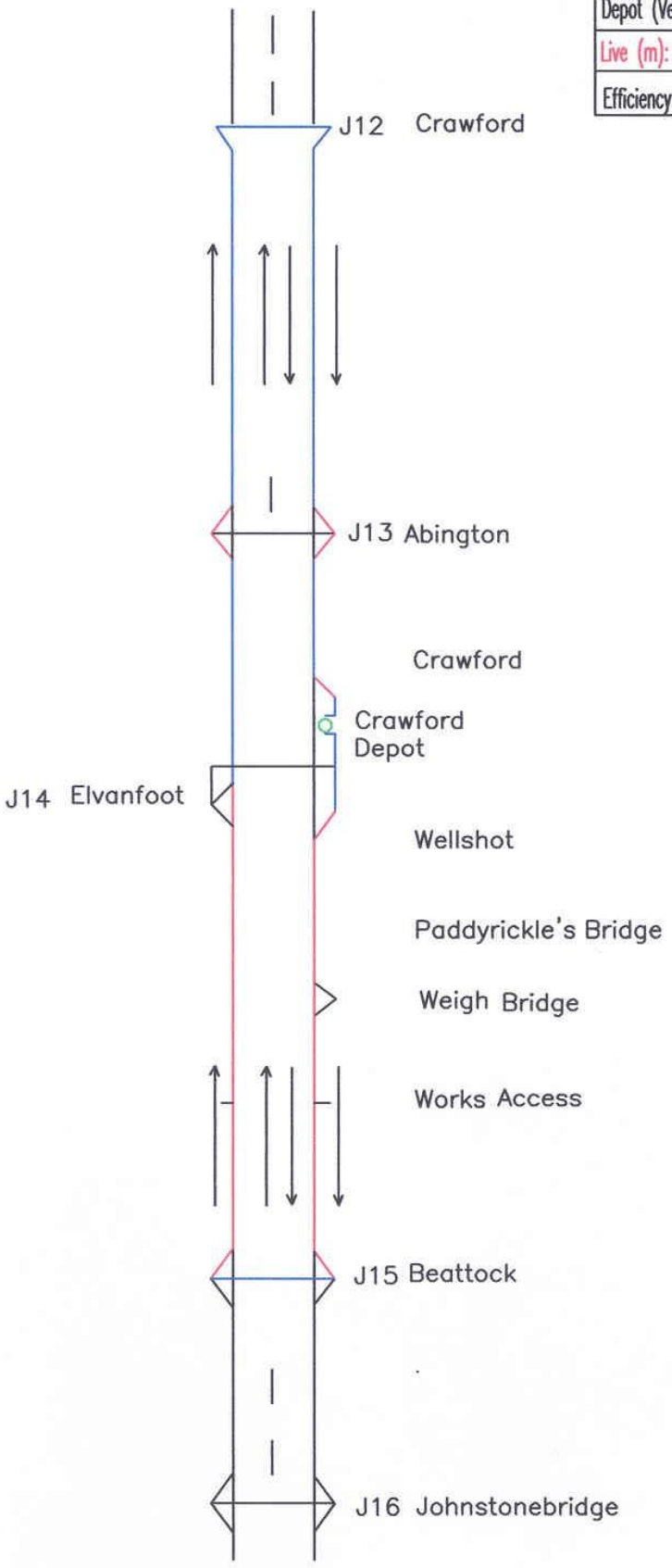
ROUTE OPTIMISATION
M6 ROM

Pre-Salt 20gm^{-2} Routes

VAISALA LTD
Vaisala House
349 Bristol Road
Birmingham B5 7SW
United Kingdom
Phone intl + (0)121 683 1200
Fax intl + (0)121 683 1299
http://www.vaisala.com

Certificate No.
FS 34153

M6 ROM Version 2 July 2004 Pre-Salt Routes		
Route: 1	Domain: n/a	Spread:10,15,20gm
Depot (Vehicles): Crawford		
Live (m): 30.2	Dead (m) 24.9	Total (m): 55.1
Efficiency: 54%	Time (h:m): 1.26	Thermal: Cold



M6 ROM

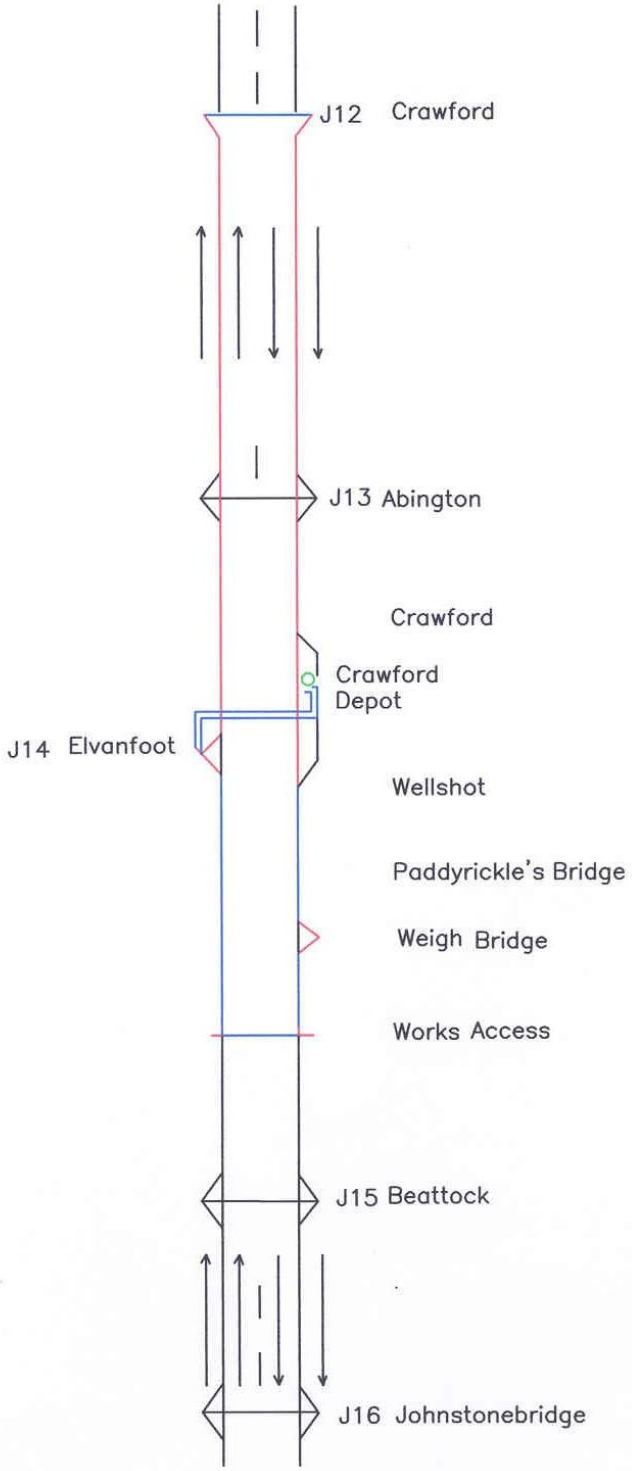
PRE-SALT 10/15/20gm^2 ROUTES

ROUTE 1

FROM CRAWFORD DEPOT

	Out of depot, TURN RIGHT
TRAVEL	A702 southbound and B7076 to M74 Junction 14 southbound on slip at Wellshot, BEAR LEFT
SALT	On slip and M74 southbound and M74 Junction 15 off slip to end, TURN RIGHT
TRAVEL	A701 underneath M74 to M74 Junction 15 northbound on slip, TURN RIGHT
SALT	On slip and M74 northbound to end of M74 Junction 14 on slip, STRAIGHT
TRAVEL	M74 northbound to M74 southbound to M74 Junction 13 off slip, BEAR LEFT
SALT	Off slip and M74 Junction 13 on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound, M74 Junction 12 off slip, road underneath M74, M74 southbound on slip and M74 southbound to M74 Junction 13 off slip, BEAR LEFT
SALT	Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 14 Crawford Interchange off slip, BEAR LEFT
SALT	Off slip to A702 Crawford r/b, TURN RIGHT
TRAVEL	Return to depot via A702

M6 ROM Version 2 July 2004 Pre-Salt Routes			
Route: 2	Domain: n/a	Spread:10,15,20gm	
Depot (Vehicles):	Crawford		
Live (m): 28.6	Dead (m) 15.4	Total (m): 44	
Efficiency: 65%	Time (h:m): 1.19	Thermal:	Cold



M6 ROM

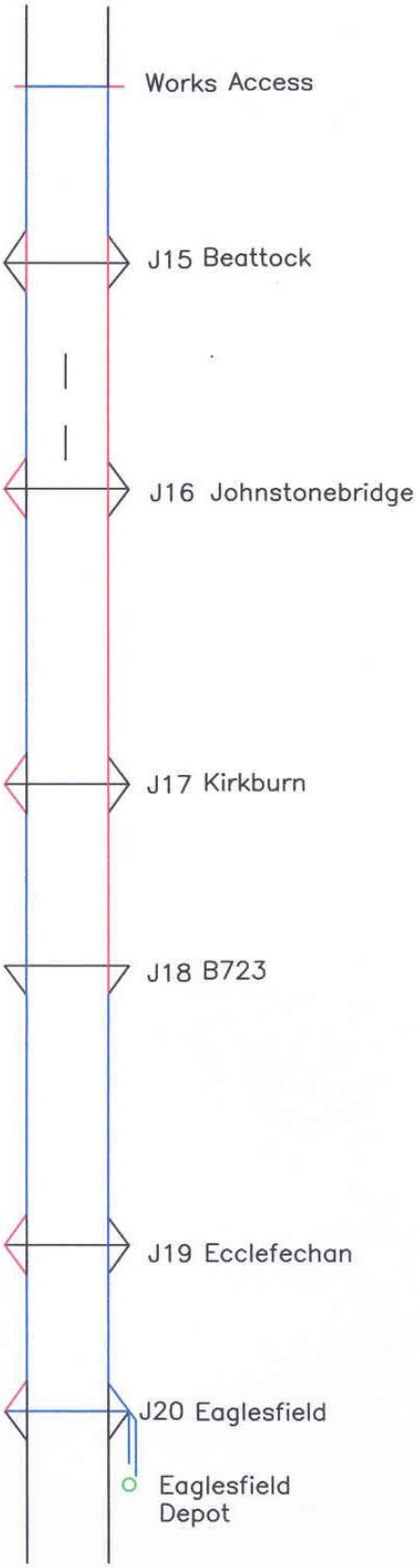
PRE-SALT 10/15/20gm^2 ROUTES

ROUTE 2

FROM CRAWFORD DEPOT

	Out of depot, TURN RIGHT
TRAVEL	A702 southbound to M74 Junction 14 northbound on slip, TURN LEFT
SALT	On slip and M74 northbound and the M74 Junction 12 off slip, TURN RIGHT
TRAVEL	A70 to M74 Junction 12 southbound on slip, TURN RIGHT
SALT	On slip and M74 southbound to end of M74 Junction 14 on slip at Wellshot, STRAIGHT
TRAVEL	M74 southbound to M74 southbound Weigh Bridge off slip, BEAR LEFT
SALT	Off slip and M74 southbound Weigh Bridge on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to gap in carriageway at Works Access, BEAR LEFT
SALT	Off slip and through Works Access gates
TRAVEL	B719 over Greenhillstairs Bridge to B7076 and M74 northbound Works Access, TURN RIGHT
SALT	Works Access gates to northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 14 off slip, BEAR LEFT
SALT	Off slip to A702 r/b, TURN LEFT
TRAVEL	Return to depot via A702

M6 ROM Version 2 July 2004 Pre-Salt Routes		
Route: 3	Domain: n/a	Spread:10,15,20gm
Depot (Vehicles):	Crawford	
Live (m): 20.5	Dead (m) 39.2	Total (m): 59.7
Efficiency: 32%	Time (h:m): 1.35	Thermal: Cold



M6 ROM

PRE-SALT 10/15/20gm^2 ROUTES

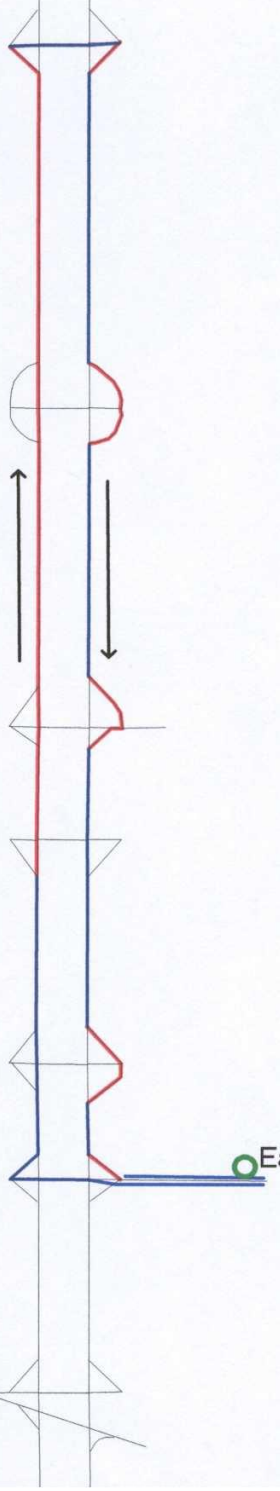
ROUTE 3

FROM EAGLESFIELD DEPOT

	Out of depot, TURN LEFT
TRAVEL	B722 to M74 Junction 20 northbound on slip
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 19 off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 17 off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 16 off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 15 off slip, STRAIGHT
SALT	M74 northbound to end of M74 Junction 15 on slip, STRAIGHT
TRAVEL	M74 northbound to gap in carriageway at Works Access, BEAR LEFT
SALT	Off slip and through the Work Access gates, TURN LEFT
TRAVEL	B7076 southbound to B719 over Greenhillstairs Bridge and TURN LEFT to the southbound Works Access gates
SALT	Works Access gates to southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 15 off slip, STRAIGHT
SALT	M74 southbound to end of M74 Junction 18 southbound on slip, STRAIGHT
TRAVEL	Return to depot via M74 southbound, M74 Junction 20 off slip and B722

Scale 1:14000 Title 20gm rt4 © Vaisala Ltd

M6 ROM	*Version 1 August 2000, Pre-Salt 20gm Routes*				
Route:	4	Domain:	Central	Spread:	20g
Depot (Vehicle):		Eaglesfield			
Salt (m):	17.1	Dead (m):	28.2	Total (m):	45.3
Efficiency:	38%	Time (h:m):	01:11	Thermal:	



J 15 Beattock

J 16 Johnstonebridge

J 17 Kirkburn

J 18 B723

J 19

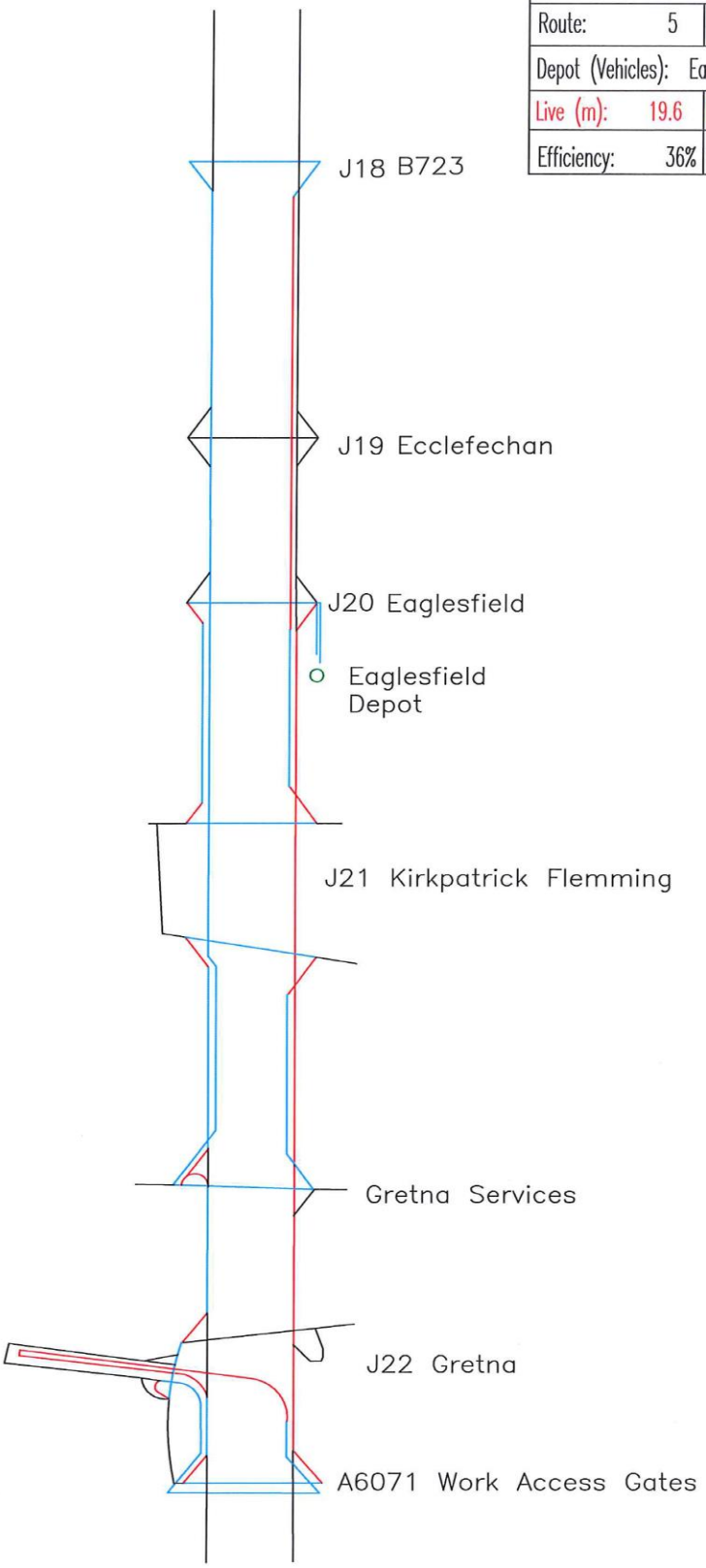
Eaglesfield Depot

J 20 Eaglesfield

J 21 Kirkpatrick Fleming

Grahamshill

M6 (ROM) Version 3 October 2015 Pre-Salt Routes					
Route:	5	Domain:	n/a	Spread:10,15,20gm	
Depot (Vehicles):	Eaglesfield				
Live (m):	19.6	Dead (m)	35.6	Total (m):	55.2
Efficiency:	36%	Time (h:m):	01:26	Thermal:	Cold



M6 ROM
PRE-SALT 20GM² ROUTES

ROUTE 5
FROM EAGLESFIELD DEPOT

	Out of depot,
TRAVEL	B722 to A74/M Junction 20 southbound on slip, TURN LEFT
SALT	On slip and A74/M southbound at A6071 Guardsmill over bridge, STRAIGHT. BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
SALT	Off slip and On slip to end using at the emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL	A74/M northbound to off slip A75(T)
SALT	A75(T) off slip towards Gretna and main carriageway to gap in carriageway, U-TURN
SALT	A75(T) eastbound and on slip to A74/M
TRAVEL	A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL	A74/M northbound and A75(T) off slip towards Gretna to first spur off to B7076, TURN LEFT
SALT	A75(T) off slip to B7076, TURN LEFT
TRAVEL	B7076 to A74/M northbound on slip, STRAIGHT
SALT	Off slip B7076 to end TURN LEFT
TRAVEL	B7076 to A74/M northbound on slip, STRAIGHT
SALT	On slip to end , JOIN CARRIAGEWAY
TRAVEL	A74/M northbound to Gretna Green Services off slip, BEAR LEFT
SALT	Off slip, Service Access road and A74/M northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	A74/M northbound to B7076 Grahamshill off slip, BEAR LEFT
SALT	Off slip to B7076, TURN RIGHT

TRAVEL B7076 over main carriageway to A74/M southbound on slip, TURN RIGHT

M6 ROM
PRE-SALT 20GM² ROUTES

ROUTE 5
FROM EAGLESFIELD DEPOT (Continued……)

SALT On slip to end, JOIN CARRIAGEWAY

TRAVEL A74/M southbound, Gretna Green Services off slip, Service Access road over main carriageway, A74/M northbound on slip and A74/M northbound to A74/M Junction 18 off slip, BEAR LEFT

TRAVEL Off slip, B723 and A74/M southbound on slip to end, JOIN CARRIAGEWAY

SALT A74/M southbound to end of A74/M Junction 20 on slip, STRAIGHT

TRAVEL A74/M southbound to A74/M Junction 21 off slip at Kirkpatrick Fleming, BEAR LEFT

SALT Off slip to B6357, TURN RIGHT

TRAVEL B6357 over main carriageway to A74/M northbound on slip, TURN RIGHT

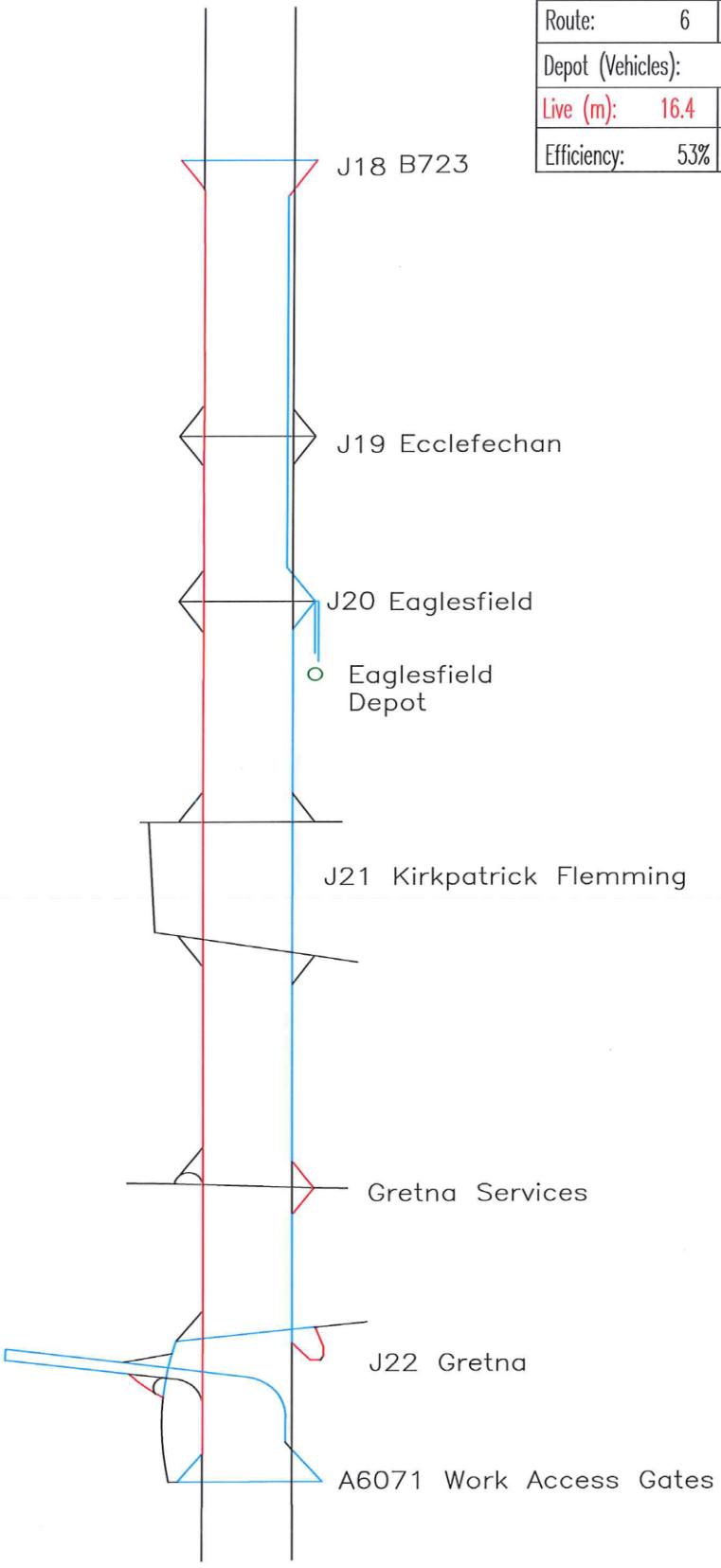
SALT On slip to end, JOIN CARRIAGEWAY

TRAVEL A74/M northbound to A74/M Junction 20 off slip, BEAR LEFT

SALT Off slip to B722, TURN RIGHT

Return to depot via B722.

M6 (ROM) Version 3 October 2014 Pre-Salt Routes		
Route: 6	Domain: n/a	Spread:10,15,20gm
Depot (Vehicles):	Eaglesfield	
Live (m): 16.4	Dead (m) 14.8	Total (m): 31.2
Efficiency: 53%	Time (h:m): 00:52	Thermal: Cold



M6 ROM
PRE-SALT 20GM² ROUTES

ROUTE 6
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL B722, A74/M Junction 20 southbound on slip and A74/M southbound to Gretna Green Services off slip, BEAR LEFT

SALT Off slip and A74/M southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL A74/M southbound to Springfield off slip, BEAR LEFT

SALT Off slip to Springfield r/b, TURN LEFT

TRAVEL Class III road, B7076 to Gretna A75(T) westbound on slip

SALT On slip to A75(T) westbound to end, JOIN CARRIAGEWAY

TRAVEL A75(T) westbound to break in carriageway, U-TURN

TRAVEL A75(T) eastbound, A74/M southbound on slip, A74/M southbound at A6071 Guards Mill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound

TRAVEL A74/M northbound to A6071 Guardsmill over bridge, STRAIGHT

SALT A74/M northbound and A74/M Junction 18 off slip to B723, TURN RIGHT

TRAVEL B723 to A74/M southbound on slip, TURN RIGHT

SALT On slip to end, JOIN CARRIAGEWAY

Return to depot via A74/M southbound, A74/M Junction 20 off slip and B722.

ROUTE OPTIMISATION
M6 ROM

Pre-Salt 40gm^{-2} Routes

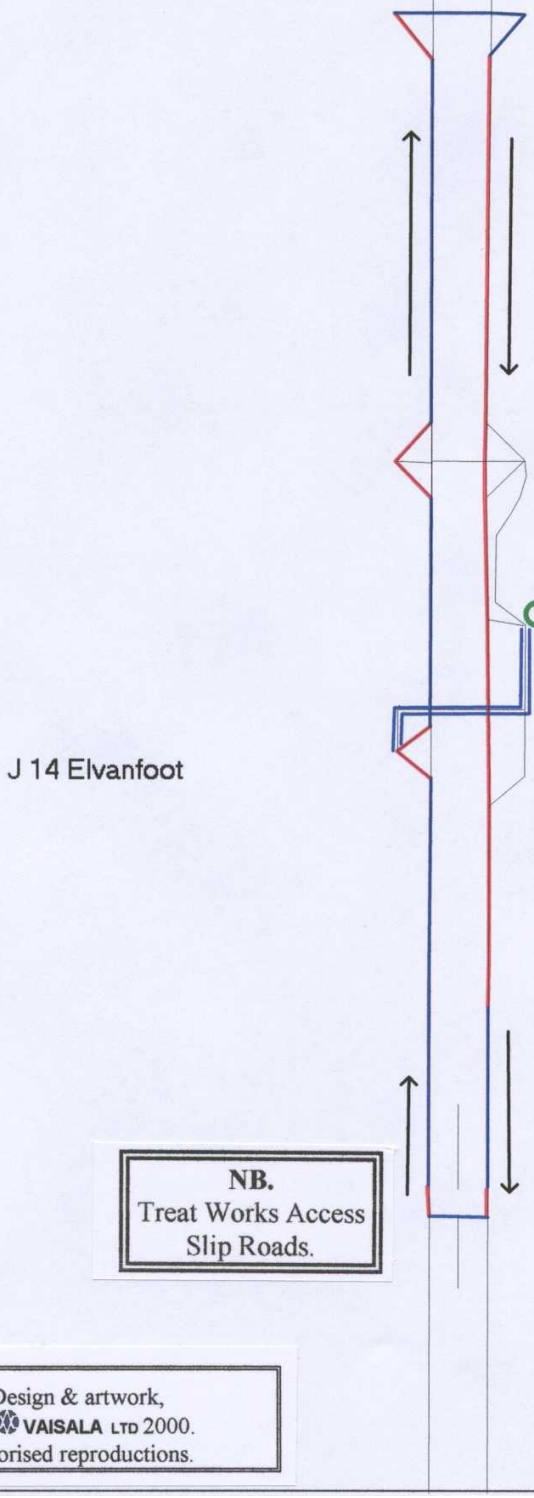
VAISALA LTD
Vaisala House
349 Bristol Road
Birmingham B5 7SW
United Kingdom
Phone intl + (0)121 683 1200
Fax intl + (0)121 683 1299
http://www.vaisala.com

Certificate No.
FS 34153

Scale 1:12000

Title 40gm rt1 © Vaisala Ltd

M6 ROM	*Version 1 August 2000, Pre-Salt 40gm Routes*				
Route:	1	Domain:	North	Spread:	40g
Depot (Vehicle):		Crawford			
Salt (m):	16.3	Dead (m):	26.2	Total (m):	42.5
Efficiency:	38%	Time (h:m):	01:07	Thermal:	Cold



J 12

J 13

Crawford Depot

Crawford

J 14 Elvanfoot

Wellshot

Paddy's Rickle Bridge

Work's Access

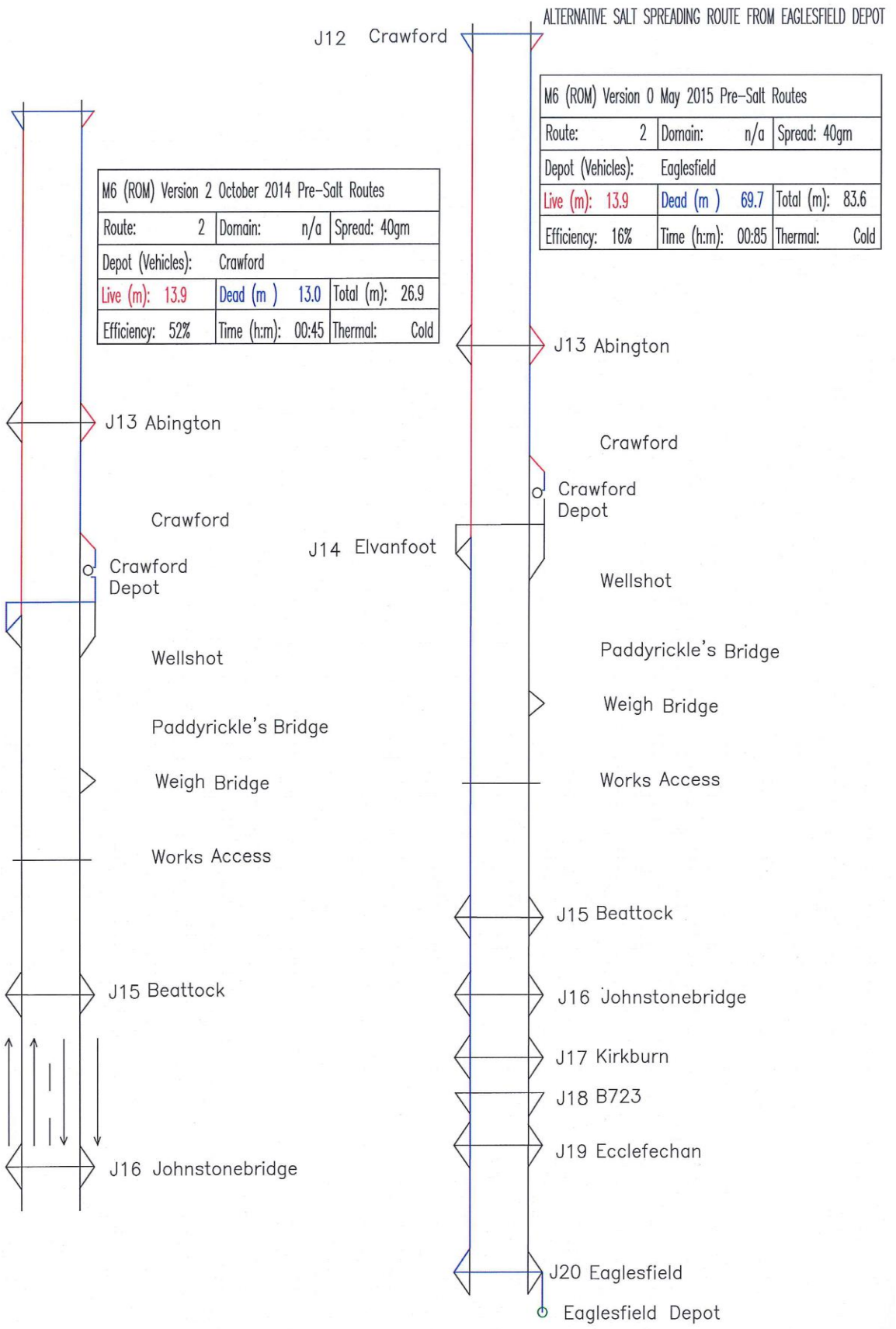
NB.
Treat Works Access
Slip Roads.

VAISALA

ROUTE 1
FROM CRAWFORD DEPOT

	Out of depot, TURN RIGHT
TRAVEL	A702 southbound to M74 Junction 14 northbound on slip, TURN LEFT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 13 off slip, BEAR LEFT
SALT	Off slip to B7078 and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 12 off slip, BEAR LEFT
SALT	Off slip to A70, TURN RIGHT
TRAVEL	A70 and M74 southbound on slip to end, JOIN CARRIAGEWAY
SALT	M74 southbound to end of Paddy's Rickle Bridge on slip, STRAIGHT
TRAVEL	M74 to gap in carriageway at Works Access, BEAR LEFT
SALT	Works Access slip roads and U-TURN
TRAVEL	M74 northbound to M74 Junction 14 off slip, BEAR LEFT
SALT	Off slip to A702 r/b, TURN RIGHT

Return to depot via A702.


ALTERNATIVE SALT SPREADING ROUTE FROM EAGLESFIELD DEPOT
M6 (ROM) Version 0 May 2015 Pre-Salt Routes
Route: 2 Domain: n/a Spread: 40gm
Depot (Vehicles): Eaglesfield
Live (m): 13.9 Dead (m) 69.7 Total (m): 83.6
Efficiency: 16% Time (h:m): 00:85 Thermal: Cold
M6 (ROM) Version 2 October 2014 Pre-Salt Routes
Route: 2 Domain: n/a Spread: 40gm
Depot (Vehicles): Crawford
Live (m): 13.9 Dead (m) 13.0 Total (m): 26.9
Efficiency: 52% Time (h:m): 00:45 Thermal: Cold
J12 Crawford
J13 Abington
Crawford
Crawford Depot
J14 Elvanfoot
Wellshot
Paddyrickle's Bridge
Weigh Bridge
Works Access
J15 Beattock
J16 Johnstonebridge
J17 Kirkburn
J18 B723
J19 Ecclefechan
J20 Eaglesfield
Eaglesfield Depot
J13 Abington
Crawford
Crawford Depot
Wellshot
Paddyrickle's Bridge
Weigh Bridge
Works Access
J15 Beattock
J16 Johnstonebridge

M6 ROM
PRE-SALT 40gm² ROUTES

ROUTE 2
FROM CRAWFORD DEPOT

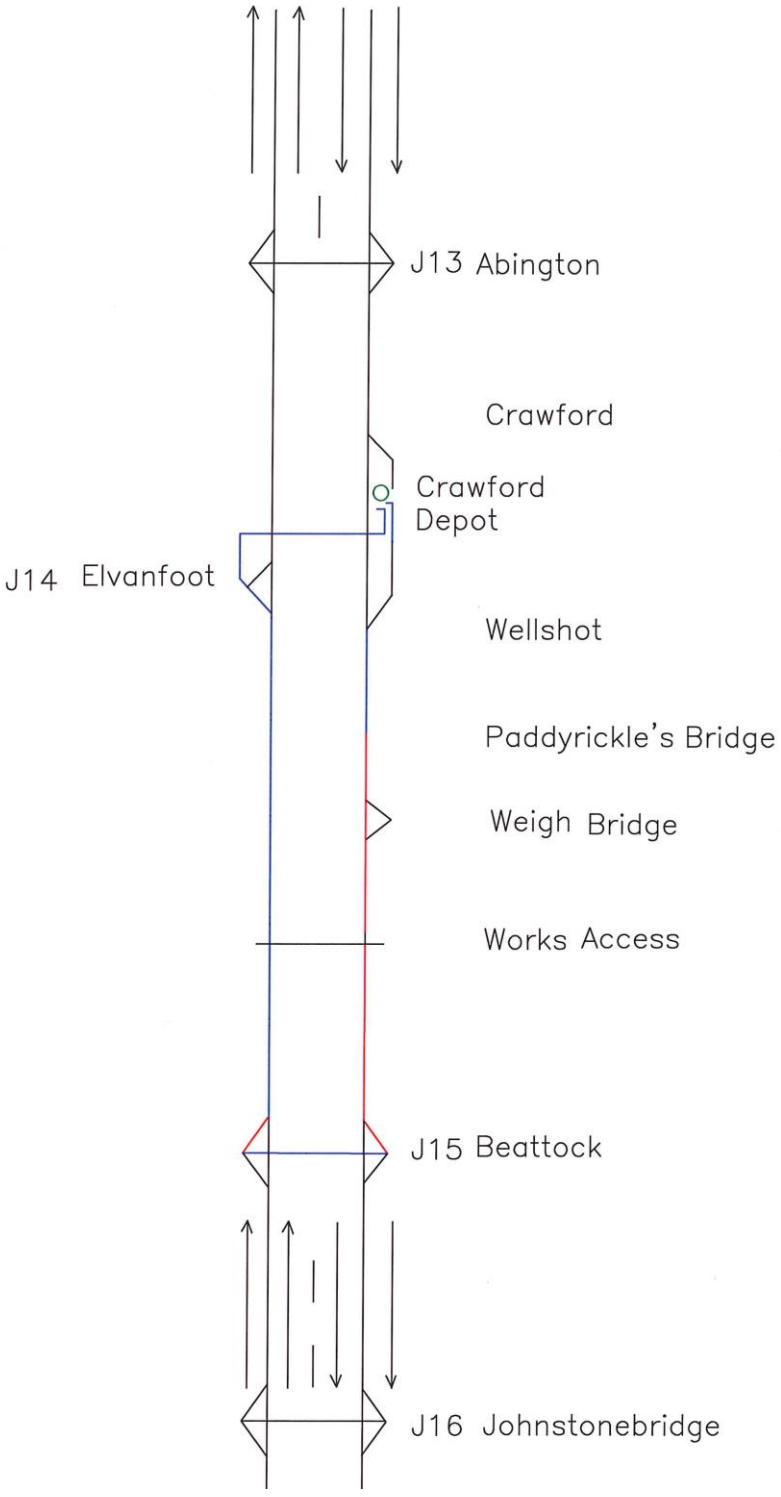
	Out of depot, TURN RIGHT
TRAVEL	A702 southbound & M74 Junction 14 northbound on slip to end, JOIN CARRIAGEWAY
SALT	M74 northbound to M74 Junction 12 off slip, BEAR LEFT
TRAVEL	Off slip & A70 to M74 southbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 13 off slip, BEAR LEFT
SALT	Off slip & M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to Crawford Interchange off slip, BEAR LEFT
SALT	Off slip to A702 Crawford r/b
	Return to depot

ALTERNATIVE ROUTE 2
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL	B722 TO A74/M Junction 20 northbound on slip, JOIN CARRIAGEWAY
TRAVEL	A74/M northbound, to the M74 J14 on slip,
SALT	M74 northbound to M74 Junction 12 off slip, BEAR LEFT
TRAVEL	Off slip & A70 to M74 southbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 13 off slip, BEAR LEFT
SALT	Off slip & M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to Crawford Interchange off slip, BEAR LEFT
SALT	Off slip to A702 Crawford r/b
	Return to Crawford Depot, Route Completed

M6 ROM Version 2 August 2013 Pre-Salt Routes		
Route: 3	Domain: North	Spread: 40gm
Depot (Vehicles):	Crawford	
Salt (m): 11.8	Dead (m) 15.9	Total (m): 27.7
Efficiency: 42%	Time (h:m): 00:55	Thermal: Cold



M6 ROM

PRE-SALT 40GM² ROUTES

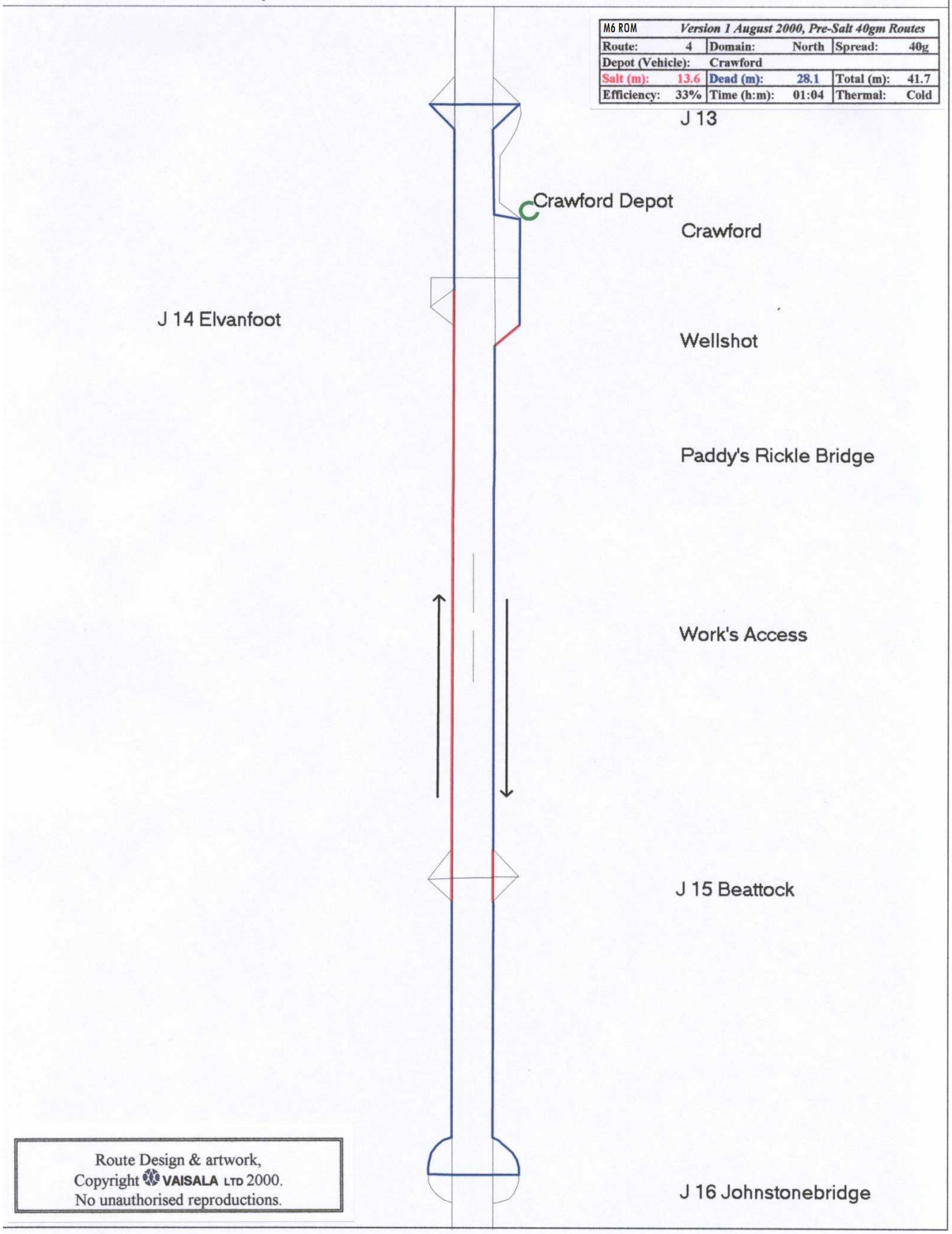
ROUTE 3
FROM CRAWFORD DEPOT

	Out of depot, TURN RIGHT
TRAVEL	A702 southbound, B7078, A74/M southbound on slip at Wellshot interchange and A74/M southbound to Paddys Rickle Bridge, STRAIGHT
SALT	A74/M Paddys Rickle Bridge southbound and A74/M Junction 15 off slip to A701, TURN RIGHT
TRAVEL	A701 under A74/M main carriageway to A74/M northbound on slip TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY

Scale 1:12000

Title 40gm rt4 © Vaisala Ltd

M6 ROM	*Version 1 August 2000, Pre-Salt 40gm Routes*				
Route:	4	Domain:	North	Spread:	40g
Depot (Vehicle):		Crawford			
Salt (m):	13.6	Dead (m):	28.1	Total (m):	41.7
Efficiency:	33%	Time (h:m):	01:04	Thermal:	Cold



VAISALA

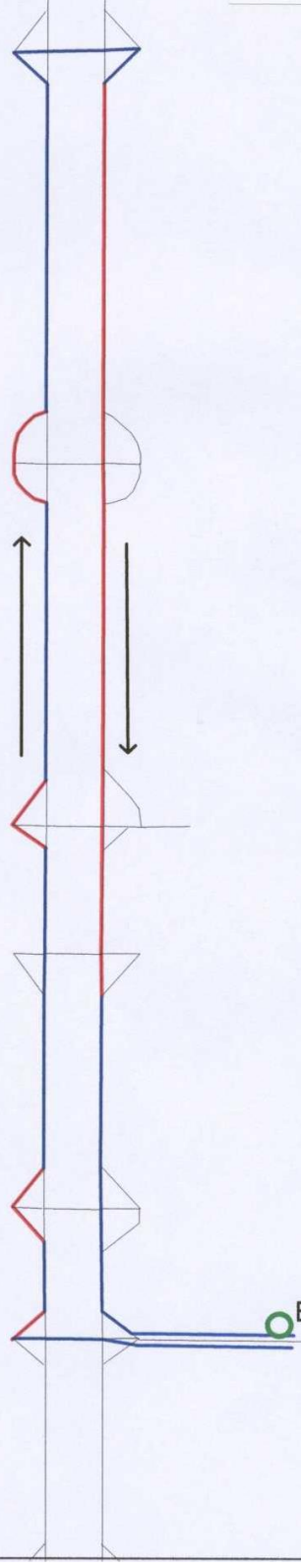
ROUTE 4
FROM CRAWFORD DEPOT

	Out of depot, TURN RIGHT
TRAVEL	A702 southbound and B7076 to Wellshot r/b, TURN RIGHT
SALT	M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 15 off slip, STRAIGHT
SALT	M74 southbound to end of M74 Junction 15 on slip, STRAIGHT
TRAVEL	M74 southbound, M74 Junction 16 off slip, road under M74, M74 northbound on slip and M74 northbound to M74 Junction 15 off slip, STRAIGHT
SALT	M74 northbound to end of M74 Junction 14 on slip, STRAIGHT

Return to depot via M74 northbound, M74 Junction 13 off slip, B7078, M74 southbound and A702.

Scale 1:12000 Title 40gm rt 5 © Vaisala Ltd

M6 ROM	*Version 1 August 2000, Pre-Salt 40gm Routes*				
Route:	5	Domain:	Central	Spread:	40g
Depot (Vehicle):		Eaglesfield			
Salt (m):	17.2	Dead (m):	22.7	Total (m):	39.9
Efficiency:	43%	Time (h:m):	01:04	Thermal:	



J 15 Beattock

J 16 Johnstonebridge

J 17 Kirkburn

J 18 B723

J 19

Eaglesfield Depot

J 20 Eaglesfield

VAISALA

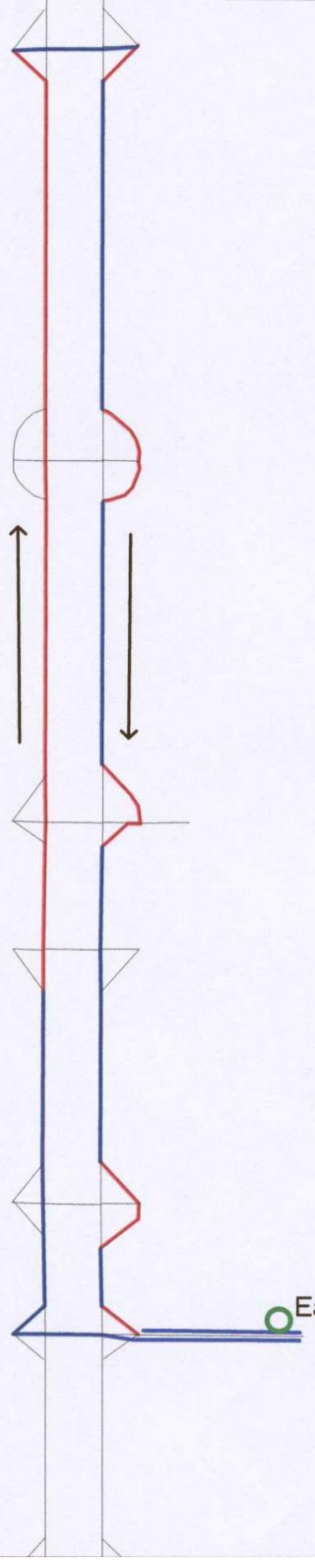
ROUTE 5
FROM EAGLESFIELD DEPOT

	Out of depot,
TRAVEL	B722 to M74 Junction 20 northbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 19 off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 17 off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 16 Johnstonebridge Services off slip, BEAR LEFT
SALT	Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 northbound to M74 Junction 15 off slip, BEAR LEFT
SALT	Off slip to A701, TURN RIGHT
TRAVEL	A701 under M74 and M74 southbound on slip to end, JOIN CARRIAGEWAY
SALT	M74 southbound to end of M74 Junction 18 on slip, STRAIGHT

Return to depot via M74 southbound, Junction 20 off slip and B722.

Scale 1:12000 Title 40gm rt6 © Vaisala Ltd

M6 ROM	*Version 1 August 2000, Pre-Salt 40gm Routes*				
Route:	6	Domain:	Central	Spread:	40g
Depot (Vehicle):		Eaglesfield			
Salt (m):	17.1	Dead (m):	28.2	Total (m):	45.3
Efficiency:	38%	Time (h:m):	01:11	Thermal:	



J 15 Beattock

J 16 Johnstonebridge

J 17 Kirkburn

J 18 B723

J 19

Eaglesfield Depot

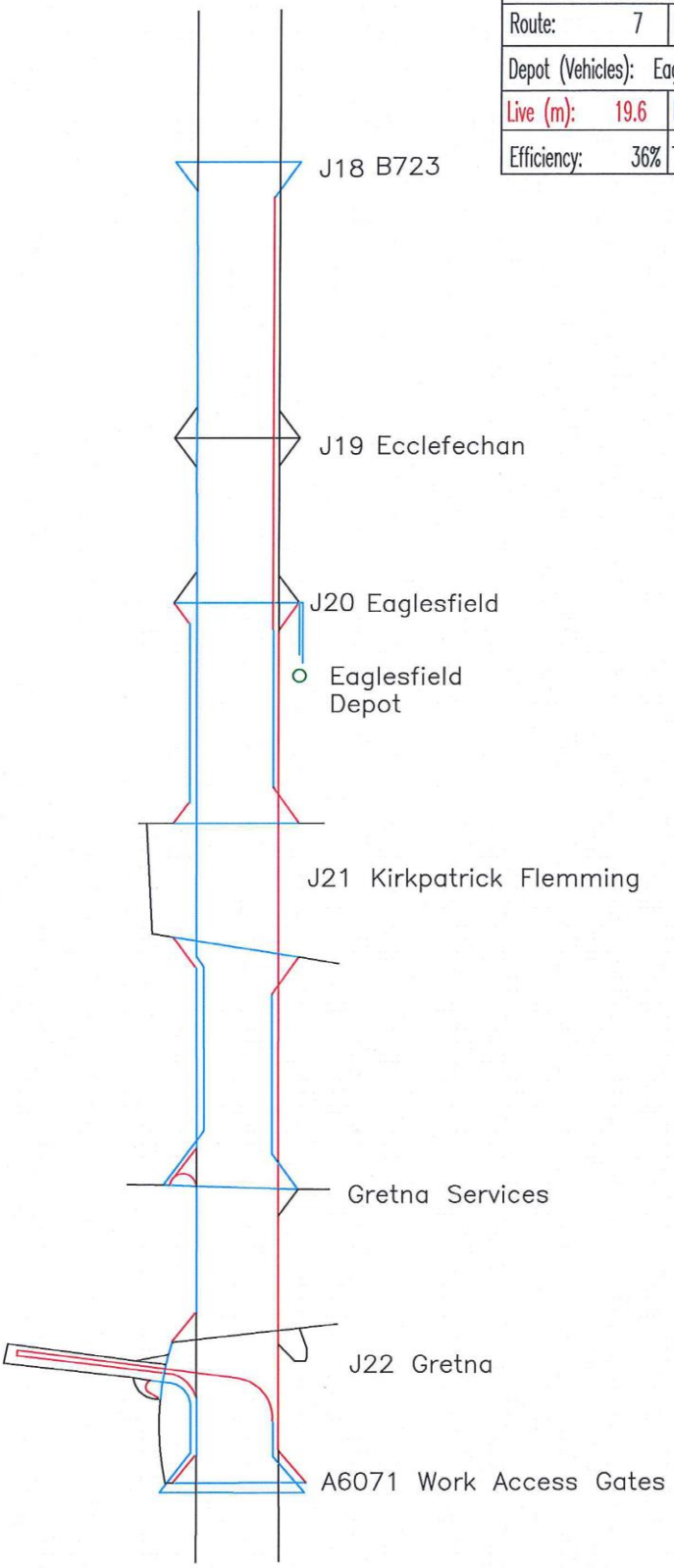
J 20 Eaglesfield

VAISALA

ROUTE 6
FROM EAGLESFIELD DEPOT

	Out of depot,
TRAVEL	B722, M74 Junction 20 northbound on slip and M74 northbound to M74 Junction 18 off slip, STRAIGHT
SALT	M74 northbound to M74 Junction 15 off slip, BEAR LEFT
TRAVEL	Off slip and A701 under M74 to M74 southbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 16 Johnstonebridge Services off slip, BEAR LEFT
SALT	Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 17 off slip, BEAR LEFT
SALT	Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 19 off slip, BEAR LEFT
SALT	Off slip to B7076 r/b and M74 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	M74 southbound to M74 Junction 20 off slip, BEAR LEFT
SALT	Off slip to B722, TURN LEFT
	Return to depot via B722.

M6 (ROM) Version 4 May 2015 Pre-Salt Routes		
Route: 7	Domain: South	Spread: 40gm
Depot (Vehicles): Eaglesfield		
Live (m): 19.6	Dead (m) 35.6	Total (m): 55.2
Efficiency: 36%	Time (h:m): 01:26	Thermal: Cold



M6 ROM
POST-SALT 40gm² ROUTES

ROUTE 7
FROM EAGLESFIELD DEPOT

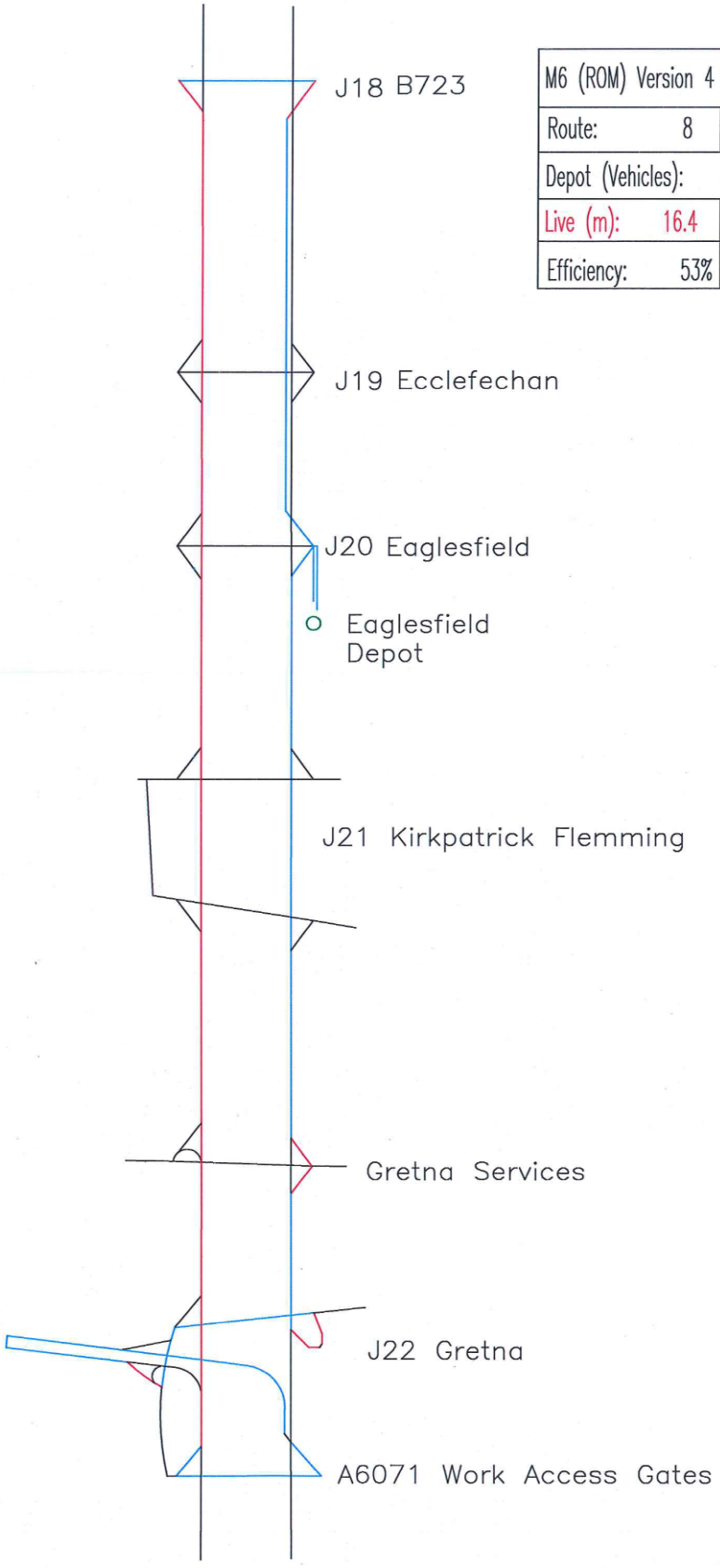
	Out of depot,
TRAVEL	B722 TO A74/M Junction 20 southbound on slip, TURN LEFT
SALT	On slip & A74/M southbound to A6071 Guards Mill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL	A74/M northbound to off slip A75(T)
SALT	A75(T) off slip towards Gretna & main carriageway to gap in carriageway, U-TURN
SALT	A75(T) eastbound & on slip to A74/M
TRAVEL	A74/M southbound to A6071 Guards Mill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL	A74/M northbound & A75(T) off slip towards Gretna to first spur off to B7076, TURN LEFT
SALT	A75(T) slip to B7076, TURN LEFT
TRAVEL	B7076 to A74/M northbound on slip, STRAIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	A74/M northbound to Gretna Green Services off slip, BEAR LEFT
SALT	Off slip, Service Access road & A74/M northbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	A74/M northbound to B7076 Grahamshill off slip, BEAR LEFT
SALT	Off slip to B7076, TURN RIGHT
TRAVEL	B7076 over main carriageway to A74/M southbound on slip TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY

(continued…..)

M6 ROM
POST-SALT 40gm² ROUTES

ROUTE 7
FROM EAGLESFIELD DEPOT (Continued)

TRAVEL	A74/M southbound, Gretna Green Services off slip, Service Access road over carriageway, A74/M northbound on slip & A74/M northbound to A74/M Junction 18 off slip, BEAR LEFT
TRAVEL	Off slip, B723 & A74/M southbound on slip to end, JOIN CARRIAGEWAY
SALT	A74/M southbound to end of A74/M Junction 20 on slip, STRAIGHT
TRAVEL	A74/M southbound to A74/M Junction 21 off slip at Kirkpatrick Fleming, BEAR LEFT
SALT	Off slip to B6357, TURN RIGHT
TRAVEL	B6357 over main carriageway to A74/M northbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
TRAVEL	A74/M northbound to A74/M Junction 20 off slip, BEAR LEFT
SALT	Off slip to B722, TURN RIGHT
	Return to depot via B722



M6 (ROM) Version 4 May 2015 Pre-Salt Routes		
Route: 8	Domain: n/a	Spread: 40gm
Depot (Vehicles): Eaglesfield		
Live (m): 16.4	Dead (m) 14.8	Total (m): 31.2
Efficiency: 53%	Time (h:m): 00:52	Thermal: Cold

M6 ROM
POST-SALT 40gm² ROUTES

ROUTE 8
FROM EAGLESFIELD DEPOT

	Out of depot,
TRAVEL	B722, A74/M Junction 20 southbound on slip & A74/M southbound to Gretna Green Services off slip, BEAR LEFT
SALT	Off slip & A74/M southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL	A74/M southbound to Springfield off slip, BEAR LEFT
SALT	Off slip to Springfield r/b, TURN LEFT
TRAVEL	Class III road, B7076 to Gretna A75(T) westbound on slip
SALT	On slip to A75(T) westbound to end, JOIN CARRIAGEWAY
TRAVEL	A75(T) westbound to break in carriageway, U-TURN
TRAVEL	A75(T) eastbound, A74/M southbound to A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
SALT	A74/M northbound & A74/M Junction 18 off slip to B723, TURN RIGHT
TRAVEL	B723 to A74/M southbound on slip, TURN RIGHT
SALT	On slip to end, JOIN CARRIAGEWAY
	Return to depot via A74/M southbound, A74/M Junction 20 off slip & B722

ROUTE OPTIMISATION M6 ROM

PloughingRoutes

Version 1 (Phase IV)

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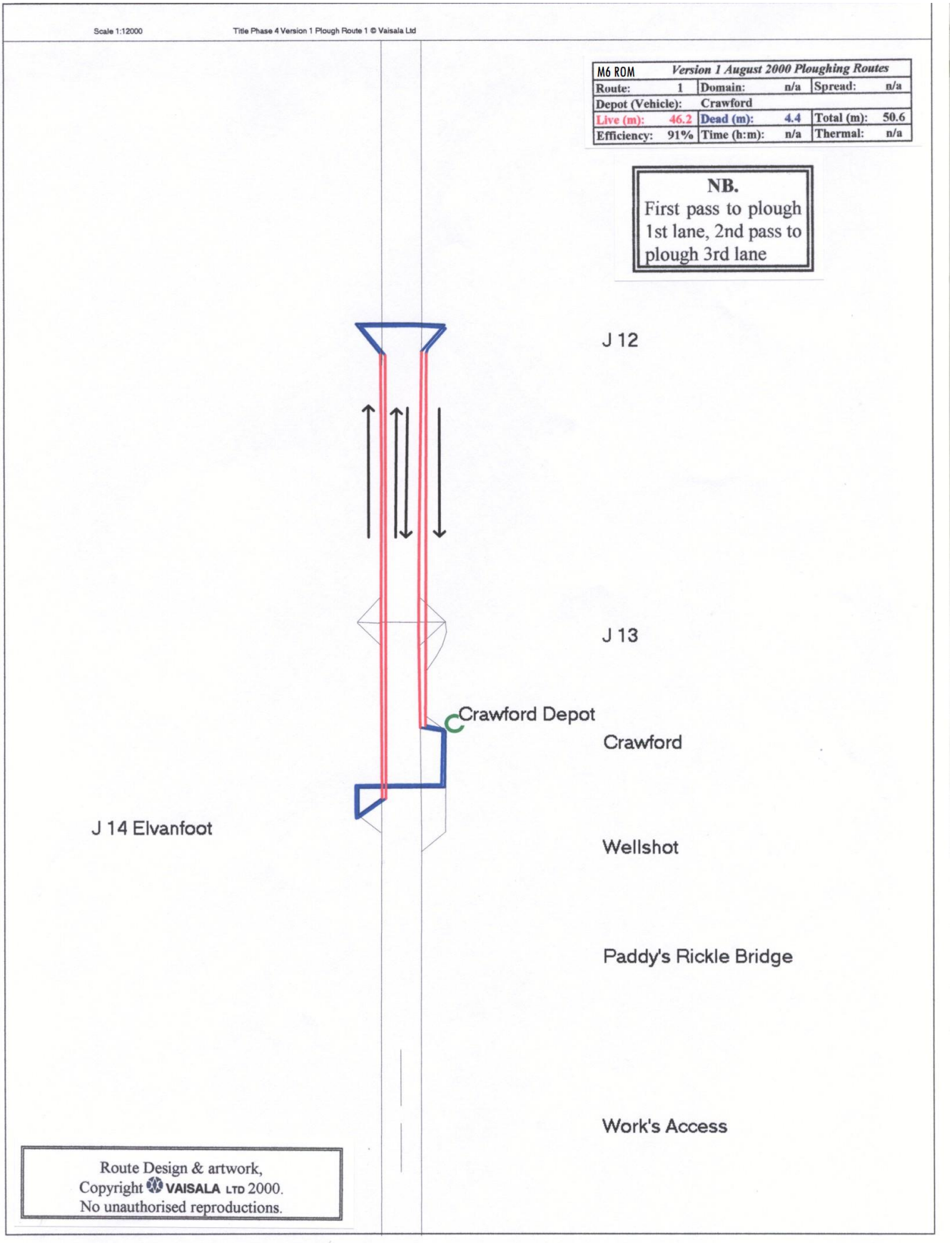
Certificate No.
FS 34153


Scale 1:12000
Title Phase 4 Version 1 Plough Route 1 © Vaisala Ltd
M6 ROM Version 1 August 2000 Ploughing Routes
Route: 1 Domain: n/a Spread: n/a
Depot (Vehicle): Crawford
Live (m): 46.2 Dead (m): 4.4 Total (m): 50.6
Efficiency: 91% Time (h:m): n/a Thermal: n/a
NB.
First pass to plough 1st lane, 2nd pass to plough 3rd lane
J 12
J 13
Crawford Depot
Crawford
J 14 Elvanfoot
Wellshot
Paddy's Rickle Bridge
Work's Access
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M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 1
FROM CRAWFORD DEPOT

Out of depot, TURN RIGHT

TRAVEL A702 southbound and M74 Junction 14 northbound on slip to end, JOIN CARRIAGEWAY

N.B. On first pass plough in first lane

PLOUGH First lane of M74 northbound to M74 Junction 12 off slip, BEAR LEFT

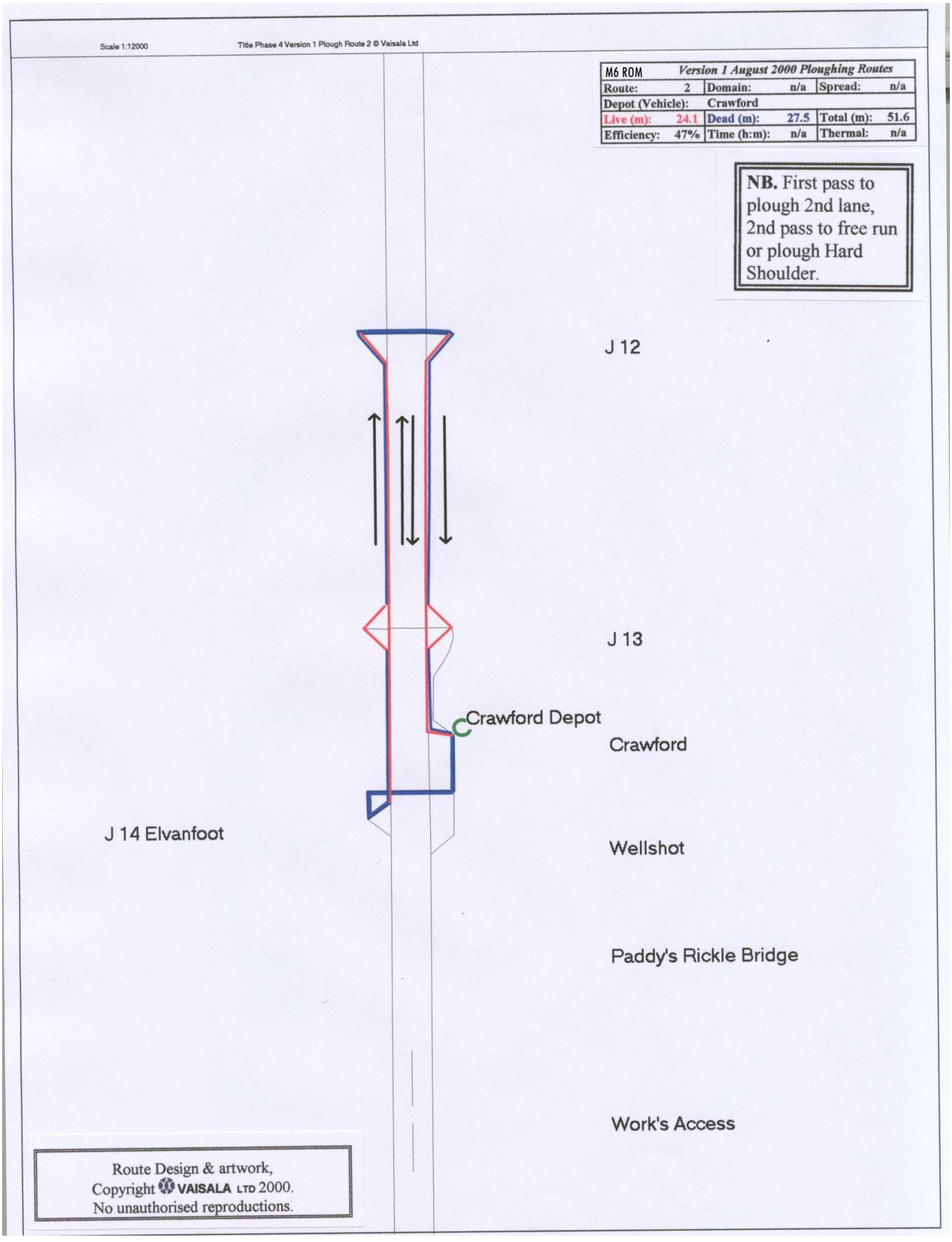
TRAVEL Off slip, A70 and M74 southbound on slip to end, JOIN CARRIAGEWAY

PLOUGH First lane of M74 southbound to Crawford Interchange off slip, BEAR LEFT

TRAVEL Off slip to A702 r/b, BEAR RIGHT

N.B. Repeat route ploughing in third lane

Return to depot via A702.


Scale 1:12000
Title Phase 4 Version 1 Plough Route 2 © Vaisala Ltd
M6 ROM
Version 1 August 2000 Ploughing Routes
Route: 2
Domain: n/a
Spread: n/a
Depot (Vehicle): Crawford
Live (m): 24.1
Dead (m): 27.5
Total (m): 51.6
Efficiency: 47%
Time (h:m): n/a
Thermal: n/a
NB. First pass to plough 2nd lane, 2nd pass to free run or plough Hard Shoulder.
J 12
J 13
Crawford Depot
Crawford
J 14 Elvanfoot
Wellshot
Paddy's Rickle Bridge
Work's Access
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M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 2
FROM CRAWFORD DEPOT

Out of depot, TURN RIGHT

TRAVEL A702 southbound and M74 Junction 14 northbound on slip to end, JOIN CARRIAGEWAY

PLOUGH Second lane of M74 northbound and M74 Junction 12 off slip to A70, TURN RIGHT

TRAVEL A70 to M74 southbound on slip, TURN RIGHT

PLOUGH On slip, second lane of M74 southbound and Crawford Interchange off slip to A702 r/b, BEAR RIGHT

TRAVEL A702 southbound and M74 Junction 14 northbound on slip to end, JOIN CARRIAGEWAY

N.B. On second pass either travel main carriageway, or plough hard shoulder

TRAVEL/PLOUGH M74 northbound to M74 Junction 13 off slip, BEAR LEFT

PLOUGH Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 northbound to M74 Junction 12 off slip, BEAR LEFT

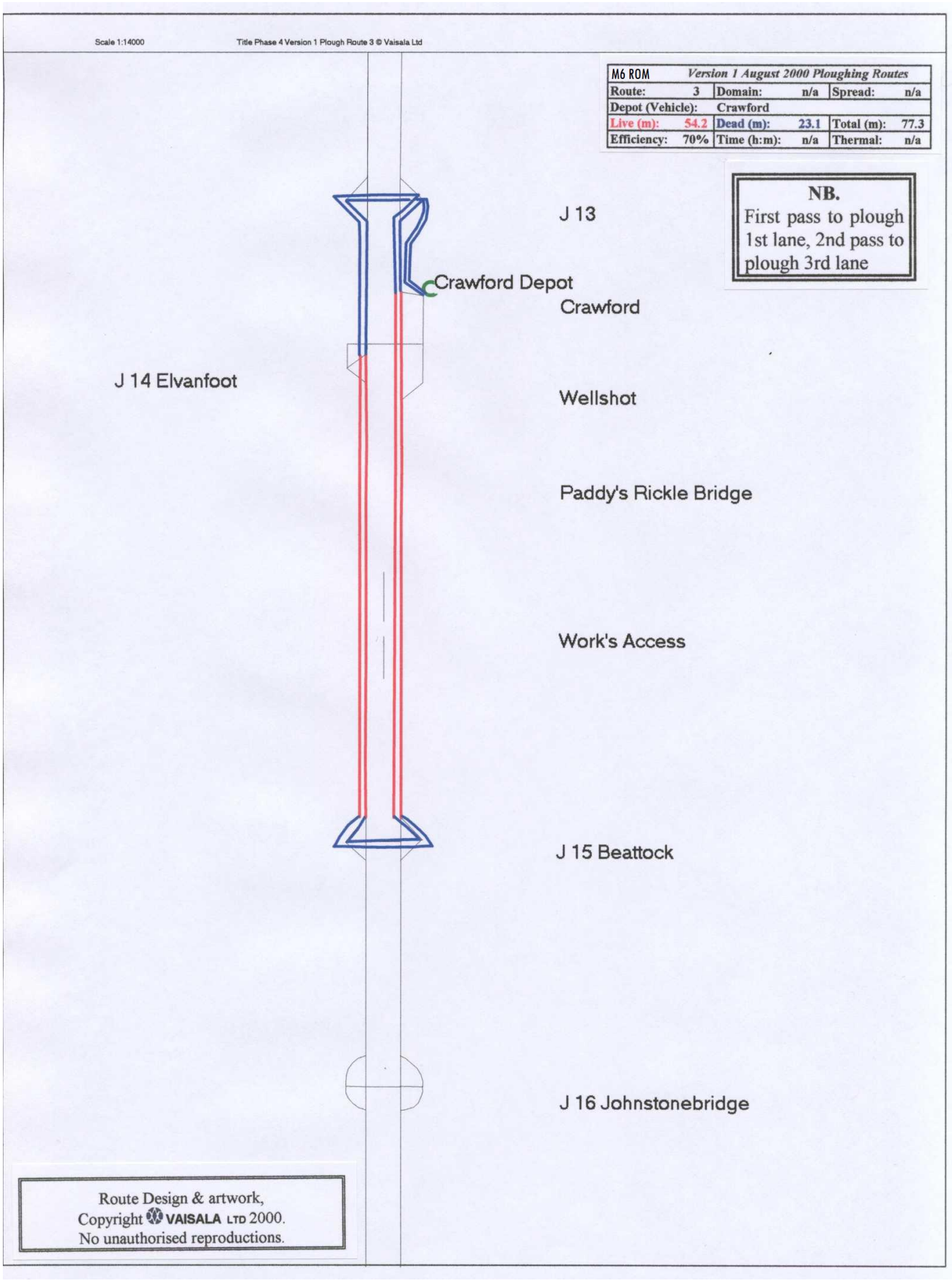
TRAVEL Off slip, A70 and M74 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 southbound to M74 Junction 13 off slip, BEAR LEFT

PLOUGH Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 southbound to Crawford Interchange off slip, BEAR LEFT

Return to depot via off slip and A702.


Scale 1:14000
Title Phase 4 Version 1 Plough Route 3 © Vaisala Ltd
M6 ROM Version 1 August 2000 Ploughing Routes
Route: 3 Domain: n/a Spread: n/a
Depot (Vehicle): Crawford
Live (m): 54.2 Dead (m): 23.1 Total (m): 77.3
Efficiency: 70% Time (h:m): n/a Thermal: n/a
NB.
First pass to plough 1st lane, 2nd pass to plough 3rd lane
J 13
Crawford Depot
Crawford
J 14 Elvanfoot
Wellshot
Paddy's Rickle Bridge
Work's Access
J 15 Beattock
J 16 Johnstonebridge
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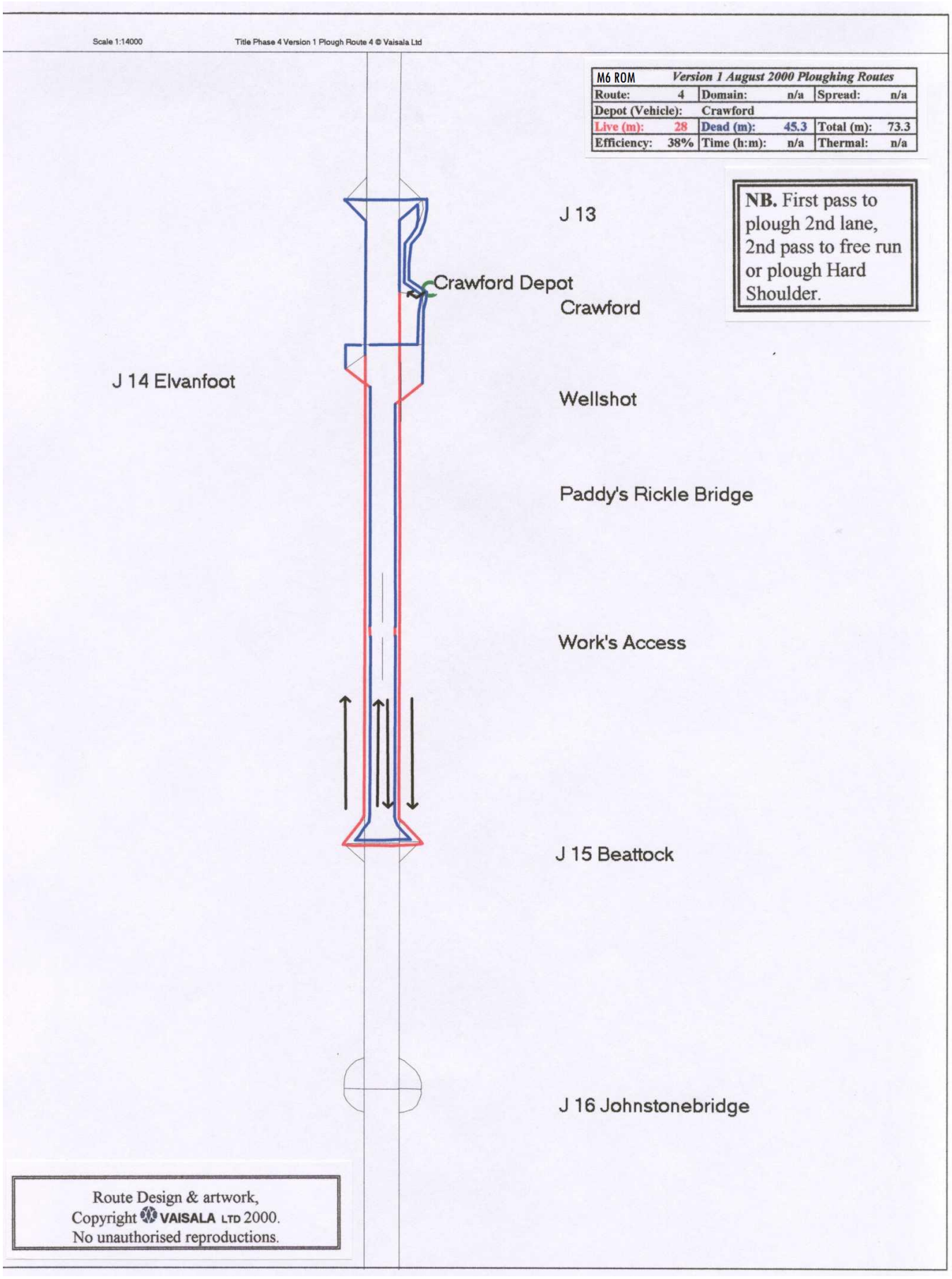
M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 3
FROM CRAWFORD DEPOT

	Out of depot, TURN LEFT
TRAVEL	A702 northbound to M74 Junction 13 southbound on slip, BEAR LEFT
TRAVEL	On slip and M74 southbound to Crawford Interchange off slip, STRAIGHT
PLOUGH	First lane of M74 southbound to M74 Junction 15 off slip, BEAR LEFT
TRAVEL	Off slip, road under M74 and M74 northbound on slip to end, JOIN CARRIAGEWAY
PLOUGH	First lane of M74 northbound to end of M74 Junction 14 on slip, STRAIGHT
TRAVEL	M74 northbound, M74 Junction 13 off slip, B7078, M74 southbound on slip and M74 southbound to off slip at Crawford Interchange, STRAIGHT
PLOUGH	Third lane of M74 southbound to M74 Junction 15 off slip, BEAR LEFT
TRAVEL	Off slip, road under M74 and M74 northbound on slip to end, JOIN CARRIAGEWAY
PLOUGH	Third lane of M74 northbound to end of M74 Junction 14 on slip, STRAIGHT
	Return to depot via M74 northbound, M74 Junction 13 off slip, B7078 and A702.


Scale 1:14000
Title Phase 4 Version 1 Plough Route 4 © Vaisala Ltd
M6 ROM Version 1 August 2000 Ploughing Routes
Route: 4 Domain: n/a Spread: n/a
Depot (Vehicle): Crawford
Live (m): 28 Dead (m): 45.3 Total (m): 73.3
Efficiency: 38% Time (h:m): n/a Thermal: n/a
NB. First pass to plough 2nd lane, 2nd pass to free run or plough Hard Shoulder.
J 13
Crawford Depot
Crawford
J 14 Elvanfoot
Wellshot
Paddy's Rickle Bridge
Work's Access
J 15 Beattock
J 16 Johnstonebridge
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M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 4
FROM CRAWFORD DEPOT

Out of depot, TURN LEFT

TRAVEL A702 northbound, M74 Junction 13 southbound on slip and M74 southbound to end of Crawford Interchange off slip, STRAIGHT

PLOUGH Second lane of M74 southbound, M74 Junction 15 off slip, road under M74, M74 northbound on slip and second lane of M74 northbound to end of M74 Junction 14 on slip, STRAIGHT

TRAVEL M74 northbound, M74 Junction 13 off slip, B7078, A702 southbound and B7076 southbound to Wellshot Hill r/b, TURN RIGHT (2nd exit)

PLOUGH M74 southbound on slip to end, JOIN CARRIAGEWAY

N.B. On second pass either travel main carriageway, or plough hard shoulder

TRAVEL/PLOUGH M74 southbound to Works Access

PLOUGH Works Access

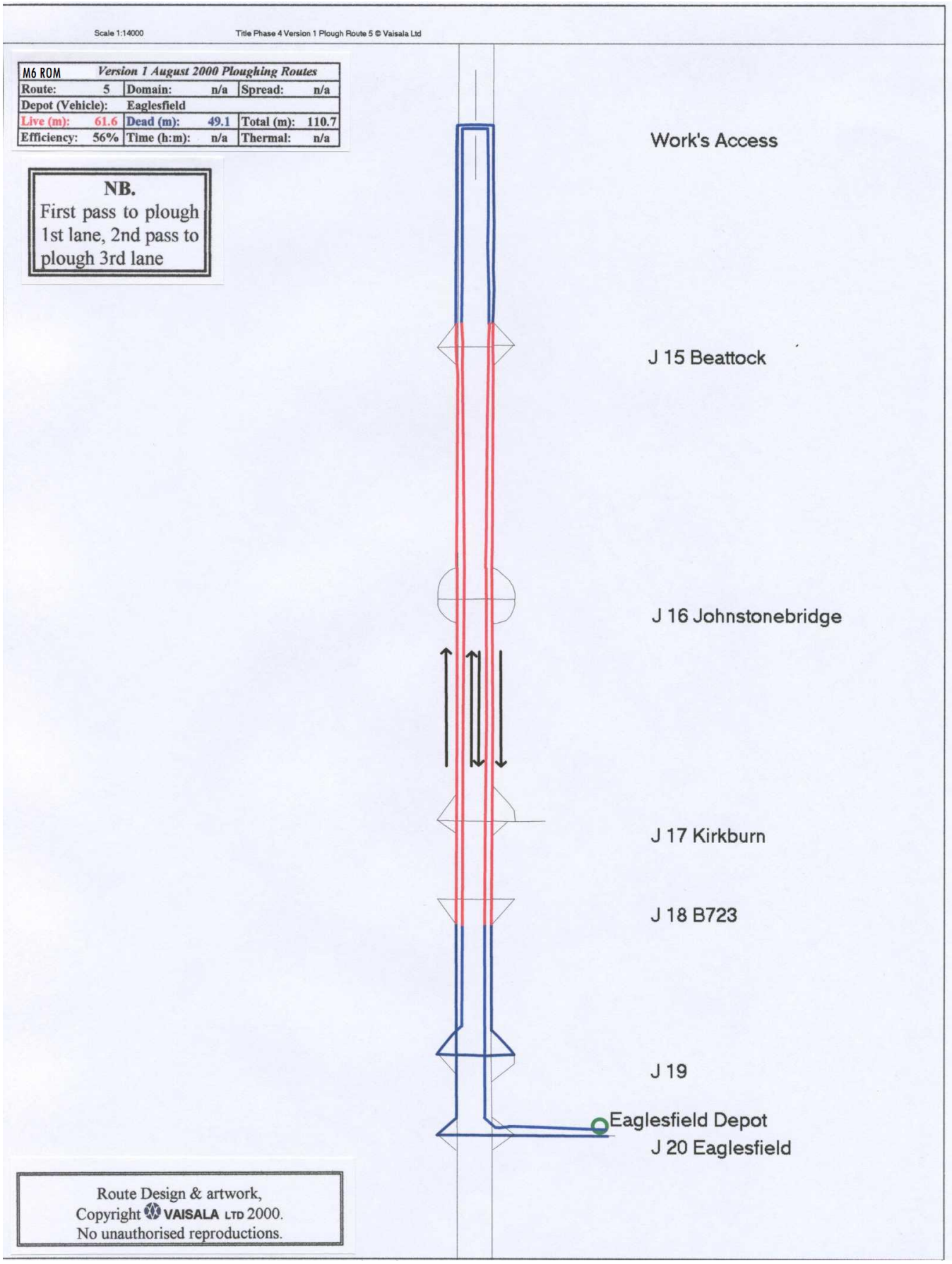
TRAVEL/PLOUGH M74 southbound, M74 Junction 15 off slip, road under M74, M74 northbound on slip and M74 northbound to Works Access

PLOUGH Works Access

TRAVEL/PLOUGH M74 northbound to M74 Junction 14 off slip, BEAR LEFT

PLOUGH Off slip to A702 r/b, TURN RIGHT

Return to depot via A702.


Scale 1:14000
Title Phase 4 Version 1 Plough Route 5 © Vaisala Ltd
M6 ROM
Version 1 August 2000 Ploughing Routes
Route: 5
Domain: n/a
Spread: n/a
Depot (Vehicle): Eaglesfield
Live (m): 61.6
Dead (m): 49.1
Total (m): 110.7
Efficiency: 56%
Time (h:m): n/a
Thermal: n/a
NB.
First pass to plough 1st lane, 2nd pass to plough 3rd lane
Work's Access
J 15 Beattock
J 16 Johnstonebridge
J 17 Kirkburn
J 18 B723
J 19
Eaglesfield Depot
J 20 Eaglesfield
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M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 5
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL B722, M74 Junction 20 northbound on slip and M74 northbound to M74 Junction 18 off slip, STRAIGHT

PLOUGH First lane of M74 northbound to end of M74 Junction 15 on slip, STRAIGHT

TRAVEL M74 nouthbound, works access roads under M74 and M74 southbound to M74 Junction 15 off slip, STRAIGHT

PLOUGH First lane of M74 southbound to M74 Junction 18 on slip, STRAIGHT

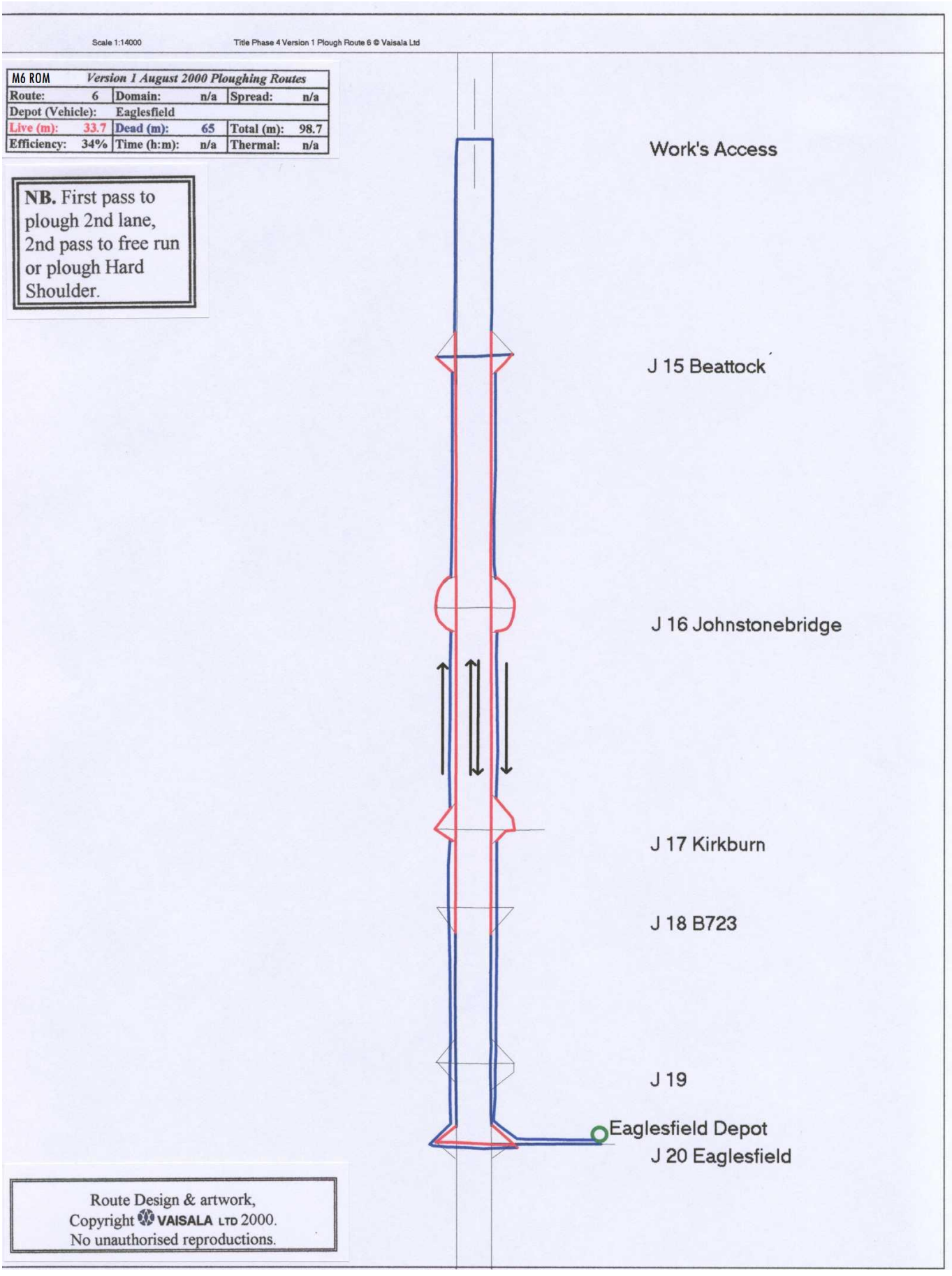
TRAVEL M74 southbound, M74 Junction 19 off slip, road over M74, M74 Junction 19 on slip and M74 northbound to M74 Junction 18 off slip, STRAIGHT

PLOUGH Third lane of M74 northbound to end of M74 Junction 15 on slip, STRAIGHT

TRAVEL M74 northbound, works access roads under M74 and M74 southbound to M74 Junction 15 off slip, STRAIGHT

PLOUGH Third lane of M74 southbound to M74 Junction 18 on slip, STRAIGHT

Return to depot via M74 southbound and Junction 20 off slip.


Scale 1:14000
Title Phase 4 Version 1 Plough Route 6 © Vaisala Ltd
M6 ROM Version 1 August 2000 Ploughing Routes
Route: 6 Domain: n/a Spread: n/a
Depot (Vehicle): Eaglesfield
Live (m): 33.7 Dead (m): 65 Total (m): 98.7
Efficiency: 34% Time (h:m): n/a Thermal: n/a
NB. First pass to plough 2nd lane, 2nd pass to free run or plough Hard Shoulder.
Work's Access
J 15 Beattock
J 16 Johnstonebridge
J 17 Kirkburn
J 18 B723
J 19
Eaglesfield Depot
J 20 Eaglesfield
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M6 ROM
PLOUGHING ROUTES

VAISALA

ROUTE 6
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL B722 to end of M74 Junction 20 southbound off slip, STRAIGHT

PLOUGH B722 over main carriageway and M74 Junction 20 northbound on slip, JOIN CARRIAGEWAY

TRAVEL M74 northbound to M74 Junction 18 off slip, STRAIGHT

PLOUGH Second lane of M74 northbound to end of M74 Junction 15 on slip, STRAIGHT

TRAVEL M74 northbound, works access roads under M74 and M74 southbound to M74 Junction 15 off slip, STRAIGHT

PLOUGH Second lane of M74 southbound to end of M74 Junction 18 on slip, STRAIGHT

TRAVEL M74 southbound to M74 Junction 20 off slip, BEAR LEFT

PLOUGH Off slip to B722, TURN RIGHT

TRAVEL B722 under M74 and M74 northbound on slip to M74, JOIN CARRIAGEWAY

N.B. On second pass either travel main carriageway, or plough hard shoulder

TRAVEL/PLOUGH M74 northbound to M74 Junction 17 off slip, BEAR LEFT

PLOUGH Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 northbound to Junction 16 Johnstonebridge Services off slip, BEAR LEFT

PLOUGH Off slip and M74 northbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 northbound to M74 Junction 15 off slip, BEAR LEFT

PLOUGH Off slip to A701, TURN RIGHT

TRAVEL A701 to M74 Junction 15 on slip, TURN RIGHT

PLOUGH On slip to end, JOIN CARRIAGEWAY

(continued...)

ROUTE 6
FROM EAGLESFIELD DEPOT (Continued)

TRAVEL/PLOUGH M74 southbound to M74 Junction 16 Johnstonebridge services off slip, BEAR LEFT

PLOUGH Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 southbound to M74 Junction 17 off slip, BEAR LEFT

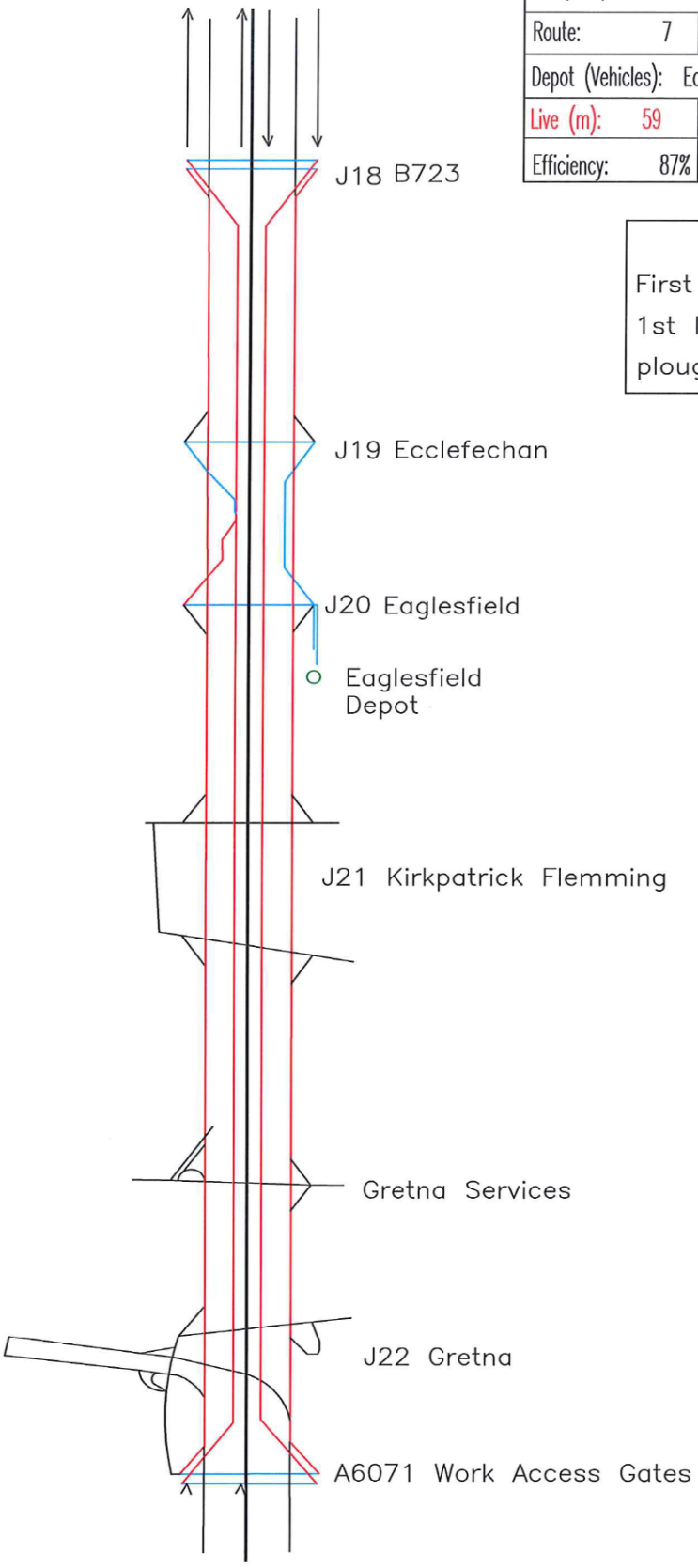
PLOUGH Off slip and M74 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH M74 southbound to M74 Junction 20 off slip, BEAR LEFT

Return to depot via slip road and B722.

M6 (ROM) Version 2 October 2015 Ploughing Routes		
Route: 7	Domain: N/A	Spread: N/A
Depot (Vehicles): Eaglesfield		
Live (m): 59	Dead (m) 9.2	Total (m): 68.2
Efficiency: 87%	Time (h:m): N/A	Thermal: N/A

NB.
First pass to plough 1st lane, 2nd pass to plough 3rd lane



M6 ROM
PLOUGHING ROUTES

ROUTE 7
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL B722 & A74/M Junction 20 northbound on slip to end, JOIN CARRIAGEWAY

PLOUGH First lane of A74/M northbound to A74/M Junction 18 off slip, BEAR LEFT

PLOUGH Off slip, B723 under A74/M & A74/M Junction 18 southbound on slip to end, JOIN CARRIAGEWAY

PLOUGH First lane of A74/M southbound to A6071 Guardsmill over bridge, STRAIGHT

TRAVEL A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound

PLOUGH First lane of A74/M northbound to A74/M Junction 20 on slip, STRIAGHT

PLOUGH Third lane of A74/M northbound Junction 20 on slip to A74/M Junction 18 off slip, BEAR LEFT

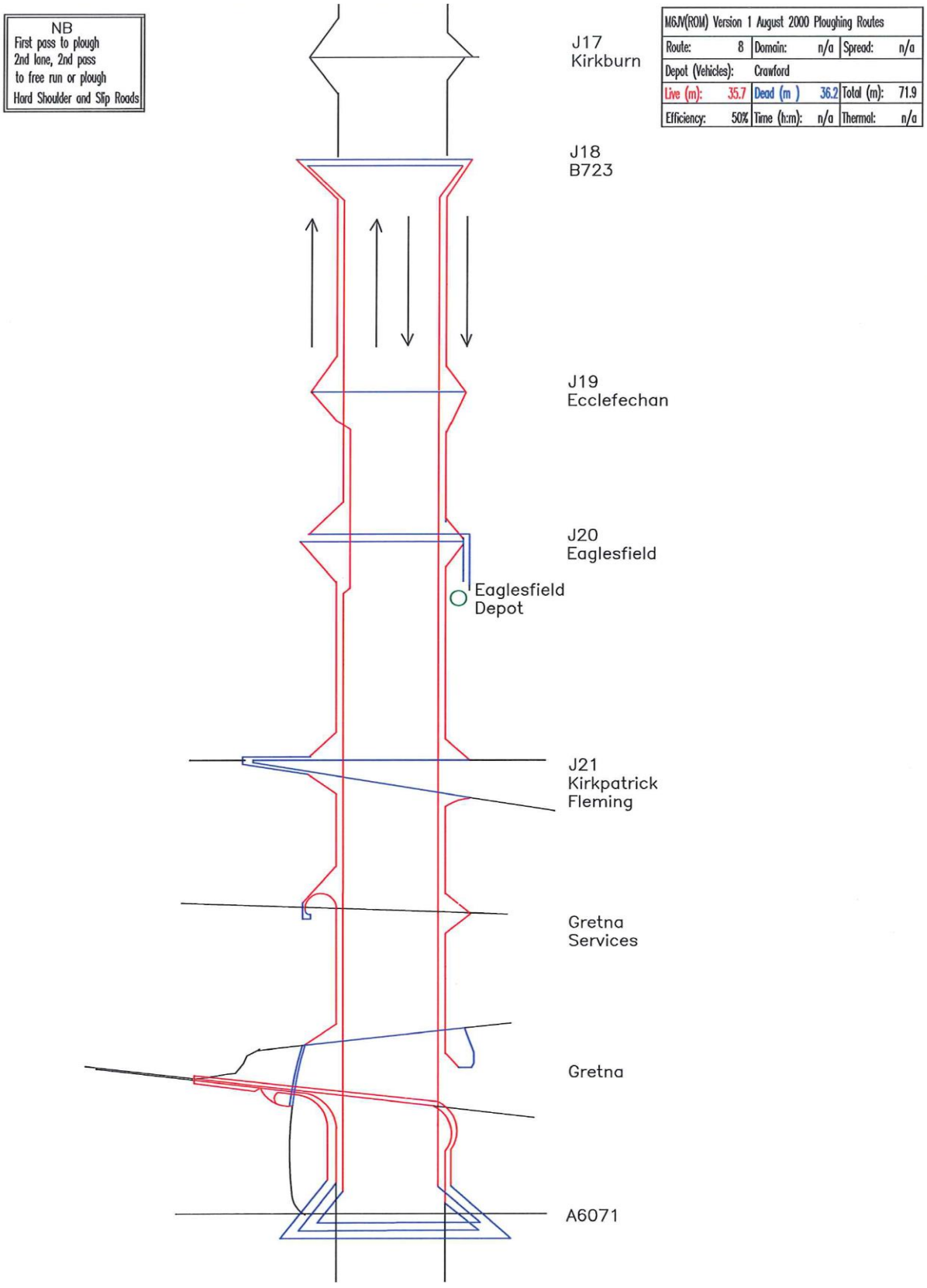
PLOUGH Off slip, B723 under A74/M & A74/M Junction 18 southbound on slip to end, JOIN CARRIAGEWAY

PLOUGH Third lane of A74/M southbound to A6071 Guardsmill over bridge, STRAIGHT

TRAVEL A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound

PLOUGH Third lane of A74/M northbound to A74/M Junction 20 on slip, STRIAGHT

Return to depot or Repeat ploughing routes if required


NB
First pass to plough
2nd lane, 2nd pass
to free run or plough
Hard Shoulder and Slip Roads
M6JV(ROM) Version 1 August 2000 Ploughing Routes
Route: 8
Domain: n/a
Spread: n/a
Depot (Vehicles): Crawford
Live (m): 35.7
Dead (m) 36.2
Total (m): 71.9
Efficiency: 50%
Time (h:m): n/a
Thermal: n/a
J17
Kirkburn
J18
B723
J19
Ecclefechan
J20
Eaglesfield
Eaglesfield
Depot
J21
Kirkpatrick
Fleming
Gretna
Services
Gretna
A6071

M6 ROM
PLOUGHING ROUTES

ROUTE 8
FROM EAGLESFIELD DEPOT

Out of depot,

TRAVEL B722 to A74/M Junction 20 northbound on slip.

PLOUGH A74/M Junction 20 northbound on slip to end, JOIN CARRIAGEWAY

PLOUGH Second lane of A74/M northbound to A74/M Junction 18

PLOUGH A74/M Junction 18 northbound off slip to end TURN RIGHT B723

PLOUGH A74/M Junction 18 southbound on slip & second lane of A74/M southbound to A6071 Guardsmill over bridge, STRAIGHT

TRAVEL A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound

PLOUGH Second lane of A74/M northbound to A74/M Junction 20 northbound on slip, STRIAGHT

N.B On second pass either travel main carriageway or plough hard shoulder

TRAVEL/PLOUGH A74/M northbound to A74/M Junction 19 off slip, BEAR LEFT

TRAVEL/PLOUGH A74/M Junction 19 off slip & A74/M Junction 19 northbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH A74/M northbound, A74/M Junction 18 off slip, BEAR LEFT

TRAVEL/PLOUGH A74/M Junction 18 northbound off slip to end, BEAR RIGHT B723, A74/M Junction 18 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH A74/M southbound, A74/M Junction 19 off slip, BEAR LEFT

TRAVEL/PLOUGH A74/M Junction 19 southbound off slip to end, A74/M Junction 19 southbound on slip to end, JOIN CARRIAGEWAY

TRAVEL/PLOUGH A74/M southbound & A74/M Junction 20 off slip to B722, STRIAGHT

(continued…..)

M6 ROM
PLOUGHING ROUTES

ROUTE 8
FROM EAGLESFIELD DEPOT (Continued)

TRAVEL/PLOUGH	A74/M Junction 20 southbound off slip to end, A74/M Junction 20 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M Junction 20 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M southbound to A74/M Junction 21 off slip at Kirkpatrick Fleming, BEAR LEFT
TRAVEL/PLOUGH	A74/M Junction 21 southbound off slip to end B6357, TURN RIGHT
TRAVEL	B6357 & B7076 to A74/M southbound Grahamshill on slip, TURN RIGHT
TRAVEL/PLOUGH	A74/M Junction 21 southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M southbound to Gretna Green Services off slip, BEAR LEFT
TRAVEL/PLOUGH	Gretna Green Services southbound off slip to end, A74/M Gretna Green Services southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M southbound to A74/M Junction 22 southbound off slip, BEAR LEFT
TRAVEL/PLOUGH	A74/M Junction 22 southbound off slip roundabout, (1st exit)
TRAVEL	Class III road & B7076 to A75(T) westbound on slip, BEAR RIGHT
TRAVEL/PLOUGH	A75(T) westbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A75(T) westbound to first gap in carriageway, U-TURN, then A75(T) eastbound to A74/M southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M southbound to A6071 Guardsmill over bridge, BEAR LEFT

(continued…..)

M6 ROM
PLOUGHING ROUTES

ROUTE 8
FROM EAGLESFIELD DEPOT (Continued)

TRAVEL	A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL/PLOUGH	A74/M northbound to A75(T) off slip towards Gretna, BEAR LEFT
TRAVEL/PLOUGH	A75(T) westbound to first gap in carriageway, U-TURN, then A75(T) eastbound to A74/M southbound on slip to end, JOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M southbound to A6071 Guardsmill over bridge, BEAR LEFT
TRAVEL	A74/M southbound at A6071 Guardsmill over bridge, BEAR LEFT using emergency gates at Guardsmill over bridge and JOIN CARRIAGEWAY A74/M northbound
TRAVEL/PLOUGH	A74/M northbound to A75(T) off slip towards Gretna, BEAR LEFT
TRAVEL/PLOUGH	A75(T) eastbound to off slip for first spur off to B7076, BEAR LEFT
	Gretna off slip to first spur off to B7076 to end, TURN LEFT
TRAVEL	B7076 & Class III road to A74/M northbound on slip, STRIAGHT
TRAVEL/PLOUGH	A74/M Junction 22 northbound on slip to end, REJOIN CARRIAGEWAY
TRAVEL/PLOUGH	A74/M northbound to Gretna Green Services off slip, BEAR LEFT
TRAVEL/PLOUGH	Gretna Green Services northbound off slip to end, A74/M Gretna Green Services northbound on slip to end, JOIN CARRIAGEWAY

(continued…..)

M6 ROM
PLOUGHING ROUTES

ROUTE 8
FROM EAGLESFIELD DEPOT (Continued)

TRAVEL/PLOUGH A74/M northbound to A74/M Junction 21 northbound off slip, BEAR LEFT

TRAVEL/PLOUGH A74/M Junction 21 northbound off slip to end B7076, TURN LEFT

TRAVEL B7076 & B6357 to A74/M Junction 21 northbound on slip at Kirkpatrick Fleming, TURN LEFT

TRAVEL/PLOUGH A74/M Junction 21 northbound on slip to end, JOIN CARRIAGEWAY

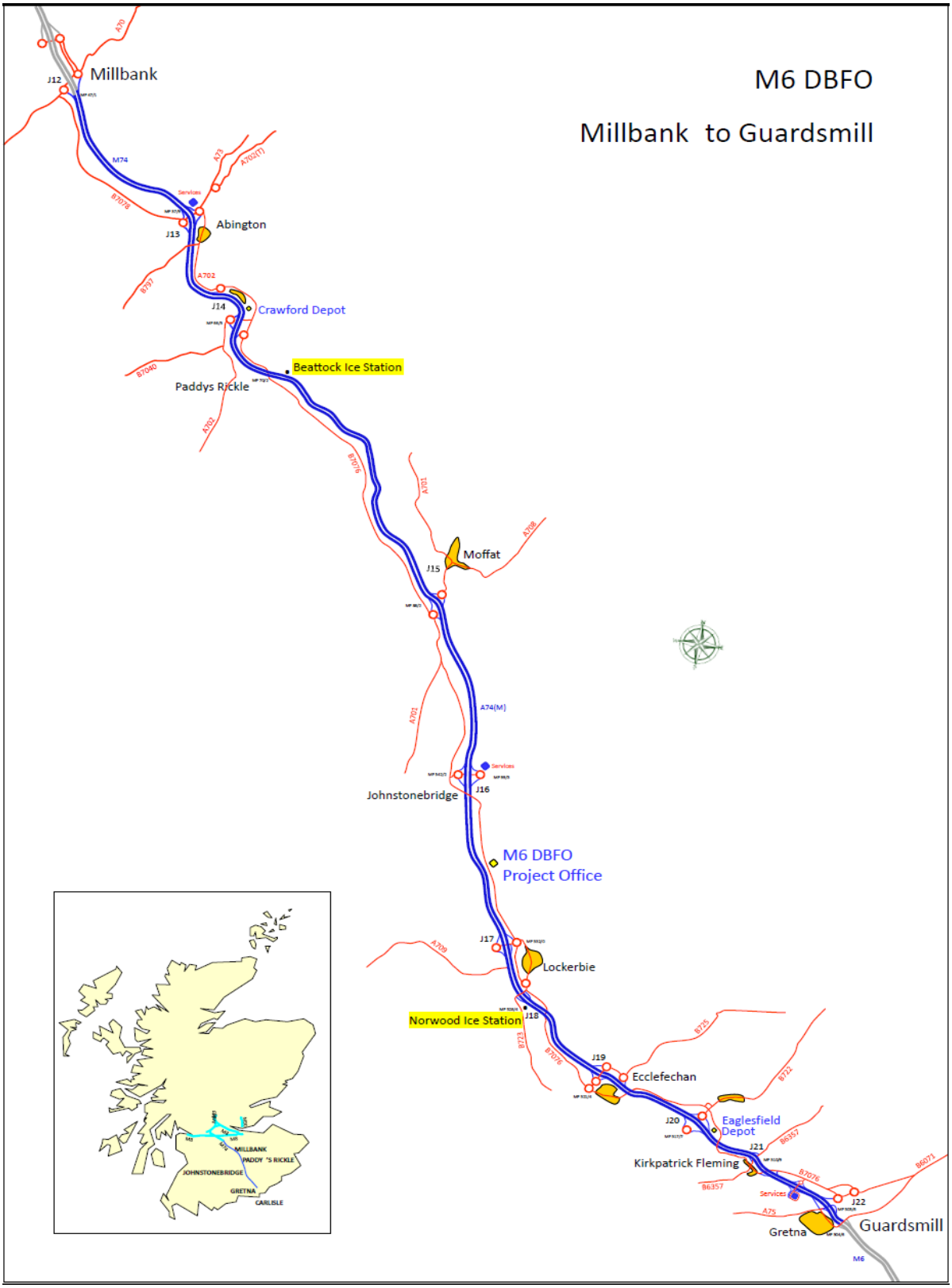
TRAVEL/PLOUGH A74/M northbound to A74/M Junction 20 off slip, BEAR LEFT

PLOUGH A74/M Junction 20 northbound off slip to end.

Return to depot or Repeat ploughing routes if required

Appendix D

Project Road



Operation and Maintenance Contract 91.3 kilometres	
20 grm routes	6no.
40 grm routes	8no.
Ploughing routes	8no.

Appendix E

Schedule of Winter Maintenance Contacts

Appendix E

M6 ROM

SCHEDULE OF WINTER MAINTENANCE CONTACTS

DESIGNATION	NAME	TELE. NO. OFFICE	TELE. NO. MOBILE	FAX NO.
24 Hour No.	**Duty Officer** (Office Hours- Secretary other – Security Officer)	[redacted]	**N/A**	**01576 204 666**
AUTOLINK HELPLINE (24 hour)		[redacted]		
Project Manager	**Phil Burlison**	[redacted]	[redacted]	[redacted]
Works Manager	**Stephen Wilson**	[redacted]	[redacted]	[redacted]
Duty Engineer	**Trish Turner**	[redacted]	[redacted]	[redacted]
Duty Engineer	**George Robson**	[redacted]	[redacted]	[redacted]
Duty Engineer	**Keith Wilson**	[redacted]	[redacted]	[redacted]
Duty Engineer	**Stephen Hunter**	[redacted]	[redacted]	[redacted]
Network Abnormal Loads Officer	**Andy McGurk**	[redacted]		[redacted]

Appendix F

Duty Engineer Rota

Appendix F

DUTY ENGINEER ROTA 2017/2018

The Duty Engineer is responsible for Emergency Response all year and Winter Maintenance between 1st October and 15th May.

The Duty changes at 08.00 hours on Tuesdays.

If the Duty Engineer wishes to change the allocated weeks it is his responsibility to organise. The Project Manager and Secretary must be informed of any agreed changes to this rota.

Week commencing	26 September 2017 to 3 October 2017	George Robson
Week commencing	3 October 2017 to 10 October 2017	Trish Turner
Week commencing	10 October 2017 to 17 October 2017	Keith Wilson
Week commencing	17 October 2017 to 24 October 2017	Stephen Hunter
Week commencing	24 October 2017 to 31 October 2017	George Robson
Week commencing	31 October 2017 to 7 November 2017	Trish Turner
Week commencing	7 November 2017 to 14 November 2017	Keith Wilson
Week commencing	14 November 2017 to 21 November 2017	Stephen Hunter
Week commencing	21 November 2017 to 28 November 2017	George Robson
Week commencing	28 November 2017 to 5 December 2017	Trish Turner
Week commencing	5 December 2017 to 12 December 2017	Keith Wilson
Week commencing	12 December 2017 to 19 December 2017	Stephen Hunter
Week commencing	19 December 2017 to 22 December 2017	George Robson
Week commencing	22 December 2017to 29 December 2017	Keith Wilson
Week commencing	29 December 2017to 5 January 2018	Stephen Hunter
Week commencing	5 January 2018 to 9 January 2018	George Robson
Week commencing	9 January 2018 to 16 January 2018	Trish Turner
Week commencing	16 January 2018 to 23 January 2018	Keith Wilson
Week commencing	23 January 2018 to 30 January 2018	Stephen Hunter
Week commencing	30 January 2018 to 6 February 2018	George Robson
Week commencing	6 February 2018 to 13 February 2018	Trish Turner
Week commencing	13 February 2018 to 20 February 2018	Keith Wilson
Week commencing	20 February 2018 to 27 February 2018	Stephen Hunter
Week commencing	27 February 2018 to 6 March 2018	George Robson
Week commencing	6 March 2018 to 13 March 2018	Trish Turner
Week commencing	13 March 2018 to 20 March 2018	Keith Wilson
Week commencing	20 March 2018 to 27 March 2018	Stephen Hunter
Week commencing	27 March 2018 to 3 April 2018(Easter Sun 01)	George Robson

Week commencing	3 April 2018 to 10 April 2018	Trish Turner
Week commencing	10 April 2018 to 17 April 2018	Keith Wilson
Week commencing	17 April 2018 to 24 April 2018	Stephen Hunter
Week commencing	24 April 2018 to 1 May 2018	George Robson
Week commencing	1 May 2018 to 8 May 2018	Trish Turner
Week commencing	8 May 2018 to 15 May 2018	Keith Wilson

Appendix G

Decision Making / Forecasts

Appendix G

M6 ROM
ACTION ON RECEIPT OF A FORECAST PREDICTING FREEZING TEMPERATURES

ROAD SURFACE TEMPERATURE		**May fall below freezing**	**Expected to fall below freezing – See Note (v)**					
Precipitation etc.		**No rain** **No hoar frost** **No fog**	**No rain** **No hoar frost** **No fog**	**Expected hoar** **Frost** **Expected fog**	**Expected rain before freezing**	**Expected rain during freezing**	**Possible rain** **Possible hoar frost** **Possible fog**	**Freezing Rain**
Road Conditions	**Wet**	**1**	**1**	**1**	**3** **See Note (iii)**	**1 & 4** **See Note (iv)**	**4**	**7**
	Wet Patches	**2** **See Note (i)**	**2** **See Note (i)**	**2 & 4** **See Note (ii)**	**3** **See Note (iii)**	**1 & 4** **See Note (iv)**	**5**	**7**
	Dry	**6** **See Note (i)**	**6** **See Note (i)**	**4** **See Note (iii)**	**3** **See Note (iii)**	**1 & 4** **See Note (iv)**	**5**	**7**
	Pre-salted within last 24 hours with no rain since	**6** **See Note (i)**	**6** **See Note (i)**	**6** **See Note (i)**	**3** **See Note (iii)**	**1 & 4** **See Note (iv)**	**5**	**7**

Action :

1. Salt early evening
2. Salt wet patches early evening
3. Salt after rain stops
4. Salt early morning
5. Supervisor inspect early morning with crews standing by in depot for instructions
6. No action
7. Salt before event and continue throughout event

Notes :

See following page.

Appendix G

2.0 Notes to Accompany Action Table

i) Particular attention will be given to the possibility of water running across carriageways, eg. off adjacent grassed areas after heavy rain washing away salt previously deposited. Such locations will be kept under close scrutiny and may require treating in the evening and morning, and possibly on other occasions.

ii) When a forecast contains reference to expected hoar frost considerable deposits may occur. Hoar frost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset may be dispersed before it can become effective. Particular vigilance is required under this forecasted condition which is ideally treated just as the hoar frost is forming. Such action is usually not practicable and salt may have to be deposited on a dry road before the condition forms. Hoar frost may be forecast to occur at other times in which case the timing of salting operations should be adjusted accordingly.

iii) If under those conditions, rain has not ceased by early morning, crews must be called out and action should be initiated as rain ceases (Action 5).

iv) Under these circumstances rain will freeze on contact with the road surface and full pre-salting must take place even on dry roads. Constant vigilance must be maintained throughout the danger period.

v) Forecasts are often qualified by altitudes in which case differing action may be required from each depot.

3.0 Procedure For General Weekday Decision Making

3.1 A 24 hour forecast with an extended outlook for 5 days and 4 nights will be issued each day between 12.00 hours and 17.00 hours. Updates will be obtained after 17.00 hours.

3.2 A hard copy of the weekday and weekend forecast will be kept on file in the Reporting centre.

3.3 The Duty Engineer will make a decision at 14.00 hours each day as to what action if any is to be taken. This decision will be revised if necessary following receipt of the forecast updates after 17.00 hours.

3.4 Notification of any action will be carried out using the Daily Action form and the 'Ice-Man' record sheet in Appendix H.

3.5 Notification of the proposed initial action will be faxed to the Police departments and neighbouring Local Authorities listed in Appendix J by no later than 16.00 hours.

3.6 Full use of the Ice Prediction System will be made by the Duty Engineer over the 24 hour period.

3.7 If the Duty Engineer is unable to make a decision he/she will report to his/her line manager.

4.0 Procedure For General Weekend Decision Making

4.1 A 24 hour forecast with an extended outlook for 5 days and 4 nights will be obtained by the Duty Engineer via the portable computer and modem between 12.00 hours and 17.00 hours each day. Updates will be obtained after 17.00 hours.

4.2 A hard copy of the forecasts will be kept on file in the Reporting Centre.

4.3 The Duty Engineer will make a decision at 14.00 hours each day as to what action if any is to be taken. This decision will be revised following receipt of the forecast updates after 17.00 hours.

4.4 Notification of any action will be carried out as detailed in Section 4.

4.5 Full use of the Ice Prediction System will be made by the Duty Engineer over the weekend period.

4.6 If the Duty Engineer is unable to make a decision he/she will report to his/her line manager.

5.0 Guidance for Dealing with 'Freezing Rain'

5.1 Freezing rain in this country is a rare but an exceptionally dangerous condition. It occurs when rain falls through a layer of cold air near to the surface. The precipitation can begin as either rain and/or snow but becomes rain when it passes through a warm layer. The rain enters a very cold layer of air close to the surface. It does not freeze immediately but forms 'black ice' on contact with any road surfaces that are below freezing temperature.

5.2 The guidance document has been prepared to assist in ensuring that necessary actions and procedures are put into place to deal with the occurrence of freezing rain.

5.3 Specific measures that should be considered include:

Prior to arrival of the freezing rain a pre-treatment is to be made in the same manner as would be made prior to snow falling.

Constant monitoring of the situation is to be made and an additional treatment is to be carried out immediately the rain commences and continued until such time that the rain has ceased or the temperatures of the road has risen above freezing.

Freezing rain usually occurs along the line of an oncoming warm front. If possible, to ensure maximum effectiveness of the salt, the advance treatment should be made in the same direction and immediately in advance of the weather front. Use should be made of weather radar where available, to help determine the timing of treatment. Consideration should be given to stationing vehicles at the point on the route where the weather front will first hit in order that timely treatments can be undertaken.

Some salt will inevitably be lost during and following treatment and therefore careful consideration needs to be given to the requirement for continued successive treatments.

5.4 The very nature of freezing rain means that treatments will have virtually no effect initially and ice will form on the carriageway. Mitigation of the hazard is therefore a significant aspect of the actions taken in response to freezing rain. The main action is to inform road users of the hazard but more pro-active measures might be required. For example, consideration should be given to closing the road as the rain arrives and holding traffic (rather than diverting) until such times as it is deemed safe to proceed. Such considerations will need prior discussions with the Police and Autolink..

5.5 Specific Measures to be Considered for Hazard Mitigation include:

Where available fixed or mobile Variable Message Signs should be used to warn road users of the hazard. The existing established procedures for requesting VMS settings should be followed. The following legend is currently the most appropriate for use in these circumstances;

SKID RISK
SLOW DOWN

Autolink are to contact the Agency Press Officer in order that local media can be advised as necessary.

Consideration should be given to the use of rolling blocks to slow down traffic just prior to and during the event. This will need discussing with the Police.

Appendix H

Records / Salt Returns

Appendix H

M6 ROM
WINTER MAINTENANCE
Weekly Report (10 – 20 g Routes)

Week Ending……

ROUTE NO.	PATROL VAN	PATROL GRITTER	NO. TIMES TREATED (10 – 20 gm)	SALT USED (TONNES)	NO. OF ACCIDENTS	RESPONSE TIME (AVERAGE)	COMMENTS
1	N/A	N/A					
2	N/A	N/A					
3	N/A	N/A					
4	N/A	N/A					
5	N/A	N/A					
6	N/A	N/A					
P10						N/A	
P11						N/A	
TOTAL							

Appendix H

M6 ROM
WINTER MAINTENANCE
Weekly Report (40 g AND Snow Ploughing Routes)

Week Ending……

ROUTE NO.	PATROL VAN	PATROL GRITTER	NO. TIMES TREATED (10 – 20 gm)	SALT USED (TONNES)	NO. OF ACCIDENTS	RESPONSE TIME (AVERAGE)	COMMENTS
1	N/A	N/A					
2	N/A	N/A					
3	N/A	N/A					
4	N/A	N/A					
5	N/A	N/A					
6	N/A	N/A					
7	N/A	N/A					
8	N/A	N/A					
TOTAL							

Appendix H

AUTOLINK / M6 ROM WINTER MAINTENANCE
PROPOSED ACTION NOTIFICATION

DATE :…….. **DUTY ENGINEER……**

ROUTE NUMBER	DEPOT	FORECAST TEMP (R)	SNOW	ROAD CONDITION		RESIDUAL SALT			PATROL	PROPOSED TREATMENT	TIME START TREAT
				WET	DRY	HIGH	MED	LOW			
	CRAWFORD										
	CRAWFORD										
	CRAWFORD										
	CRAWFORD										
	E'FIELD										
	E'FIELD										
	E'FIELD										
	E'FIELD										

FAX TO NEIGHBOURING AUTHORITIESAND RELEVANT POLICE DEPARTMENTS NO LATER THAN 16:00 HOURS EACH DAY

Appendix H

M6 ROM
WINTER MAINTENANCE PLAN
HARDWARE / SOFTWARE FAULTS

FACILITY	HARDWARE	SOFTWARE	FAULT	DURATION OF FAULT	COMMENTS
Beattock Ice Station					
Norwood Ice Station					
Icecast Control / Vaisala					
Weather Radar					
Gritter Computer / SCAM					
MeteoGroup Forecast					
Winter Maintenance Laptop					
Other					

Appendix H

M6 ROM

HIRED PLANT – WEEKLY RETURNS

Depot…….. **Week Ending……**

Serial	Type of Equipment	Source of Hire	Operator	Duration

Appendix H - WINTER MAINTENANCE DAILY SPREADER LOG

VEHICLE REG No. ……	DATE. ……
PRE WET FILTER CHECKED AND CLEANED	Sign Name: ……

Drivers Log : Please enter relevant information, circling boxes as appropriate

GH	GV	MC	IM	MW	AR	RJ	RA	CL	TJ	DB	AM	RD	RG	DP	AN	IA	GB	CC	SR	RP	AH	GP	SN	JC	JM

Depot		Route number (10 - 20 gm Routes)							Ploughing Routes Numbers and 40 gm Routes								Rate of Spread					
E	C	1	2	3	4	5	6	Patrol	1P	2P	3P	4P	5P	6P	7P	8P	10	15	20	40	Pre-Wet	
									1	2	3	4	5	6	7	8					Yes	No

End of Route		Time out of Depot		(A) Start Weight (Brine)	
Mileage			am pm	(B) Brine / Salt leaving Depot	
Start Milage		Time Route Completed		(C) Salt / Brine in Depot	
			am pm	(D) Off Load Salt / Brine Left	
Total		Time in Depot		N/A	N/A
			am pm		

Winter Maintenance Patrols: Not exceeding 3 hour intervals at each location.

Evening / Night Patrol North Section: J14 South to J15 = Patrol Contingency J15 Border to J12

Evening / Night Patrol South Section: J20 North to J15 = Patrol Contingency J15 to J22

Evening / Night Patrols to regular check depots every 3 hours:- (Eaglesfield Depot leave at J20 N/Bound or S/Bound)
(Crawford Depot leave at J14 N/Bound and rejoin at J14 N/Bound)

Motorway Parking Points:- North Patrol (J12 S/Bound Entry - Beattock VOSA Entry Slip - Wide Load Layby N/Bound)
South Patrol (J22 Works Access N/Bound - Cowdens Gate Access N/Bound - J15 S/Bound Entry Slip)

Evening / Night Patrols to telephone Duty Officer (Security) every 2 hours

Junction 12				Beattock Summit				Wide Load Layby N/B				Cowdens Gate Access				Junction 22 Works Unit			
1	:	am	pm	1	:	am	pm	1	:	am	pm	1	:	am	pm	1	:	am	pm
2	:	am	pm	2	:	am	pm	2	:	am	pm	2	:	am	pm	2	:	am	pm
3	:	am	pm	3	:	am	pm	3	:	am	pm	3	:	am	pm	3	:	am	pm
4	:	am	pm	4	:	am	pm	4	:	am	pm	4	:	am	pm	4	:	am	pm
5	:	am	pm	5	:	am	pm	5	:	am	pm	5	:	am	pm	5	:	am	pm
6	:	am	pm	6	:	am	pm	6	:	am	pm	6	:	am	pm	6	:	am	pm
7	:	am	pm	7	:	am	pm	7	:	am	pm	7	:	am	pm	7	:	am	pm
8	:	am	pm	8	:	am	pm	8	:	am	pm	8	:	am	pm	8	:	am	pm
9	:	am	pm	9	:	am	pm	9	:	am	pm	9	:	am	pm	9	:	am	pm
10	:	am	pm	10	:	am	pm	10	:	am	pm	10	:	am	pm	10	:	am	pm

ROUTE COMMENTS : (i.e.. Wet, icy, ploughing area, blocked drains, spreader downtime etc.)

Appendix H

WEEKLY SALT USAGE

Eaglesfield Rock Salt					COMMENTS	CRAWFORD Rock Salt				COMMENTS
W/E	Used	Delivered	Ordered	Stock		Used	Delivered	Ordered	Stock	
Pre Start	0	0	0	0		0	0	0	0	
04-Oct	0	0	0	0		0	0	0	0	
11-Oct	0	0	0	0		0	0	0	0	
18-Oct	0	0	0	0		0	0	0	0	
25-Oct	0	0	0	0		0	0	0	0	
01-Nov	0	0	0	0		0	0	0	0	
08-Nov	0	0	0	0		0	0	0	0	
etc.	0	0	0	0		0	0	0	0	
Totals	0	0	0			0	0	0		0
										0

EAGLESFIELD SaturatorSalt					COMMENTS	CRAWFORD Saturator Salt				COMMENTS
W/E	Used	Delivered	Ordered	Stock		Used	Delivered	Ordered	Stock	
Pre Start	0	0	0	0		0	0	0	0	
04-Oct	0	0	0	0		0	0	0	0	
11-Oct	0	0	0	0		0	0	0	0	
18-Oct	0	0	0	0		0	0	0	0	
25-Oct	0	0	0	0		0	0	0	0	
etc	0	0	0	0		0	0	0	0	
Totals	0	0	0			0	0	0		0
										0

M6-ROM-4-022 : Public Relations & Complaint Response

APPENDIX H

COMPLAINTS/ENQUIRY FORM

DATE TO BE RETURNED TO RECEPTION

BY: ……

CALL TAKEN BY:		
Log Number M6-ROM-4-022-	Date	Time
Name	Address	Tele No.
Classification	How Received	
Description		
Passed to for action:-	Forwarded by: -	Date:-
Action Taken		
Action Taken By (Sign)	Date Closed Out:-	Number of Attachments e.g. Letter

Appendix H

M6 ROM

Schedule of Road Blockages (to be included on 2 hour closure schedule)

Month……

Date	Road No.	Location	Length of Blockage	Time of Blockage	Comments

M6 ROM
FORECAST RECORD **MONTH – OCTOBER 2017**

Night of		**Duty Officer**	**Met Office – Beattock Graph**			**Met Office – Beattock Graph**			**Snow. Ave Daily Depth**	**Time instructed**	**Comments**
			Forecast Min. Air	**Actual Min, Air**	**Diff**	**Forecast MinGrnd**	**Actual Min. Grnd**	**Diff**			
	1-Oct										
	2-Oct										
	3-Oct										
	4-Oct										
	5-Oct										
	6-Oct										
	7-Oct										
	8-Oct										
	9-Oct										
	10-Oct										
	11-Oct										
	12-Oct										
	13-Oct										
	14-Oct										
	15-Oct										
	16-Oct										
	17-Oct										
	18-Oct										
	19-Oct										
	20-Oct										
	21-Oct										
	22-Oct										
	23-Oct										
	24-Oct										
	25-Oct										
	26-Oct										
	27-Oct										
	28-Oct										
	29-Oct										
	30-Oct										
	31-Oct										

Duty changes at 08.00 hours on Tuesday.

Appendix I

Contract Plant List and Additional Plant in the Event of Severe Weather

Appendix I

M6 ROM

WINTER MAINTENANCE GRITTING FLEET 2012/2013

Fleet will comprise of 8no Scania Spreaders fitted with 9cu m Smoothflow Spreaders. 5no based at Eaglesfield depot and 3no based at Crawford depot.

Spreaders to be available from mid-September 2012.

DEPOT Eaglesfield (E) Crawford (C)	**Type of Vehicle**	**Vehicle Registration**	**TYPE OF EQUIPMENT**							**SERIAL NUMBER**
			Radio	**Blade**	**Vee**	**Convert Vee**	**Fixed Spreader**	**Demount Spreader**	**Trailer Spreader**	
Spreader 1 (C)	Scania 26t 9cu m	KS13 AOW	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 2 (C)	Scania 26t 9cu m	KS13 AOY	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 3 (E)	Scania 26t 9cu m	KS13AOV	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 4 (E)	Scania 26t 9cu m	KS13 AOT	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 5 (E)	Scania 26t 9cu m	KS13 AOP	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 6 (E)	Scania 26t 9cu m	KS13 AOU	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 7 (E)	Scania 26t 9cu m	KS13 AOR	Yes	Econ High-Speed		N/A	Yes	----	----	
Spreader 8 (C)	Scania 26t 9cu m	KS13 AOX	Yes	Econ High-Speed		N/A	Yes	----	----	

Appendix I

Other Mechanical Snow Clearance Plant

Name	Nature of Business	Location	Contact name	Telephone Number
Hewden Plant Hire	JCB, Dumpers, Mini Excavators	Whitehaven	Michelle Dickson	[redacted]
A-Plant Hire	JCB, Dumpers, Mini Excavators	Carlisle	Nicola Taylor	[redacted]
David Paton	JCB 3C	Moffat	David Paton	[redacted]
Oakbank Services	JCB 3C	Dumfries	Andy McNish	[redacted]
Ryder Services	Mini Excavator JCB 4CX	Moffat	Brian Ryder	[redacted]
Weston's Garage	Loading shovel	Crawford	Billy Weston	[redacted]
Duncan Hodge	Tractors, shovels	Unit 21 Whistleberry Ind. Est. Hamilton	Duncan Hodge Alastair Hodge	[redacted]
JM Retson	Tractors, shovels	Abington	Neil Retson	[redacted]
J Allen	3no. ROBLA Snow Blowers	Pooley Bridge, Penrith	Jim Allen	[redacted]

Appendix J

Police Departments and Neighbouring Authorities

Appendix J

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NEIGHBOURING AUTHORITY CONTACTS

EMPLOYER	DESIGNATION	NAME	TELE. NO. OFFICE	TELE. NO. MOBILE
Highways England Area 13	**24 Hour Emergency Number**	**Philip Cueto**	[redacted]	
	Daytime Office Number		[redacted]	

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NEIGHBOURING AUTHORITY CONTACTS

EMPLOYER	DESIGNATION	NAME	TELE. NO. OFFICE	TELE. NO. MOBILE	FAX NO.
Transerv – South West Unit			[redacted]		
	Office – Daytime		[redacted]		
Amey – South East Unit		**Tom Wallace**	[redacted]		
Traffic Scotland			[redacted]		
			[redacted]		

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NEIGHBOURING AUTHORITY CONTACTS

EMPLOYER	DESIGNATION	NAME	TELE. NO. OFFICE	TELE. NO. MOBILE	FAX NO.
Dumfries & Galloway Council	**Head of Road, Neighbourhood and Contracted Services**		[redacted]		[redacted]
	Principle Road Service Officer	**M Fawkes**	[redacted]	[redacted]	
	Local Road Maintenance Manager	**M Simpson (Dumfries)** **K Brown (Lockerbie)**	[redacted]		[redacted]
	Technician / Site Agent	**G Nelson**	[redacted]		[redacted]
	General Foreman	**S Lockerbie**	[redacted]		[redacted]

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NEIGHBOURING AUTHORITY CONTACTS

EMPLOYER	DESIGNATION	NAME	TELE. NO. OFFICE	TELE. NO. MOBILE	FAX NO.
Cumbria County Council (Capita)	**Associate (Highways)**	**N Raymond Switchboard**	[redacted]	[redacted]	[redacted]
			[redacted]		

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POLICE CONTACTS

POLICE	EMERGENCY TELEPHONE	CONTACT		CONTROL		ADDRESS
		DESIGNATION	**NAME**	**TELE.**	**FAX**	
CUMBRIA	[redacted]	General Enquiries / Control Room	Operational Control Room	[redacted]	[redacted]	Carlton Hall Police HQ Penrith CA10 2AU
		Traffic Mgt. Officer	Geoff Taylor	[redacted]		Carlton Hall Police HQ
BOUNDARY: The Scottish Border						
Police Scotland						
Dumfries & Galloway Division	[redacted]	General Enquiries /Control Room	Control Room	[redacted]		Cornwall Mount Dumfries DG1 1HP
		Head of Traffic	Inspector Campbell Moffat	[redacted]		
LOCKERBIE		General enquiries		[redacted]		Lockerbie Police Station Main Street Lockerbie DG11 2DQ

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POLICE CONTACTS

POLICE FORCE	EMERGENCY TELEPHONE	CONTACT		CONTROL		ADDRESS
		DESIGNATION	NAME	TELE.	FAX	
BOUNDARY: Council Boundary between the A74/Greenhillstairs junction and Harthope Viaduct						
Police Scotland						
Lanark Division	[redacted]	General Enquiries		[redacted]		Strathclyde Police Call Centre 217, Windmillhill Street Motherwell ML1 1RZ
		Head of Traffic	Inspector Darren Faulds	[redacted]		
Traffic Management			Sgt. Alison McAuley	[redacted]		

Appendix K

Salt Application Spread Rates

Appendix K

Table 1 - Forecast Weather and Road Condition Status

This table sets out the forecast weather and road condition status codes used in the other Appendix K Tables.

Forecast weather			
A	Road surface temperature is higher than 1*C	H	Hoar frost
B	Road surface temperature is lower than or equal to plus 1*C but higher than minus 2*C	I	Freezing fog
C	Road surface temperature is lower than or equal to minus 2*C but higher than minus 5*C	J	Freezing rain
D	Road surface temperature is lower than or equal to minus 5*C	K	Snow accumulations up to 30mm
E	Road surface temperature is lower than or equal to plus 1*C but higher than minus 2*C following rain	L	Snow accumulations over 30mm
F	Road surface temperature is lower than or equal to minus 2*C but higher than minus 5*C following rain	M	Hard packed snow/ice
G	Road surface temperature is lower than or equal to minus 5*C following rain		

Road condition status	
1	Road surface dry
2	Frost susceptible area/known surface water run-off
3	Road surface wet
4	Road surface temperatures less than or equal to plus 1*C and relative humidity less than or equal to 80%

Table 2 - Precautionary treatment salt spreading rates

Forecast weather as referred to in Table A of Appendix K	**Road condition status as referred to in Table 1 of Appendix K**			
	1 **Dry road surface** **(grammes per square metre)**	**2** **Frost susceptible/ surface water run off area** **(grammes per square metre)**	**3** **Road surface wet** **(grammes per square metre)**	**4** **Road surface temperatures lower than or equal to plus 1*C and relative humidity less than or equal to 80%**
A	0	0	0	0
B	0	10 to 20	10 to 20	Salt moisture content shall be increased to 5% at relevant spread rates in Road condition status 1 to 3 inclusive
C	0	10 to 20	10 to 20	
D	0	20	20	
E	0	20	20	
F	0	30	40	
G	0	40	40	
H	10	20	20	
I	10	10	20	
J	40	40	40	
K	20	30	40	
L	40	40	40	
M	40	40	40	

Table 3 - Snow or ice clearance salt spreading rates

Road surface condition	Air temperature	Treatment		
		Spreading (grammes per square metres)	Ploughing	Blowing
		Salt		
Ice formed	Lower than or equal to minus 5*C and stable	20 to 40	No	No
Snow covering exceeds 30mm	Lower than or equal to minus 5*C and stable	20	Yes	No
Snow covering exceeds 30mm	Lower than or equal to minus 5*C and dropping	20 to 40	Yes	Yes
Snow accumulations due to prolonged falls	Lower than or equal to minus 5*C and stable	20 to 40	Yes (continuous)	Where applicable
Hard packed snow/ice less than 20mm thick	Higher than or equal to minus 5*C	20 to 40 (successive treatments)	No	No

Appendix L

List of Other Documents to be Read in Conjunction with this Plan

Appendix L

List of Other Documents to be Read in Conjunction with this Plan

1.0 Contract Specification :

1. M6DBFO Contract Document Schedule 4 (O&M)
2. Contract Agreement
3. Scottish Ministers' Variation SMV OM/007 – Pre-wetted Salt
4. Scottish Ministers' Variation SMV OM/013 – Winter Maintenance Enhancements.

2.0 General and Contract Procedures :

1. Winter Maintenance Strategy AM6/PR/18
2. M6-ROM-4-022 Complaint Response
3. M6-ROM-4-014 Accident Records
4. M6-ROM-4-016 Abnormal Indivisible Loads.
5. M6-ROM-4-003 Liaison
6. M6 ROM Quality Management Plan QMP/01

3.0 Agency Controlled Documents:

1. Area Management Memo No. 62/05. Guidance on Dealing with Freezing Rain

Appendix M

Interface Arrangements with Other Road Authorities

Appendix M Interface Arrangements

Highways England (Area 13)

1.1 None

Dumfries & Galloway Council

2.1 M6 ROM to treat the section of B7076 northwards from the B7076 / Glasgow / C143a junction at Gretna up to the A74(M) northbound entry slip road.

Transerv Scotland - South West Unit

3.1 Transerv Scotland to treat in area of Junction 12 as follows:

Northbound carriageway – from the start of the slip road hatching to the double nodes (a distance of about 140 metres).

Southbound carriageway – Transerve to continue from their network north of Junction 12 to the end of the hatching at the southbound entry slip road (a distance of 140 metres).