

## WINTER SERVICE PLAN 2015-16

# EXAMPLE

- SERVICE ORGANISATION
- PRECAUTIONARY SALTING ROUTES
- SNOW PLAN

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**CAERPHILLY COUNTY BOROUGH COUNCIL**  
**ENGINEERING SERVICES DIVISION - HIGHWAY OPERATIONS GROUP**  
**WINTER SERVICE PLAN**

**PREAMBLE**

This plan forms part of the Caerphilly County Borough Council's (CCBC) suite of Highways Operations Management Documents, explaining how the Council delivers its services for its biggest asset, namely its Highway Network. This Plan should be read as a Stand-alone document, but will refer to other documents related to this Service area.

This document explains the County Borough Council's responsibilities, strategy/policy and operational procedures in respect to the management and maintenance of the Caerphilly County Borough highway infrastructure network during the defined winter maintenance period, covering precautionary salting operations, clearance of ice and snow along with response to emergency flooding. Section 41 of The Highways Act 1980 places a duty on Local Authorities "to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice."

This document is to provide guidance to elected councillors, members of the public and members of staff on operational procedures and contact points during the winter service period.

The policy has taken account the recent review commissioned by Transport Ministers "Winter Resilience Review – An independent review of the Resilience of England's Transport System" which made key recommendations in its report following the 2009/2010 severe winter. There was another severe winter in 2010/2011 and further refinements have been made to improve the way in which the service is able to react to the needs of the public during such events.

**Revised winter service guidance, contained in Appendix H of Well Maintained Highways, was issued in September 2013. This guidance is considerably more detailed and onerous to implement and adhere to than the previous update in 2011. Following comments and concerns by many Winter Service providers nationally, a review is currently being undertaken by the National Winter Service Research Group (NWSRG), who developed the guidance. This is likely to result in a revision of the document. (To date, no further guidance has been issued) As such, together with all other Welsh Authorities we do not intend to fully adopt this guidance until this review is complete. The Authority will contribute to the review via feedback submitted through the Welsh County Surveyors Society.**

## **WINTER SERVICE POLICY**

The County Borough Council aims to provide a winter service which, as far as possible, facilitates the safe movement of traffic and keeps to a minimum delays and accidents caused by adverse winter weather conditions. In practice this is achieved by taking precautionary measures to pre-salt certain routes, taking account of weather forecast and local observations. The response also aims to, as far as practicable, ensure access to essential Council premises, residential accommodation for older people, education establishments, hospitals, doctors surgeries, town centres, major bus stations and emergency services.

Priority is primarily given to the 'A' and 'B' roads (the authorities core transportation network so that the continuation of access to goods and services is maintained as best it can in the prevailing circumstances). The primary objective is to achieve the precautionary application of salt to specified elements of the network prior to the predicted time for the onset of sub-zero conditions.

During severe and/or prolonged sub zero/snowfall conditions causing the risk of formation of ice or significant accumulations of snow throughout the network, consideration is also given to those non principal classified routes and unclassified routes which are deemed to be of significant importance having regard to the number of vehicles carried during the morning/evening peak times on those routes which link a substantial community to a priority route. Actual locations will depend to an extent on particular weather conditions at the time and will be determined based on available information by the Highway Operations Group Manager / Designated Representative / Winter Emergencies Officer. These routes will be considered for treatment where practical, following completion of the priority routes.

There maybe times during the winter period where decisions may need to be made to reduce salting of routes to a key strategic network should conditions dictate. Consultation will be undertaken with senior officers should this instance be necessary prior to implementation.

It is recommended that this policy needs to be reviewed alongside the Council's Out of Hours (Duty Officer) Manual. This will ensure that a full understanding of the operational context is understood for emergency situations.

## 1. WINTER SERVICE ROLES AND RESPONSIBILITIES.

There are nine winter emergency roles defined within this section.

- 1.1. Winter Emergency Officer (WEO)
- 1.2. Highway Operations Group Manager/Designated Representative (HOGM/DR)
- 1.3 Operational Inspection Personnel (OIP)
- 1.4 Highway Operations Group (HOG)
- 1.5 Operational Duty Officer (ODO)
- 1.6 Sirhowy Enterprise Way (SEW)
- 1.7 Meteorological Forecaster
- 1.8 Decision Maker
- 1.9 Decision Receiver

### 1.1 Winter Emergency Officer (WEO)

The WEO is the duty officer responsible for monitoring and actioning all requirements in relation to winter maintenance outside normal working hours.

The WEO covers 3 categories of winter emergency operations:-

- Precautionary Salting
- White Out/Snow Plan
- Winter Emergency Severe Weather Flooding

#### **Precautionary Salting - Role and Responsibility**

1. Weather forecasts received from weather centre to be noted and actioned in consultation with trained staff only (G Parry, G Richards, C Adams and S Hodges).
2. WEO to inform a controlled list of persons/organisation contacts of winter maintenance actions including "no action" via e-mail as appropriate.
  - Operational Duty Officer.
  - CCBC Out of Hours Control Room @ Tir-Y-Berth.
  - Met Office.
  - Emergency Services.
  - All neighbouring authorities.
3. Unless forecast is 'green' all vehicles to be placed on standby. WEO to confirm with supervisors that all vehicles are prepared fuelled up and ready. This process will include knowing what front line vehicles are unavailable due to servicing or repairs and arranging necessary cover in any depot with additional replacement vehicles, and providing a status report on unavailable vehicles.
4. Where forecast is unclear and vehicles placed on standby as above the WEO will maintain regular contact with weather centre until a clear action is defined.

5. Where no clear action can be defined from the above or forecast is unclear previous 5 days action and weather to be analysed to determine amount of residual salt on highway (in consultation with HOGM/DR). In accordance with the definitive and pessimistic requirement, if in any doubt, action for pre-salting to be called.
6. All actions should be communicated with sufficient warning enabling gritting teams to be informed in a timely manner. (All actions should be recorded by WEO and kept electronically)
7. WEO to determine time for completion of routes and then clearly inform all gritting teams of the time to meet at each depot and the time to commence each route **in order that precautionary salting is completed prior to predicted onset time for sub zero conditions.**
8. WEO to confirm attendance of all staff at depots prior to salting commencement, enabling any problems to be attended to in a timely manner without affecting salting.
9. During salting WEO to maintain contact with all drivers and report any difficulties or problems with the routes to HOGM/DR where necessary.
10. Where vehicle/equipment problems occur WEO to contact winter service fitter to assess repairs and arrange alternate plant to ensure timely completion of salting.
11. Upon completion of salting WEO to confirm completion of all routes and 'sign off' staff as returned safely. Key performance indicator record to be maintained for all routes completed prior to the predicted sub-zero forecast time.
12. Gritting staff to be informed at the time if rest periods\* are due, to allow sufficient time for preplanning of work the following day.
13. WEO to assess what impacts rest periods\* and plant unavailability will have on following days planned works and update works supervisors as appropriate.
14. No later than 07:30 the next day Supervisors to be notified of anticipated rest periods and vehicle breakdowns to allow efficient redeployment of plant labour and materials, as assessed by WEO.
15. WEO to ensure all records in accordance with current NCS quality assurance system requirements are maintained.

\* No strict guidelines are set out regarding rest period entitlement due to the significant amount of variables that could occur. However, duty time will be limited where possible to a maximum of 11 hours in a 24hour period and again where possible a minimum of 9.5 hours continuous off duty rest will be allocated. WEO to record time of action, amount of advance warning given and duration of action, some of which can be re-organised to mitigate disruption to all services by effectively managing resources, timely notification of actions required and monitoring of labour working and resting periods between shifts. Awareness of new legislation regarding driving hours needs to be taken into account when assessing rest periods.

## 1.2 Highway Operations Group Manager / Designated Representative.

1. HOGM/DR will undertake an annual review and update (as deemed necessary) of the Winter Maintenance Plan prior to the commencement of the winter maintenance period.
2. HOGM/DR shall ensure that the definitive GIS stored precautionary salting network and local salt bin locations are maintained.
3. HOGM/DR will ensure that a contract is in place with a meteorological contractor to supply a weather forecast or road danger warning each day during the months from October to March inclusive.
4. HOGM/DR will generally monitor the actions determined by their designated representative and/or WEO.
5. HOGM/DR will ensure that Highways House is available for snow emergencies and that staff can access the facility.
6. HOGM/DR shall ensure that all relevant KPI data is completed following the Winter Maintenance period.

## 1.3 Operational Inspection Personnel.

1. When so requested by HOGM/DR, Inspectors will patrol the routes specified in order to assist the decision making process.
2. Any adverse conditions are to be reported to the WEO.
3. In the event of a snow emergency, inspection personnel will assist with the effective direction of resources.
4. Inspectors should generally make themselves aware of current winter maintenance actions prior to leaving work each day and ensure that the weekly availability log sheet is up to date.

## 1.4 Highway Operations Group. (HOG)

The Highway Operations Group is the winter maintenance service delivery client and contractor and is required to implement all winter service instructions issued by HOGM/DR/WEO. It is required to provide labour and plant, which must be available at all times to respond at short notice. The labour force is thoroughly trained and versed in the use of specialist plant and equipment to be used.

### 1 Service Delivery Specification.

The service to be provided by the winter maintenance service delivery contractor is comprehensively specified. This document is effectively a contract and includes schedules of all plant and machinery to be used in the provision of the winter maintenance, which the H.O.G. will be responsible for delivering.



This document is reviewed annually prior to the commencement of the winter service period.

#### 1.5 Operational Duty Officer. (ODO)

The Engineering Division operates a 24hour emergency response system, which is capable of responding to highway infrastructure related emergencies outside normal office hours. The ODO is the duty officer responsible for actioning all requirements in relation to the Out of Hours emergency service operated by HOG and needs to liaise closely with the WEO.

#### 1.6 Sirhowy Enterprise Way. (SEW)

The SEW is the responsibility of CCBC, although it is a privately financed project which is operated and maintained by SEW Ltd. Caerphilly CBC as a local authority does retain an involvement with the project road as NCS Caerphilly CBC has been contracted to undertake a twenty three year Operation and Maintenance Contract, which is due to expire on 20th January 2034.

Part of this contract is to provide a Winter Maintenance Service provision, and it has been incorporated within the existing winter maintenance routes for efficiency.

#### 1.7 Meteorological Forecaster.

During the winter months weather forecasts are received daily by e-mail by HOGM/DR and the WEO. Outside normal hours the WEO will receive the forecast directly from the forecast contractor. All copies of the forecasts and actions instructed are held electronically by the Highway Operations Group.

#### 1.8 Decision Maker.

On receipt of the daily forecast, a decision will usually be made for the gritting actions for that day. This decision will be made by HOGM/DR. In some instances it may not be possible to make a decision upon receipt of the daily forecast, and further updates from the meteorological contractor must be sought until action is confirmed or declined.

#### 1.9 Decision Receiver.

When the decision has been made regarding pre gritting action, this decision is then relayed to the WEO, The WEO then informs all drivers of the start times of the gritting routes and the spread rates and also records the completion times of the gritting routes.

## **2. OPERATIONAL PLAN – PRE SALTING**

### **2.1 During the Normal Working Day**

1. HOGM/DR will receive weather forecast/road danger warning information daily throughout the designated winter maintenance period October 1<sup>st</sup> to April 30<sup>th</sup> and determine the appropriate action.
2. HOGM/DR will convey the instruction to the WEO who will then be responsible for undertaking the detailed duties of the WEO.

### **2.2 Outside the Normal Working Day/Bank Holidays/Weekends**

The WEO will receive forecast information including updates as necessary, determine the appropriate action in consultation with HOGM/DR and undertake the detailed roles and responsibilities of the WEO (listed previously).

Similarly, a general priority order has been established for the clearance of ice and snow; which is as follows:

1. Strategic salting routes A, B and C if implementation required.
2. Major roads. (described as Priority Routes for Pre-salting)
3. Other routes known as urgent medical and important industrial routes.
4. Other Class II and III roads providing access to villages.
5. Bus routes.
6. Routes to Schools, doctors surgeries, dialysis patients meals on wheels & funerals.
7. Other roads to give access into built up areas.
8. Roads serving isolated farms and houses.
9. Other roads.

In the event of a severe snow emergency it will be necessary to augment the winter maintenance fleet by the use of additional plant hired from previously arranged sources and to implement the Snow Plan (Section 3) which utilises labour resources from other directorates to assist in the clearance of snow/ice.

The winter service delivery will be undertaken by a highly experienced combined client/contractors team. The utilisation of experienced local in-house staff has proved extremely beneficial in the past with high levels of local knowledge and experience applied. This well trained in-house service is considered an essential strategic link in maintaining the local highway network in an acceptable operations condition.

### **2.3 Pre-salting.**

In accordance with the Winter Maintenance Policy, priority routes will be pre-salted when weather conditions so dictate as instructed by HOGM/DR/WEO.

In the interest of efficiency and in order to achieve the desired target time the priority routes have been grouped together to form pre-salting routes of approximately 58 kms, excluding dead mileage.

Each pre-salting route has been given an identification number from 1-8. These routes are included in Appendix A. Should conditions dictate the need to salt high routes only (generally above 300m), then the routes indicated 10 and 11 in Appendix B will be actioned.

#### 2.4 Recommended Practice for Pre-salting.

Precautionary salting takes place when the road surface temperature is expected to fall to 0°C or below unless:-

- i) no moisture is expected on the road surface.
- ii) there is enough residual salt on the road to deal with expected conditions.

Pre-salting should normally be at 15 gms/sq.m and should be completed prior to the formation of frost. The width of spread should be 2.0m less than the width of the carriageway, the channels then being treated by the action of traffic.

When continuous snow is forecast, spreading rates should be increased to 25 gms/sq.m. HOGM/DR/WEO will specify within the instruction to the contractor the rate of spread required according to the anticipated severity of the snowfall. The presence of salt will melt the initial fall and provide a wet surface beneath subsequent snow thus easing the work of ploughing.

When persistent ice is expected, spreading rates should be similarly increased to 25 gms/sq.m according to severity.

During a period of long cold dry weather salting rates may be reduced to 8 gms/sq.m and an assessment of road condition taken to determine whether daily continuous salting is required.

#### 2.5 Strategic Salting Routes A, B and C.

Strategic routes A, B and C may need to be implemented should salt stocks reduce to a critical level of less than 1000T and the advanced forecast and salt delivery information give cause for concern. Consultation with the Head of Service and the Councils Chief Executive Officer will be undertaken prior to implementation of this strategic salting regime. These strategic routes are included in Appendix C.

#### 2.6 Emergency Conditions.

HOGM/DR/WEO will be responsible for initiating emergency conditions and the procedures contained in the snow plan (see Section 3). Emergency conditions will generally arise from significant snowfall and/or widespread ice formation. If emergency conditions arise outside of normal working hours the WEO will advise HOGM/DR of such action and the service will operate from Highway House. The object of this arrangement is to provide a single co-ordinating centre to assess conditions, determine actions, organise the effective utilisation of resources and provide accurate information. Emergency meetings will be arranged as and when required by the HOGM/DR/WEO. All minutes/decisions from these meeting will be documented and stored electronically.

All relevant information regarding the emergency will be monitored, collated and disseminated to the DoE, the HoES and any other relevant parties by HOGM.

## 2.7 Salting of footways.

Footways will not be subject to precautionary pre-salting in the same manner as carriageways.

During severe winter conditions such as heavy or prolonged snowfall and/or significant ice formation a pre-defined network of the most heavily used pedestrian routes centered on major shopping zones will be treated in accordance with the snow plan upon instruction of HOGM/DR/WEO. The decision will be informed as necessary by local on site inspections of the network at the instigation of HOGM/DR/WEO.

Advice on sensible use of the Highway network during winter conditions is available on the Caerphilly County Borough Council web pages.

Shopping areas and safe routes to schools will be monitored during early morning inspections if deemed necessary.

## 2.8 Pedestrian Footbridges .

There are twelve footbridges within the authority, which provide a primary pedestrian access across major roads to nearby schools.

Where it is anticipated that ice may form on these footbridges HOGM/DR/WEO will instruct the appropriate Inspector to attend these footbridges before 07.00hrs on school days. Based on the Inspector's observations, arrangements will be made to hand salt these footbridges before 08.00 if required. Footbridge locations are listed in Appendix D.

## 2.9 Salt Bins.

There are 865 strategically placed salt bins that have been provided on a "self help" basis. These are filled at the end of the winter period to deter theft vandalism and litter problems through the summer. Bins will be filled periodically during the winter, usually after a spell of severe weather conditions, provided sufficient stocks are available.

### **3. OPERATIONAL PLAN – SNOW CONDITIONS.**

#### **3.1 White Out - Snow Plan.**

Snow will normally be forecast in advance allowing WEO to discuss/plan actions in conjunction with HOGM/DR to assess requirements for additional staff for the period. Good communication and teamwork will also allow the same to be organised in emergency situations where no warning is given.

Procedures 1-15 in section 1.1 for precautionary salting operations will apply with the addition of the following:-

16. Additional precautionary salting staff to be organised to 'ride shotgun' with gritter drivers if ploughs are required. They will assist with the fitting of ploughs and accompany the driver on their route.
17. Other additional labour may be utilised for hand salting or driving backup gritters to respond to emergency calls. This may include staff from other service areas such as Public Services, Building Services and Ground Maintenance.
18. Highway House will be opened up out of hours with the WEO and CCBC Tir-Y-Berth control room (Out of Hours) notified of action.
19. Where prolonged snowfall is predicted WEO will instigate a shift pattern. This shift pattern will be organised for the WEO, labour force and HOG Staff, to enable effective gritting for prolonged periods.
20. Regular updates of forecast to be recorded to allow advance planning of resources.
21. WEO to monitor precautionary salting duties to allow effects on programmed work to be minimised by releasing and replacing essential labour to maximise following days productivity without compromising precautionary salting thus, maintaining work commitments and contracts.
22. Labour to be notified of rest periods if due and details/actions passed to HOG Team Managers and Supervisors by 07:30 the following day with assessed amendments.

#### **3.2 Implementation of Snow Plan**

HOGM/DR/WEO will be responsible for initiating snow plan actions.

HOGM/DR/WEO will implement pre-planned arrangements to increase resources directed at snow/ice clearance. Contact details are included in Appendix E.

#### **3.3 Recommended Practice for Ploughing Snow.**

In the interests of traffic safety and effective working it is necessary to have a snow ploughing policy, which is readily understood and acted upon by all staff.

Ploughing generally only becomes effective when snowfall exceeds 50 mm in depth.

Lighter falls may call for ploughing where light local drifts have occurred. Ploughing may be required to remove snow not dispersed by traffic in cases where there is a reluctance to use the right hand lane of dual carriageways or where traffic is light (at night for instance).

When prolonged falls are forecast it is recommended to plough continuously from the onset of snow to prevent build up and to prevent compaction by traffic. Such ploughing can be combined with simultaneous salting at 15-25 gms/sq.m and over if appropriate, so that a wet base is maintained. However, once snow depths of 12cms have been reached, when tackling snow drifts or where vehicles are operating on gradients it may be desirable to continue ploughing without salting. The weight of a salt load will aid vehicle traction when ploughing. Additional actions would depend upon the depth of the remaining snow.

When repeated ploughing is necessary 24 hour manning may be required. This will be undertaken via a 2 shift system in order to achieve maximum staff deployment.

On dual carriageway sections of the network within the authority the following additional recommendations should be observed:-

- i) The process should be based on CLEARANCE BY LANES with the ultimate object of CLEARING ALL LANES. Dual carriageway lanes are defined by broken white lines and road studs/cats eyes which drivers are accustomed to use as guides. It is therefore bad practice to make ploughing passes which leave traffic guided by irregular windrows of snow which weave from one lane to another or even on and off the hard shoulder. The effects of such ploughing for traffic is dangerous in daylight and even more so at night.
- ii) It is also undesirable to leave only half lanes clear as drivers are tempted to overtake dangerously by squeezing past at speed. Similarly, the ploughed windrows of snow should form a smooth and continuous line without sudden encroachments into the cleared path or overtaking vehicles will be obliged to brake hard or risk hitting the windrows at speed.
- iii) The ultimate aim must always be to clear all lanes as soon as conditions permit, and clearance work should proceed continuously to this end. If clearance work is stopped during a fall, resultant snow build-up may take disproportionately longer to clear. Packed snow, glazed by the wind can be particularly difficult to remove.
- iv) If one or more lanes are left uncleared and a thaw sets in, those lanes will go through an uncontrolled transitional stage of semi clearance under the action of the thaw, which might tempt imprudent drivers to risk overtaking through the restricted gaps already mentioned.
- v) Due to variations in local weather conditions, snow depth, snow wetness and topography, it is difficult to be precise on the order of lane clearance. Local traffic densities and movements, which differ from day to day and even within a day, can affect lane clearance priorities.

### 3.4 Snow Clearance Additional Priorities.

A priority order has been established for the clearance of ice and snow, which is as follows:-

1. Strategic salting routes A, B and C if implementation required.
2. Major Roads. (described as priority routes for pre-salting)
3. Other routes known as urgent medical and important industrial routes.
4. Other Class II and III roads providing access to villages.
5. Bus routes.
6. Other roads to give access into built up areas.
7. Roads serving isolated farms and houses.
8. Other roads.

Where snowfall is substantial and prolonged it may be necessary to close certain mountain roads and steep hills in the interest of safety. Such closures would be kept to a minimum and alternative routes should be kept clear.

### 3.5 Action when a thaw occurs.

Appropriate warning signs must be ready for placement at locations of known flood risk. Appropriate gullies and water outlets should be opened to permit free flow of water. Carriageways should be inspected for evidence of frost damage and damage by snow clearing plant and remedial action identified.

### 3.6 Meals on Wheels Kitchens.

There is one “meals on wheels” kitchen within the County Borough, which will receive priority in terms of snow clearance to ensure that the provision of hot meals to the elderly is maintained. The kitchen is at the following location:

Horner Street. Tir-Y-Berth.

### 3.7 Snow/Persistent Ice Clearance on Footways.

Salt is not spread on footways on receipt of an adverse weather forecast. However, where snow or persistent ice forms on footways, it shall be cleared having regard for the prevailing conditions, forecast and available resources. The Housing Dept. and the Social Services also have, through their Grounds Maintenance related functions, certain responsibilities for snow clearance beyond the public highway, which include typically, Council Offices and Day Care Centres. Additional resources are directed to this task see Appendix F.

Hand clearance of strategic locations is to be undertaken by additional personnel from Grounds Maintenance and Public Services, under the instruction of HOGM/DR. These additional personnel will be accompanied by their own supervisory staff.

A priority order has been established for the clearance of ice and snow from footways which is as follows provided resources allow:-

- i) Town centre footways. (See Appendix G)
- ii) Footways giving access to schools, hospitals, doctors surgeries and homes for the elderly etc. (See Appendices H & F)
- iii) Footways access for emergencies.
- iv) Footways to allow funerals to proceed.

EXAMPLE



#### **4. WINTER EMERGENCY – FLOODING.**

Should an emergency for flooding occur during the winter period, the following process should be followed:-

- 1 If severe weather dictates that the WEO requires additional resources the WEO will liaise with HOGM/DR and arrange that Highway House to established as a control room if deemed necessary.
- 2 The WEO will liaise with the ODO during periods of severe snow/ice or flooding and combine resources to effectively manage the situation, if appropriate by establishing a control centre at Highways House.
- 3 The WEO will contact winter emergency operatives to meet at the respective depots.
- 4 The WEO in consultation with the ODO will allocate resources to effectively resolve flooding problems.
- 5 The WEO will assess whether other additional resources over and above the winter emergency operatives are required and will endeavour to ensure adequate resources are available to effectively resolve flooding problems.
- 6 The WEO will keep HOGM/DR fully informed during such occurrences.

Should the severity of the situation escalate, consideration of providing updates to the Head of Service and the Director of the Environment should be made.

## **5. COMMUNICATION PLAN.**

### **5.1 Means of Communication.**

Communications will be predominately by telephone, of which, the Highway Operations Group have suitable numbers of mobile telephones. In the event of a snow emergency the service will be directed and managed from Highways House in order to ensure prompt and effective direction of operations. Should events escalate, decisions will be taken by HOGM/DR or the WEO to inform and update HoES and CEO as deemed appropriate.

In the event of a telecommunications failure, there are provisions in place by the mobile network provider that emergency communications will be maintained/available.

### **5.2 Public/Emergency Services Information/Customer Care/Out of Hours.**

The public and the emergency services will be informed of the services to be provided prior to commencement of the winter and where necessary during the winter.

With regard to the public, this will be achieved by distributing this document to Community and Town Councils. In addition to local councilors, copies will also be distributed to public libraries and made available on the intranet.

Emergency services will be informed of the County Borough's policy on winter maintenance and how it will be achieved. A copy of this document will be distributed to all the emergency services.

Emergency services and the Meteorological Forecaster will be informed daily, by 16.00 hours of any preplanned action to be undertaken during the night.

This information is also relayed by e-mail to the personnel covering the 'Customer Care' line and the control room at Tir-Y-Berth (Out of Hours) in order that they may advise callers of proposed action and any information in respect to road conditions through the provision of regular and accurate reports.

### **5.3 Road Condition Information to the Media.**

HOGM/DR/WEO will provide information to local radio via the CCBC Communications Group in respect to current conditions. The general message will be to discourage all unnecessary car journeys and to advise on which routes are blocked, closed or considered hazardous.

Alternatively, information can be provided to [Cardiff@inrixmedia.com](mailto:Cardiff@inrixmedia.com)

Daily information will be forwarded to the website coordinator to update the webpage on gritting action for that day.

All internal communication will be completed by either telephone or e-mail.

## 6. WEATHER FORECASTER/WEATHER CONDITION REPORTS.

### 6.1 Introduction.

Effective and efficient winter service is only possible with reliable information on road and weather conditions. HOG personnel need accurate and detailed information in order to implement the operational requirements of this document. HOG receive weather forecasts and road condition reports from the following sources :-

### 6.2 Meteorological Forecaster.

During the winter months, weather forecasts are received daily by e-mail by HOG. Outside normal hours the WEO will receive the forecast directly from the forecast contractor. All copies of the forecasts and actions instructed are held electronically by HOG.

### 6.3 Local Reports.

Local reports of poor road and or weather conditions are received from the Police and the public. During office hours HOG/DR deals with these reports. Outside office hours, the WEO deals with reports from the Police and seeks advice/guidance from HOGM/designated representative if deemed necessary.

### 6.4 Road Weather Sensors.

There are five road weather sensors located at Markham, Ystrad Mynach, Hafodyrynys, Risca and Princetown. Data gathered from these sensors will be used by the meteorological forecaster and aid in the forecasting of road conditions and temperatures. These weather sensors will allow operational staff to review real time information on current road condition at these locations at any time.

### 6.5 Forecast Details and Format.

During the winter period a weather forecast, compiled by the meteorological forecaster, is received daily by HOG. It gives a prediction of minimum road surface temperatures and road conditions including snow and other forms of precipitation. Reference is also made to the time of day or night when such conditions are expected, the altitude, if this is relevant, and confidence limits. An alert state is also given with the forecast to give a first indication of likely conditions. The alert states are described as follows:-

**GREEN** No road within the domain will fall below zero.

This indicates a very high probability of road temperatures remaining well above zero and can be used specifically for use in mild cloudy situations. Road temperatures quoted on the forecast must be definitely expected to remain above 3 degrees C.

**AMBER** Roads within the domain will get close to zero and may fall below zero if the forecast is in error by any degree. Road temperatures are certainly expected to fall to 2 degrees.

This indicates there is some doubt in the forecast and although positive temperatures may have been quoted in the forecast text, they will be so close to zero that they will need to be updated to RED or GREEN before the planned action or gritting runs commence.

Roads could also be forecast to be below zero, but due to prolonged dry spells they will pose limited risk.

**RED** Roads in the domain will fall below zero.

This indicates that there is a high probability of roads within the domain falling below zero. A negative road temperature will have been quoted in the domain forecast with amplification within the text to give details of heights and times.

A typical weather forecast received from the meteorological contractor is shown in Appendix I.

#### 6.6 Forecast Monitoring and Updates.

The forecast is received daily at about 13.30 hours from 1 October to 31 March. The forecast provider will constantly monitor the weather and issue updates to the forecast when it considers the advice is no longer adequate or accurate. If an AMBER alert state is included in the forecast, the forecast will always be updated before any planned action commences.

#### 6.7 Consultation Service.

The forecast provider also provides a consultation service from October to April which allows HOG to speak directly to the Duty Forecaster in order to obtain “up to the minute” information on weather conditions and trends.

#### 6.8 Snow Warnings.

Even slight accumulations of snow can lead to treacherous icy surfaces under the action of traffic when the temperature of the surface is below freezing point. Warnings of slight falls will therefore be issued unless it is confidently expected that the temperatures will remain above freezing.

These are warnings of fall of snow that are likely to require HOG to consider arrangements for snow clearance, gritting or salting. Warnings refer to slight, moderate or heavy falls as follows:

Slight:	Undisturbed accumulations of less than 25mm depth
Moderate:	25 to 100mm
Heavy:	Over 100mm

## 7. SALT STOCKS.

For the forthcoming winter service period, the authority will use the “untreated” strategic salt stock located at Ty Dyffryn. Once this stockpile has been used, gritting operations will automatically revert to Bedwas & Penmaen depots and will then use “safecoat” coated ground rock salt. This type of salt adheres itself to the road surface, thus eliminating waste. Safecoat coated rock salt also reduces the amount of corrosion on street furniture, structures and road vehicles, as well as reduced application rates.

Stocks of ground rock salt, stored in barns at Pontlottyn, Bedwas and Penmaen, are replenished during the summer. Salt is stored in barns as rainwater causes loss of salinity and increases its moisture content. Wet salt is difficult to spread and can damage equipment.

During periods of prolonged severe weather conditions salt stocks may need to be replenished. Contracts to supply salt have been awarded to suppliers in Cheshire and Northern Ireland. Supplies can normally be obtained from Cheshire within 48 hours. However, recent events have shown the vulnerability of these supplies nationally.

The availability of rock salt from stock at the start of the winter is as follows:-

<b><u>Location</u></b>	<b><u>Capacity</u></b>
Bedwas Depot	1,200 tonnes
Penmaen Depot	1,200 tonnes
Pontlottyn Depot	1,200 tonnes
Ty Dyffryn	4,000 tonnes
Strategic Salt Stocks	2,000 tonnes
Grit Bins	300 tonnes
<b>Total</b>	<b>9,900 tonnes</b>

Salt stocks are monitored weekly and minimum stock levels have been set at 50% of the total. Stock levels between this minimum and the start of winter levels will be provided throughout the winter dependant on supplier deliveries. The actual level is to be determined by HOGM based on weather conditions, forecast and judgment.

The strategic salt is available from a regional salt barn situated at Waun-Y-Pound Ind Est, Ebbw Vale. This facility is shared between Caerphilly, Blaenau-Gwent, Monmouth, Torfaen, Merthyr and Rhondda Cynon Taff CBC's and is available for this winter. Caerphilly will have an additional 2000T emergency stockpile stored at this facility.

If a salt shortage should arise, a review in the pre salted routes may be instructed by HOGM in consultation with Head of Service and the Councils Chief Executive Officer. In the event that the Strategic pre salted routes are implemented, all other routes will be monitored for formation of ice and the safe passage for public use. (Details of these Strategic Routes will be found in Appendix B)

## **8. RESOURCES.**

### **8.1 Details of fleet.**

HOG maintains a fleet of 13 gritters of which 8 are front line winter service vehicles and 5 are reserves. Each vehicle can be fitted with a snowplough.

HOG also has 4 snow ploughs that can be fitted to the 7.5t tipper lorries.

All ploughs are fitted with polypropylene blade attachments to prevent damage to carriageway and road studs.

HOG also has a snow blower, kept at Bedwas Depot.

Shovel loaders are available for loading salt at Ty Dyffryn, Pontlottyn, Bedwas and Penmaen salt storage depots.

HOG also has available additional plant and can procure sub-contract plant from external sources, which may be used in an emergency.

A list of available gritting equipment is included in Appendix J.

### **8.2 Location of Winter Service Vehicles/Equipment and Fuel Stocks.**

Each item of winter service plant is located in accordance with its operational requirement. Accordingly those vehicles allocated for routine pre-salting are located at Bedwas and Penmaen salt storage depots.

Those vehicles held in reserve are usually kept at the Bedwas & Penmaen Depots, as well as at TY Dyffryn.

HOG is responsible for ensuring all vehicles have adequate supplies of fuel and that it is used in accordance with current regulations.

Should conditions dictate the implementation of the snow plan routes 1 and 2 will revert to operating out of Pontlottyn Depot and additional resources be considered for deployment to Pontlottyn Depot.

### **8.3 Manning of Plant.**

HOG is responsible for providing all drivers and operators for all winter service plant held by this Authority. They are thoroughly trained and versed in the use of the specialist plant, equipment and their operational requirements.

The labour force is readily available and is of sufficient size to carry out any instruction given in accordance with the general requirements of this document.

Where extreme conditions or prolonged snowfall are expected HOG will be instructed to place appropriate personnel on "standby" at the relevant depots. This will facilitate a prompt or continuous response to the wintry weather.

#### 8.4 Winter Service Vehicle Spread Rate Calibration.

Prior to the winter service season all spreading vehicles are calibrated to ensure that target spread rates are achieved. HOG holds these records.

#### 8.5 Additional Personnel.

Additional personnel may be made available from Public Services, Building Services and Grounds Maintenance should conditions necessitate additional resources. These personnel will generally only be available in snow conditions. Actual circumstances are to be decided upon by CEO, Head of Public Services, Head of Building Services, Head of Engineering Services and Highway Operations Group Manager. These additional personnel will primarily be utilized in the clearance of footpaths in accordance with the snow plan priorities. Supervisory staff will also be available to compliment the manual workforce and will work under instruction from highways staff at either Highway House or Bedwas Depot.

## **Appendix A.**

### **Pre-salting Routes 1-8.**

**Precautionary pre-salting route descriptions and plans.**

- Note 1:** The route plans are schematic only and must be read in conjunction with the route descriptions.
- Note 2:** In some instances, gritting may be hampered by slow moving traffic flows, or a RTC. It will be up to the drivers discretion at these times to divert from the original route to achieve best results for coverage of the routes. Ultimately, all routes should be gritted prior to the onset of frost.
- Note 3:** Gritting routes are designed to start and terminate at either Penmaen or Bedwas depots. At the start of this winter, gritters will load at Ty Dyffryn and navigate to the start of each individual gritting route. At the end of each route, gritters will again navigate to Ty Dyffryn to unload. This situation is temporary, and will only be in operation until the current stockpile located at Ty Dyffryn has been exhausted.
- Note 4:** Gritting routes in Appendices B & C will also be subject to starting & ending at Ty Dyffryn as per note 3.



## Pre-salting Route 1 (Penmaen)

No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn left - Travel B4254
3	F Continue - Travel B4254
4	F Enter roundabout travelling and take exit 1 on to B4254
5	F Turn right - Travel A4049 to junction B4254
6	F Continue - Travel A4049
7	F At roundabout take exit 3 to PENGAM ROAD
8	F Continue - Travel A4049. Grit
9	T Enter roundabout gritting and take exit 2 to DUFFRYN TERRACE
10	T Turn right - Grit DUFFRYN TERRACE
11	T Continue - Grit DUFFRYN TERRACE to SCHOOL STREET
12	T Turn left onto BEDWELLY ROAD
13	T Turn left onto BEDLWYN ROAD
14	T Continue - Grit BEDLWYN ROAD to FOTHERGILLS ROAD
15	T Continue - Grit FOTHERGILLS ROAD
16	T Turn left onto SCHOOL STREET
17	T Turn left onto BEDWELLY ROAD
18	T Turn right onto BEDWELLY ROAD
19	T Turn left onto SCHOOL STREET
20	T Continue - Grit SCHOOL STREET to CROSS STREET
21	T Turn left onto A4049
22	T Turn left onto ELLIOTT STREET
23	T At roundabout take exit 2 to ELLIOTT STREET
24	T Continue - Grit ELLIOTT STREET to QUEENS ROAD
25	T Continue - Grit QUEENS ROAD to UPPER ROAD
26	T Turn right onto A4049
27	T Continue - Grit A4049
28	T At roundabout take exit 1 to A4049
29	T Continue - Grit A4049 to A469
30	T Turn left onto A469
31	T Continue grit A469 to PLEASANT VIEW
32	T Continue grit PLEASANT VIEW to BRITHDIR CEMETARY. End of salting
33	F U-turn - Travel BRITHDIR CEMETARY to BRISTOL TERRACE. Grit
34	T Turn right -Grit BRISTOL TERRACE
35	T Continue - Grit BRISTOL TERRACE to NELSON TERRACE
36	T Continue - Grit NELSON TERRACE to TIRPHIL SQUARE. End of salting
37	F Turn left - Travel TIRPHIL SQUARE to A469. Grit
38	T Continue - Grit A469 to FARM ROAD
39	T Continue - Grit FARM ROAD to FOCHRIW ROAD.
40	T Turn right onto HILL ROAD. Grit
41	T Turn right onto BRYNHYFRYD
42	T Turn right onto FOCHRIW ROAD
43	T Continue - FOCHRIW ROAD to PONTLOTTYN ROAD
44	T Turn right onto SOUTH TUNNEL ROAD
45	T Continue - Grit SOUTH TUNNEL ROAD to TUNNEL TAVERN
46	T Turn left onto TUNNEL TAVERN
47	T Continue - Grit TUNNEL TAVERN to GLENVIEW TERRACE
48	T Turn left onto STATION TERRACE
49	T Continue - Grit STATION TERRACE to BROOK ROW
50	T Continue - Grit BROOK ROW
51	T Turn right onto MOORES ROW

52 T Continue - Grit MOORES ROW to AELYBRYN STREET

53 T Continue - Grit AELYBRYN STREET

54 T Turn left onto HEOL IAGO

55 T Continue - Grit HEOL IAGO to GLAN-Y-NANT

56 T Continue - Grit GLAN-Y-NANT

57 T Turn Right onto HEOL IAGO

58 T Continue - Grit HEOL IAGO to AELYBRYN STREET

59 T Turn left onto AELYBRYN STREET

60 T Continue - Grit AELYBRYN STRET to MOORES ROW

61 T Turn right onto BROOK ROW

62 T Continue - BROOK ROW to PONTLOTTYN ROAD

63 T Continue - Grit PONTLOTTYN ROAD. End of salting

64 F Turn left - Travel SOUTH TUNNEL ROAD

65 F Continue - Travel SOUTH TUNNEL ROAD to TUNNEL TAVERN. Grit

66 T Turn right onto TRECATTI HILL

67 T Continue - Grit TRECATTI HILL to RHYMNEY COMMON ROAD

68 T Turn left onto RHYMNEY COMMON ROAD

69 T Continue - Grit RHYMNEY COMMON ROAD to ROUNDABOUT

70 T At roundabout take exit 4 to RHYMNEY COMMON ROAD. End of salting

71 F Travel RHYMNEY COMMON ROAD to COMMON ROAD. Grit.

72 T Continue - Grit RHYMNEY COMMON ROAD to ROUNDABOUT

73 T Complete a circuit of the roundabout and take exit 2 to RHYMNEY

74 T Complete a circuit of the roundabout and take exit 1 to B4257

75 T Continue - Grit B4257 to MERTHYR ROAD

76 T Continue - Grit MERTHYR ROAD to End of Salting

77 F Continue - Travel MERTHYR ROAD

78 F Enter roundabout travelling and take exit 4 back to MERTHYR ROAD

79 F Continue - Travel MERTHYR ROAD to B4257. Grit

80 T Turn left - Grit B4257 to TY COCH

81 T Turn left - Grit TY COCH and then Turn left

82 T Turn left - Grit ANEURIN TERRACE

83 T Continue - Grit ANEURIN TERRACE

84 T Bear right - Grit ANEURIN TERRACE TO HEOL UCHAF

85 T Continue - Grit HEOL UCHAF TO PEN-Y-DRE

86 T Turn right - Grit PEN-Y-DRE. Travel.

87 T Turn left - Travel ANEURIN TERRACE.

88 T Turn right - and then Turn left. Grit

89 T Grit - Turn left on to UPPER HIGH STREET

90 T Turn right - Grit CARNO STREET to A469

91 T At roundabout take exit 4 on to CARNO STREET. End of salting.

92 F Travel CARNO STREET

93 F Continue - Travel CARNO STREET to B4257. Grit.

94 T Turn right - Grit UPPER HIGH STREET

95 T Continue - Grit UPPER HIGH STREET to CHURCH STREET

96 T Continue - Grit CHURCH STREET to HIGH STREET

97 T Continue - Grit HIGH STREET

98 T Turn right onto TRE-YORK STREET

99 T Turn right onto THE TERRACE

100 T Continue - Grit TRE-YORK STREET to GLAN-YR-AFON

101 T Continue - Grit GLAN-YR-AFON

102 T Turn right onto CARNO STREET. End of salting

103 F Travel CARNO STREET

104 F Continue - Travel CARNO STREET to CORONATION CRESCENT. Grit

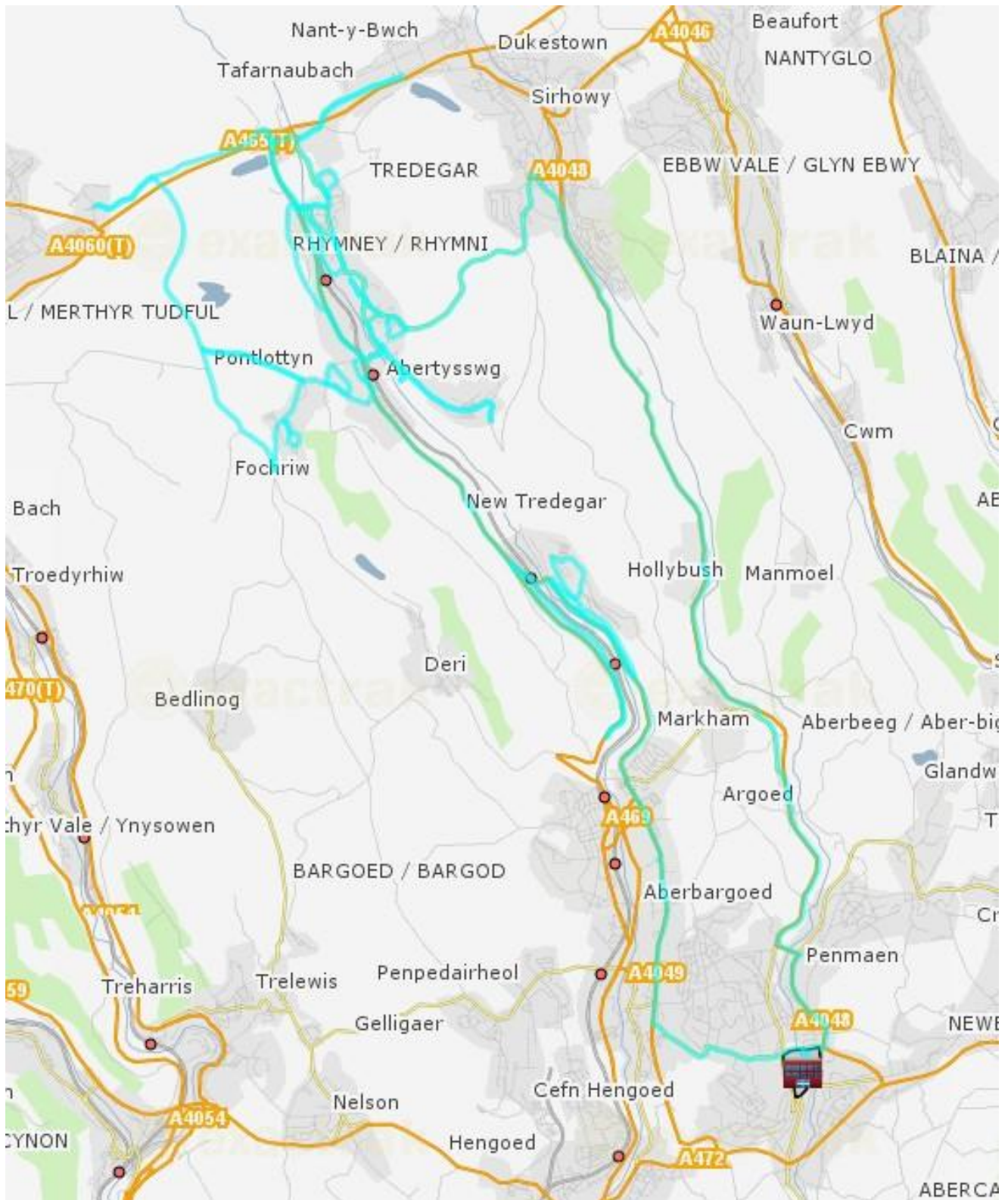
105 T Turn right - Grit CORONATION CRESCENT

106 T Continue CORONATION CRESCENT to QUEENS CRESCENT  
 107 T Continue QUEENS CRESCENT to HIGH STREET  
 108 T Turn right onto HIGH STREET. End of salting  
 109 F Travel HIGH STREET to TRE-YORK STREET. Grit  
 110 T Continue - Grit HIGH STREET TO HAVARDS ROW  
 111 T Continue - Grit HAVARDS ROW to BRYN-TEG CRESCENT  
 112 T Turn left onto HILL STREET  
 113 T Continue - Grit HILL STREET to MORIAH STREET  
 114 T Turn right onto MORIAH STREET  
 115 T Continue - Grit MORIAH STREET  
 116 T Turn left onto WELLINGTON WAY  
 117 T Continue - Grit WELLINGTON WAY  
 118 T Turn left onto ABERTYSSWG ROAD  
 119 T Continue - Grit ABERTYSSWG ROAD  
 120 T Turn right on COMPREHENSIVE SCHOOL ACCESS ROAD  
 121 T U-turn - back to ABERTYSSWG ROAD  
 122 T Turn right - Grit ABERTYSSWG ROAD  
 123 T Continue - Grit ABERTYSSWG ROAD to CARN-Y-TYLA TERRACE  
 124 T Continue - Grit CARN-Y-TYLA TERRACE to WARN'S TERRACE  
 125 T Continue - Grit WARN'S TERRACE to WALTER STREET  
 126 T Continue - Grit WALTER STREET to CHARLES STREET  
 127 T Continue - Grit CHARLES STREET to End of Salting  
 128 F U-turn - Travel CHARLES STREET to WALTER STREET  
 129 F Continue - Travel WALTER STREET to WARN'S TERRACE  
 130 F Continue - Travel WARN'S TERRACE to CARN-Y-TYLA TERRACE  
 131 F Continue - Travel CARN-Y-TYLA TERRACE to ABERTYSSWG ROAD  
 132 F Continue - Travel ABERTYSSWG ROAD. Grit  
 133 T Turn left - Grit B4257  
 134 T Continue - Grit B5247 to MERCHANT STREET  
 135 T Turn left onto MERCHANT STREET  
 136 T Continue - Grit MERCHANT STREET to FARM ROAD  
 137 T Turn right onto FARM ROAD  
 138 T Turn right onto FARM ROAD  
 139 T Continue - Grit FARM ROAD to HEOL EVAN WYNNE  
 140 T Turn right onto HEOL EVAN WYNNE  
 141 T Continue - Grit HEOL EVAN WYNNE to A469  
 142 T Turn left onto A469  
 143 T At roundabout complete a circuit and take exit 2 to A469  
 144 T Continue - grit A469 to HEADS OF VALLEYS ROUNDABOUT  
 145 T At roundabout take exit 4 back onto A469.End of salting.  
 146 F Travel A469 to CARNO STREET. Grit  
 147 T At roundabout complete a circuit and take exit 3 to INDUSTRIAL ESTATE  
 148 T Continue - Grit INDUSTRIAL ESTATE to A469. End of salting  
 149 F Turn right - Travel A469  
 150 F Continue - Travel A469 to MERCHANT STREET. Grit  
 151 T Turn left - Grit WELLINGTON WAY  
 152 T Continue - WELLINGTON WAY to FORGE CRESCENT  
 153 T Turn left onto LAWN INDUSTRIAL ESTATE  
 154 T Continue to End of salting.  
 155 F U-turn - Travel LAWN INDUSTRIAL ESTATE to FORGE CRESCENT. Grit  
 156 T Continue - Grit HILL STREET  
 157 T Continue - Grit HILL STREET to TAN-Y-BRYN  
 158 T Turn right - Grit TAN-Y-BRYN  
 159 T Continue - Grit TAN-Y-BRYN

- 160 T Turn right onto GARDEN CITY
- 161 T Continue - Grit GARDEN CITY to HILL STREET
- 162 T Turn right onto HILL STREET
- 163 T Continue - Grit HILL STREET to End of salting.
- 164 F Travel B4256 to A4048
- 165 F Travel A4048 to MARKHAM
- 166 F Turn right onto SLIP ROAD. Grit
- 167 T Turn left - Grit PENYLLAN ROAD
- 168 T Continue - Grit PENYLLAN ROAD to A4048
- 169 F Turn right onto A4048
- 170 F At roundabout take exit 1 to A4048
- 171 F At roundabout take exit 2 to A4048
- 172 F At roundabout take exit 2 to A4048
- 173 F At roundabout take exit 3 to B4254
- 174 F Turn left onto PENMAEN ROAD INDUSTRIAL ESTATE
- 175 F Turn left onto DEPOT

EXAMPLE

Pre-salting Route 1 (Penmaen)



## Pre-salting Route 2 (Penmaen)

No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn left - Travel B4254
3	F Enter roundabout travelling and take exit 1 on to B4254
4	F Turn right - Travel A4049 to junction B4254
5	F Continue - Travel A4049 to HIGH STREET. Grit
6	T Continue - Grit PENGAM ROAD
7	T At roundabout complete a circuit and take exit 3 to PENGAM ROAD
8	T Continue - Grit PENGAM ROAD to COMMERCIAL STREET
9	T Turn left onto ABERBARGOED LINK ROAD
10	T At roundabout complete a circuit and take exit 2 to BARGOED NEWYDD VIADUCT
11	T Continue - Grit BARGOED NEWYDD VIADUCT.
12	T Continue onto GILFACH STREET
13	T Continue onto CARDIFF ROAD
14	T Continue onto HANBURY ROAD
15	T Continue onto HIGH STREET
16	T Continue onto UPPER HIGH STREET
17	T At roundabout take exit 2 to ST GWLADYS WAY
18	T At roundabout complete a circuit and take exit 2 to PARK & RIDE
19	T Continue - Grit PARK & RIDE
20	T At roundabout take exit to BUS STATION
21	T At roundabout take exit 2 to STATION ROAD
22	T Continue - Grit STATION ROAD
23	T Turn left onto FACTORY ROAD
24	T Continue - Grit FACTORY ROAD.
25	T Continue - Grit FACTORY ROAD to BRITHDIR CEMETARY. End of salting
26	F U-turn - Travel BRITHDIR CEMETARY to FACTORY ROAD. Grit
27	T Turn right - Grit GROESFAEN TERRACE
28	T Continue - Grit GROESFAEN TERRACE
29	T Continue - Grit GROESFAEN TERRACE to NEW ROAD
30	T Continue - Grit NEW ROAD
31	T Turn left onto BAILEY STREET
32	T Continue - Grit BAILEY STREET to GLENVIEW TERRACE
33	T Turn left onto GELLIGAER MOUNTAIN ROAD
34	T Bear right - Grit MOUNTAIN ROAD.
35	T Turn left - Grit Minor Road to WESTERN DRIVE
36	T Turn right onto WESTERN DRIVE
37	T Continue - Grit WESTERN DRIVE TO HILLSIDE PARK
38	T Turn left onto HILLSIDE PARK
39	T Continue - Grit HILLSIDE PARK
40	T Turn left onto PARK DRIVE
41	T Continue - Grit PARK DRIVE
42	T Turn left onto HEOL FARGOED
43	T Continue - Grit HEOL FARGOED
44	T Turn left onto WESTERN DRIVE
45	T Continue - Grit WESTERN DRIVE to CROSS STREET
46	T Continue - Grit CROSS STREET
47	T Turn left onto PARK PLACE
48	T Continue - Grit PARK PLACE to GILFACH STREET
49	T Continue - Grit GILFACH STREET
50	T Turn left onto GILFACH STREET
51	T Turn left onto CARDIFF ROAD

52 T Continue - Grit CARDIFF ROAD. End of salting  
53 F Turn left onto GILFACH STREET  
54 F Travel GILFACH STREET  
55 F Turn left onto GILFACH STREET  
56 F Turn left onto CARDIFF ROAD  
57 F Travel CARDIFF ROAD. Grit  
58 T Turn right - Grit PARK DRIVE  
59 T Continue - Grit PARK DRIVE  
60 T Turn left onto HEOL PENCARREG  
61 T Continue - Grit roundabout  
62 T Continue - Grit HEOL PENCARREG to PARK DRIVE  
63 T Turn left onto PARK DRIVE  
64 T Continue - Grit PARK DRIVE to WESTERN DRIVE  
65 T Turn right - Grit WESTERN DRIVE to MOORLAND ROAD  
66 T Continue - Grit MOORLAND ROAD to MCDONNELL ROAD  
67 T Continue - Grit MCDONNELL ROAD  
68 T Turn left on ST GWLADYS AVENUE  
69 T Continue - Grit ST GWLADYS AVENUE to HEOLDDU GROVE  
70 T Continue - Grit HEOLDDU GROVE. End of salting  
71 F Turn left - Travel MCDONNELL ROAD to HEOLDDU ROAD. Grit  
72 T Continue - Grit HEOLDDU ROAD  
73 T Turn left onto CHURCH PLACE  
74 T Continue - Grit CHURCH PLACE  
75 T Turn right onto BRISTOL TERRACE  
76 T At roundabout take exit 1 to ST GWLADYS WAY.  
77 T At roundabout take exit 1 to STATION ROAD  
78 T Continue - Grit STATION ROAD to BEDWELLY ROAD.  
79 T Turn left onto CWMSYFIOG ROAD.  
80 T Continue - Grit CWMSYFIOG ROAD  
81 T Turn right onto CROSS STREET. End of salting  
82 T Continue - Travel CROSS STREET to SCHOOL STREET  
83 F Turn right onto BEDWELLY ROAD. Grit  
84 T Continue - Grit BEDWELLY ROAD to MARKHAM  
85 T At roundabout take exit 3 to ABERBARGOED  
86 T Continue - Grit B4511 to BEDWELLY ROAD  
87 T Turn left onto BEDWELLY ROAD.  
88 T Continue - Grit BEDWELLY ROAD  
89 T Turn right onto HEOL Y BEDW-HIRION  
90 T Turn left onto HEOL TYNEWYDD  
91 T Continue - grit HEOL TYNEWYDD  
92 T Turn left onto A4048  
93 T Continue - Grit A4048 to End of salting.  
94 F U -turn - Travel A4048 to LINK ROAD. Grit  
95 T Turn right - Grit LINK ROAD.  
96 T Turn Right onto ABERNANT ROAD  
97 T At roundabout take exit 2 to ABERNANT ROAD  
98 T Continue - Grit ABERNANT ROAD to A4048. End of salting  
99 F Turn right - Travel A4048 to LINK ROAD  
100 F Turn right onto LINK ROAD.  
101 F Turn Right onto ABERNANT ROAD  
102 F At roundabout take exit 1 to PANTYCEFN ROAD. Grit  
103 T Continue - Grit PANTYCEFN ROAD  
104 T At roundabout take exit 1 to HEOL Y BEDW-HIRION  
105 T Continue - Grit HEOL Y BEDW-HIRION. End of salting.

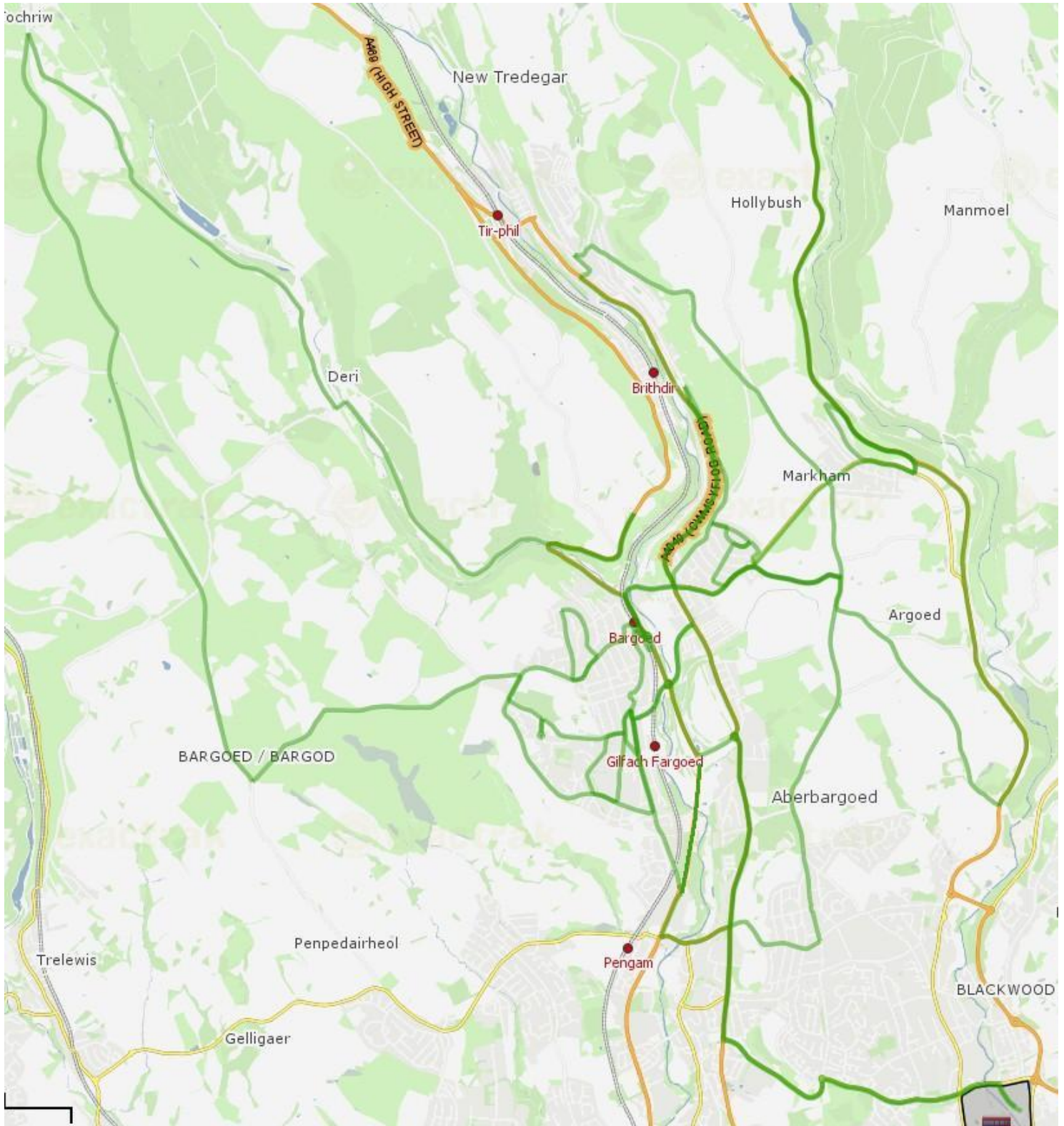
106	F	Turn right onto BEDWELLY ROAD
107	F	Continue - Travel BEDWELLY ROAD. Grit
108	T	Turn left - Grit BEDWELLY ROAD
109	T	Continue - Grit BEDWELLY ROAD
110	T	Turn left onto SANNAN STREET
111	T	Continue - Grit SANNAN STREET
112	T	Turn right onto HIGHFIELD CRESCENT
113	T	Turn right onto HIGHFIELD CRESCENT
114	T	Turn left onto LEWIS STREET
115	T	Continue to COMMUN ROAD
116	T	U-turn. - Grit LEWIS STREET
117	T	Turn right onto HIGHFIELD CRESCENT
118	T	Turn right onto LEWIS STREET
119	T	Turn right onto PANTYFID ROAD
120	T	Turn right onto BEDWELLY ROAD
121	T	Continue - Grit BEDWELLY ROAD to COMMERCIAL STREET
122	T	Turn right onto COMMUN ROAD
123	T	Continue - Grit COMMUN ROAD
124	T	Bear left - Grit COMMUN ROAD
125	T	Continue - Grit COMMUN ROAD to UPPER ROAD. End of salting
126	F	Turn left onto UPPER ROAD
127	F	Turn left onto CWMSYFIOG ROAD.
128	F	Continue - Travel CWMSYFIOG ROAD
129	F	Turn right onto BEDWELLY ROAD
130	F	Continue - Travel BEDWELLY ROAD
131	F	Continue - Travel BEDWELLY ROAD to STATION ROAD. Grit
132	T	Enter roundabout gritting and take exit 2 to ANGEL WAY
133	T	Continue - Grit ANGEL WAY
134	T	At roundabout take exit 1 to BRITANNIA LINK ROAD
135	T	Continue - Grit BRITANNIA LINK ROAD. End of salting
136	F	At roundabout take exit 2 to A4049
137	F	Continue - Travel A4049 to WAUNBORFA ROAD
138	F	Turn Left onto WAUNBORFA ROAD
139	F	Continue - Travel WAUNBORFA ROAD to BEDWELLY ROAD
140	F	Turn left onto BEDWELLY ROAD
141	F	Continue - Travel BEDWELLY ROAD to GREENWOOD ROAD. Grit
142	T	Continue - Grit HEOL Y CEFN
143	T	Continue - Grit HEOL Y CEFN to HEOL Y BEDW-HIRION
144	T	Continue - Grit HEOL Y BEDW-HIRION. End of salting.
145	F	Turn left onto BEDWELLY ROAD
146	F	Continue - Travel BEDWELLY ROAD
147	F	Turn left onto BEDWELLY ROAD
148	F	Continue - Travel BEDWELLY ROAD
149	F	Turn left onto COMMERCIAL STREET
150	F	Continue - Travel COMMERCIAL STREET
151	F	Turn right onto ABERBARGOED LINK ROAD
152	F	At roundabout take exit 2 to BARGOED NEWYDD VIADUCT
153	F	Continue - Travel BARGOED NEWYDD VIADUCT.
154	F	Turn left onto GILFACH STREET
155	F	Continue - Travel GILFACH STREET to PARK PLACE
156	F	Continue - Travel PARK PLACE to GWERTHONOR PLACE. Grit
157	T	Continue - Grit GWERTHONOR PLACE to A469
158	T	Turn left onto A469
159	T	Continue - Grit A469



- |     |   |   |
|-----|---|---|
| 160 | T | Enter roundabout and take exit 3 back to A469             |
| 161 | T | Continue - grit A469                                      |
| 162 | T | Continue - Grit A469 to HIGH STREET. End of salting       |
| 163 | F | Turn left onto HIGH STREET                                |
| 164 | F | Turn right onto A4049                                     |
| 165 | F | Continue travel A4049 to OAK TERRACE                      |
| 166 | F | Turn left onto B4254                                      |
| 167 | F | At roundabout take exit 3 to B4254                        |
| 168 | F | Continue - Travel B4254 to PENMAEN ROAD INDUSTRIAL ESTATE |
| 169 | F | Turn left onto PENMAEN ROAD INDUSTRIAL ESTATE             |
| 170 | F | Turn left into DEPOT                                      |

EXAMPLE

## Pre-salting Route 2 (Penmaen)



### Pre-salting Route 3 (Penmaen)

No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn right - Travel B4254
3	F At roundabout take exit 1 onto A4048. Grit
4	T Enter roundabout gritting take exit 3 to OAKDALE
5	T Continue - Grit OAKDALE TERRACE
6	T Turn left onto OAKDALE COMP LANE
7	T Turn right onto THE RHIW
8	T Turn right onto RHIW SYR DAFYDD HILL
9	T Turn right onto PEHRHIW TERRACE
10	T Turn left onto GROVESIDE TERRACE
11	T Continue - Grit GROVESIDE ROAD to LLWYN ON LANE
12	T Turn right onto LLWYN ON LANE
13	T Continue - Grit LLWYN ON LANE to MAES-Y-GARN ROAD
14	T Turn left onto BEECH GROVE ROAD
15	T Turn left onto ABERCONWY PLACE
16	T Turn left onto CENTRAL AVENUE
17	T Continue - Grit CENTRAL AVENUE
18	T Turn right onto PEN-RHIW TERRACE
19	T Continue - Grit PEN-RHIW TERRACE to SYR DAFYDD AVENUE
20	T Turn right onto PENMAEN AVENUE
21	T Turn left onto ABERCONWY PLACE
22	T Turn right onto ABERCONWY PLACE
23	T Turn right onto ABERCONWY PLACE
24	T Turn right onto ABERCONWY PLACE
25	T Turn right onto ABERCONWY PLACE
26	T Turn left onto PENMAEN AVENUE
27	T Turn right onto SYR DAFYDD AVENUE
28	T Continue - Grit SYR-DAFYDD AVENUE to BRYN HOWARD TERRACE
29	T Continue - Grit BRYN HOWARD TERRACE
30	T Turn right - Grit CLOS PENTREGROES. End of salting
31	F U-turn - Travel CLOS PENTREGROES. Grit
32	T Turn right - Grit LON MAES YR HAF. End of salting
33	F U-turn - Travel LON MAES YR HAF
34	F Continue - Travel LON MAES YR HAF
35	F Turn right - Travel CLOS PENTRE GROES and then Turn right. Grit
36	T Turn right on to KENDON ROAD
37	T Turn left onto PARKWAY
38	T Continue - Grit PARKWAY.
39	T Turn right - Grit CHERRY TREE HOUSE.
40	T U-turn - Grit to PARKWAY
41	T Turn right onto PARKWAY
42	T At roundabout make a complete circuit and take exit 1 to BRYN BRITHDIR.
43	T Continue - Grit BRYN BRITHDIR. End of salting
44	F U turn - Travel BRYN BRITHDIR
45	F Travel - at roundabout take exit 1 to COAL YARD RISE. Grit
46	T Turn left -Grit WATERLOO
47	T Continue - Grit WATERLOO
48	T Turn right onto SYR DAFYDD AVENUE
49	T Turn left onto BEECH GROVE ROAD. End of salting.
50	F Travel - Turn left onto ABERCONWY PLACE

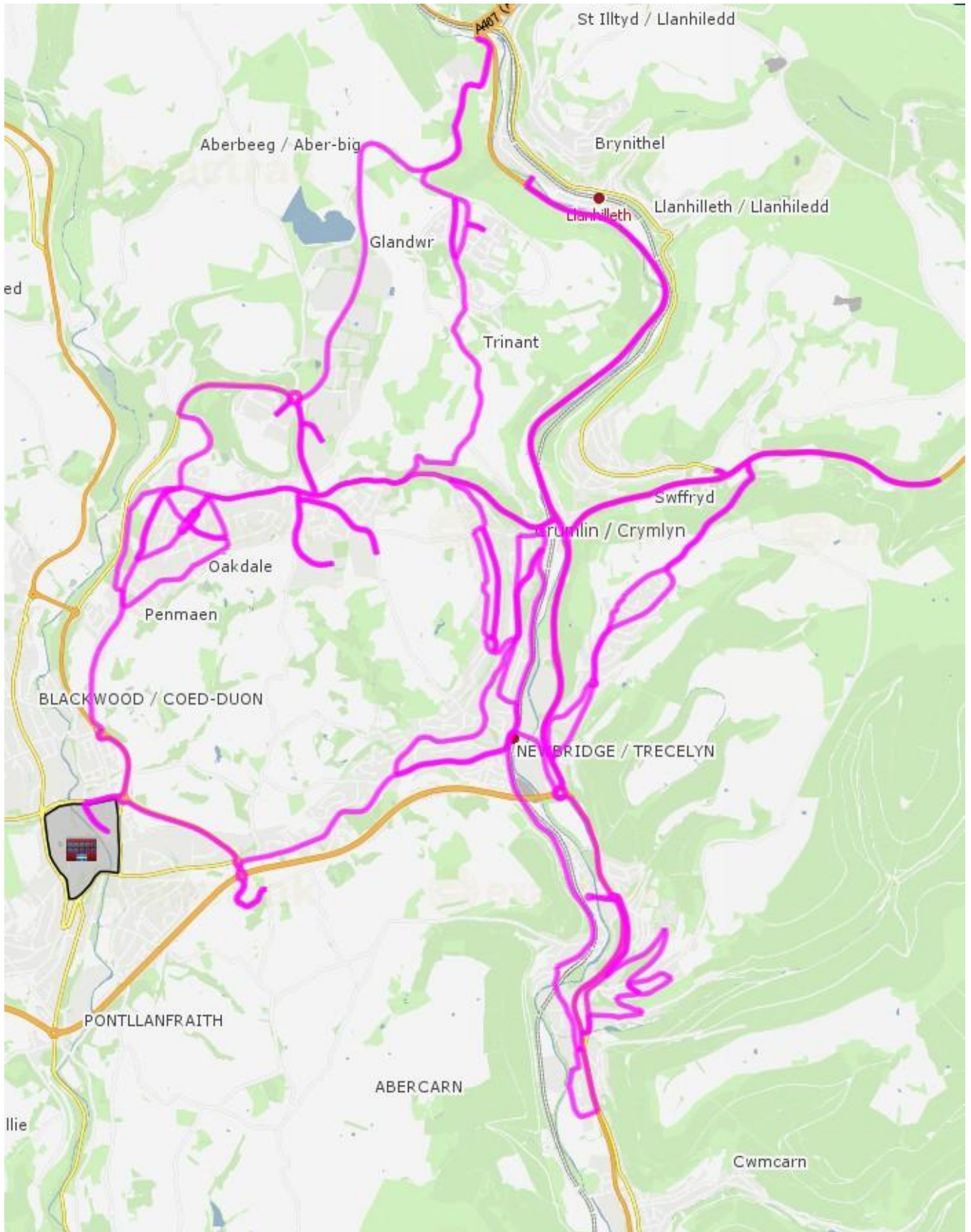
51 F Travel - Turn right onto ABERCONWY PLACE  
52 F Travel - Turn right onto ABERCONWY PLACE  
53 F Travel - Turn left onto BEECH GROVE ROAD  
54 F Travel - BEECH GROVE ROAD. Grit  
55 T Turn left - Grit MAES-Y-GARN ROAD. End of salting  
56 F Travel - Turn right onto SYR DAFYDD AVENUE  
57 F Continue - Travel SYR-DAFYDD AVENUE to BRYN HOWARD TERRACE  
58 F Continue - Travel BRYN HOWARD TERRACE. Grit  
59 T Continue - Grit KENDON ROAD  
60 T Turn left - Grit TRINANT ROAD  
61 T Continue - Grit TRINANT ROAD  
62 T Continue - Grit TRINANT ROAD to PENTWYN ROAD  
63 T Continue - Grit PENTWYN ROAD  
64 T Continue - Grit PENTWYN ROAD to PENTWYN TERRACE  
65 T Turn right onto TRINANT TERRACE  
66 T Continue - Grit TRINANT TERRACE  
67 T Turn left - Grit CONWAY ROAD  
68 T U-turn - Grit CONWAY ROAD to TRINANT TERRACE  
69 T Turn left - Grit TRINANT TERRACE TO PENTWYN TERRACE  
70 T Turn right - Grit PENTWYN TERRACE  
71 T Continue - Grit PENTWYN TERRACE to CWM NANT GWYNT.  
72 T Turn right onto CHRISTCHURCH ROAD  
73 T Continue - Grit CHRISTCHURCH ROAD to PANTDDU ROAD  
74 T Continue - Grit PANTDDU ROAD. End of salting  
75 F U-turn - Travel PANTDDU ROAD to PENTRAPEOD ROAD. Grit  
76 T Continue - Grit PENTRAPEOD ROAD to PARKWAY  
77 T At roundabout take exit 1 on to PARKWAY. End of salting  
78 F Travel - PARKWAY to KENDON ROAD  
79 T Turn left - Travel KENDON ROAD  
80 F Travel KENDON ROAD TO TRINANT ROAD. Grit  
81 T Continue - Grit KENDON ROAD to A467  
82 T Turn left onto A467  
83 T Turn left - Grit A467 to End of Salting  
84 F Continue - Travel A467 to GLANDWR INDUSTRIAL ESTATE and then Turn right  
85 F U-turn - Travel A467 to Start of Salting  
86 T Continue - Grit A467.  
87 T Turn left onto A472 HAFODYRYNYS ROAD  
88 T Turn left onto SWFFRYD ROAD  
89 T U-turn - Grit to A472  
90 T Turn left onto A472 to Boundary. End of salting  
91 F U turn - Travel A472 to HERBERT TERRACE. Grit  
92 T Continue - Grit HERBERT TERRACE to HAFODYRYNYS ROAD  
93 T Turn left onto A467  
94 T Continue - Grit A467.  
95 T Turn left onto CENTRAL AVENUE  
96 T Continue - Grit CENTRAL AVENUE  
97 T At roundabout complete a circuit and take exit 2 to OLD PANT ROAD  
98 T Continue - Grit OLD PANT ROAD  
99 T Turn right onto PANT ROAD  
100 T Continue - Grit PANT ROAD. End of salting.  
101 F U turn - Travel PANT ROAD. Grit

102	T	Turn right - Grit BOUNDARY ROAD
103	T	Continue - Grit BOUNDARY ROAD. End of salting.
104	F	Turn right - Travel OLD PANT ROAD. Grit
105	T	Enter roundabout salting take exit 3 to OLD PANT ROAD
106	T	Continue - Grit OLD PANT ROAD
107	T	Turn right onto CENTRAL AVENUE
108	T	Turn left onto A467
109	T	Enter roundabout complete a circuit and take exit 4 back to A467
110	T	Continue - Grit A467.
111	T	Turn left onto KENDON ROAD
112	T	Turn left onto MAIN STREET
113	T	U-turn at HILLSIDE. End of salting
114	F	Travel - MAIN STREET
115	F	Turn left - Travel KENDON ROAD. Grit
116	T	Turn left - Grit RHIW LEVEL ROAD
117	T	Continue - Grit RHIW LEVEL ROAD to PARRY TERRACE
118	T	Turn left onto TREOWEN ROAD
119	T	Continue - Grit TREOWEN ROAD
120	T	Turn right onto ELIDYR ROAD
121	T	Continue on to FFLORENS ROAD
122	T	Turn right - Grit FFLORENS ROAD to ROYAL CRESCENT
123	T	Continue - Grit ROYAL CRESCENT to FFLORENS ROAD
124	T	Continue - Grit FFLORENS ROAD to PARRY TERRACE
125	T	Turn right - Grit PARRY TERRACE. End of salting
126	F	Turn right - Travel TREOWEN ROAD. Grit
127	T	Turn left - Grit THE CIRCLE
128	T	Turn right - Grit THE CIRCLE
129	T	Bear right - Grit THE CIRCLE and then Turn right. Grit
130	T	Turn right on to THE CIRCLE. Grit
131	T	Bear left - Grit THE CIRCLE to PARK ROAD
132	T	Turn left - Grit PARK ROAD to COMMERCIAL ROAD
133	T	Bear left - Grit COMMERCIAL ROAD to HILLSIDE
134	T	Turn right - Grit HILLSIDE to MAIN STREET
135	T	Turn right - Grit MAIN STREET to MINING SCHOOL HILL
136	T	Turn right - Grit MINING SCHOOL HILL to PARK ROAD
137	T	Continue - Grit PARK ROAD to NEW BRYNGWYN ROAD
138	T	Continue - Grit NEW BRYNGWYN ROAD to BRYNGWYN ROAD
139	T	Turn left onto BRYNGWYN ROAD
140	T	Continue - Grit BRYNGWYN ROAD to HIGH STREET
141	T	Turn left onto HIGH STREET
142	T	Turn left onto NORTH ROAD
143	T	Turn left onto ASHFIELD ROAD
144	T	Continue - Grit ASHFIELD ROAD. End of salting
145	F	Turn right - Travel PARK Road to MINING SCHOOL HILL. Grit
146	T	Turn right - Grit NORTH ROAD
147	T	Continue - Grit NORTH ROAD to TRAFFIC SIGNALS
148	T	Turn right onto HIGH STREET
149	T	Turn left onto CELYNEN ROAD
150	T	Continue - Grit CELYNEN ROAD to LLANOVER STREET
151	T	Continue - Grit LLANOVER STREET to ISLWYN STREET
152	T	Continue - Grit ISLWYN STREET to BRIDGE STREET
153	T	Continue - Grit BRIDGE STREET
154	T	Turn right onto A467

155	T	Turn right onto DARREN DRIVE
156	T	Continue - Grit DARREN DRIVE
157	T	Turn Right onto BRIDGE STREET
158	T	Turn left onto A467
159	T	Turn right onto ABERCARN LINK ROAD
160	T	Turn left onto HIGH STREET
161	T	Turn right onto GWYDDON ROAD
162	T	Turn right - Grit GWYDDON ROAD
163	T	Continue - Grit GWYDDON ROAD
164	T	Turn left - Grit COED MOELFA ROAD to LLAN-FACH ROAD
165	T	Turn right - Grit LLAN-FACH ROAD to BRYN ROAD
166	T	Turn left - Grit BRYN ROAD to TWYN ROAD
167	T	Turn right - Grit TWYN ROAD to LLAN-FACH ROAD
168	T	Turn right - Grit LLAN-FACH ROAD and then Turn right
169	T	Turn right on to BRYN ROAD
170	T	Turn right - Grit BRYN ROAD to PEN-RHIW TERRACE
171	T	Continue - Grit PEN-RHIW TERRACE to CEMETARY ROAD
172	T	Bear left - Grit CEMETARY ROAD
173	T	Turn right onto CHAPEL OF EASE
174	T	At roundabout complete a circuit and take exit 4 onto CHAPEL OF EASE
175	T	Continue - Grit CHAPEL OF EASE to HIGH STREET. End of salting
176	F	Travel HIGH STREET
177	F	Turn right onto ABERCARN LINK ROAD
178	F	Turn right onto A467. Grit
179	T	Continue - Grit A467.
180	T	At roundabout take exit 1 to COED CELYNEN DRIVE
181	T	At roundabout complete a circuit and take exit 3 to COED CELYNEN DRIVE
182	T	At roundabout take exit 1 to A467
183	T	At roundabout take exit 2 to BRIDGE STREET
184	T	Turn left - Grit PARK & RIDE
185	T	Turn left onto BRIDGE STREET
186	T	Bear left onto HIGH STREET. End of salting
187	F	Continue - Travel HIGH STREET to BRYNGWYN ROAD. Grit
188	T	Continue - Grit BRYNGWYN ROAD to NEWBRIDGE ROAD
189	T	Continue - Grit NEWBRIDGE ROAD to HIGH STREET
190	T	Continue - Grit HIGH STREET to NEWBRIDGE ROAD
191	T	At roundabout take exit 1 to A472 LINK ROAD
192	T	At roundabout take exit 2 on to Minor Road
193	T	Continue - Grit NAILERS ARMS LINK ROAD. End of salting
194	F	U-turn - Travel NAILERS ARMS LINK ROAD. Grit
195	T	Continue - Enter roundabout salting and take exit 2 on to A4048
196	T	At roundabout take exit 2 on to A4048
197	T	Continue - Grit A4048. End of salting
198	F	At roundabout take exit 2 onto B4254
199	F	Turn left into PENMAEN ROAD INDUSTRIAL ESTATE
200	F	Turn left into DEPOT



Pre-salting Route 3 (Penmaen)



## Pre-salting Route 4 (Penmaen)

No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn right - Travel B4254. Grit
3	T Enter roundabout salting complete a circuit and take exit 1 onto A4048
4	T At roundabout complete a circuit and take exit 2 onto A4048
5	T At roundabout complete a circuit and take exit 1 onto A4048
6	T At roundabout complete a circuit and take exit 4 onto A4048
7	T Continue - Grit A4048
8	T At roundabout complete a circuit and take exit 1 onto B4251
9	T Continue - Grit B4251
10	T At roundabout complete a circuit and take exit 1 onto LON GELLIDEG
11	T Turn right onto MANMOEL ROAD
12	T Continue - Grit MANMOEL ROAD
13	T Turn left - Grit MANMOEL VILLAGE
14	T Turn right - Grit LLANERCH LANE
15	T Turn left - Grit LLANERCH LANE to farm. End of salting.
16	F U-turn - Travel to LLANERCH LANE
17	F Turn right - Travel LLANERCH LANE
18	F Turn left - Travel MANMOEL VILLAGE
19	F Turn right - Travel MANMOEL ROAD
20	F Turn left - Travel LON GELLIDEG
21	F Enter roundabout travelling and take exit 4 onto B4251
22	F Continue - Travel B4251. Grit
23	T Turn right - Grit OAKDALE COMP LANE
24	T Continue - Grit OAKDALE COMP LANE to ROCK FACH LANE
25	T Continue - Grit ROCK FACH LANE
26	T Turn Left onto A4048
27	T At roundabout take exit 3 onto SUNNYBANK ROAD.
28	T Continue - Grit SUNNYBANK ROAD
29	T At roundabout take exit 2 to TWYNYFFALD ROAD
30	T Turn right onto GREENWOOD ROAD
31	T Turn right onto BEDWELLY ROAD
32	T Turn right onto HEOL PIT Y CEILIOGOD
33	T Turn left onto BEAUMARIS WAY
34	T Continue - Grit BEAUMARIS WAY
35	T Turn right onto GREENWOOD ROAD
36	T Turn left onto BEDWELLY ROAD
37	T Turn right onto WAUNBORFA ROAD
38	T Turn right onto CEFN FFOREST AVENUE
39	T Turn right onto CENTRAL AVENUE
40	T Complete a loop of the SHOPPING AREA
41	T Turn right onto CENTRAL AVENUE
42	T Turn right onto BEDWELLY ROAD
43	T Continue - Grit BEDWELLY ROAD to BRYN ROAD
44	T Turn right onto PWLLGLAS ROAD
45	T Continue - Grit PWLLGLAS ROAD to FAIRVIEW
46	T Continue - Grit FAIRVIEW
47	T Turn right onto PENGAM ROAD
48	T Turn right onto WAUNBORFA ROAD
49	T Turn right onto CEFN FFOREST AVENUE
50	T Turn left onto FAIRVIEW. End of salting

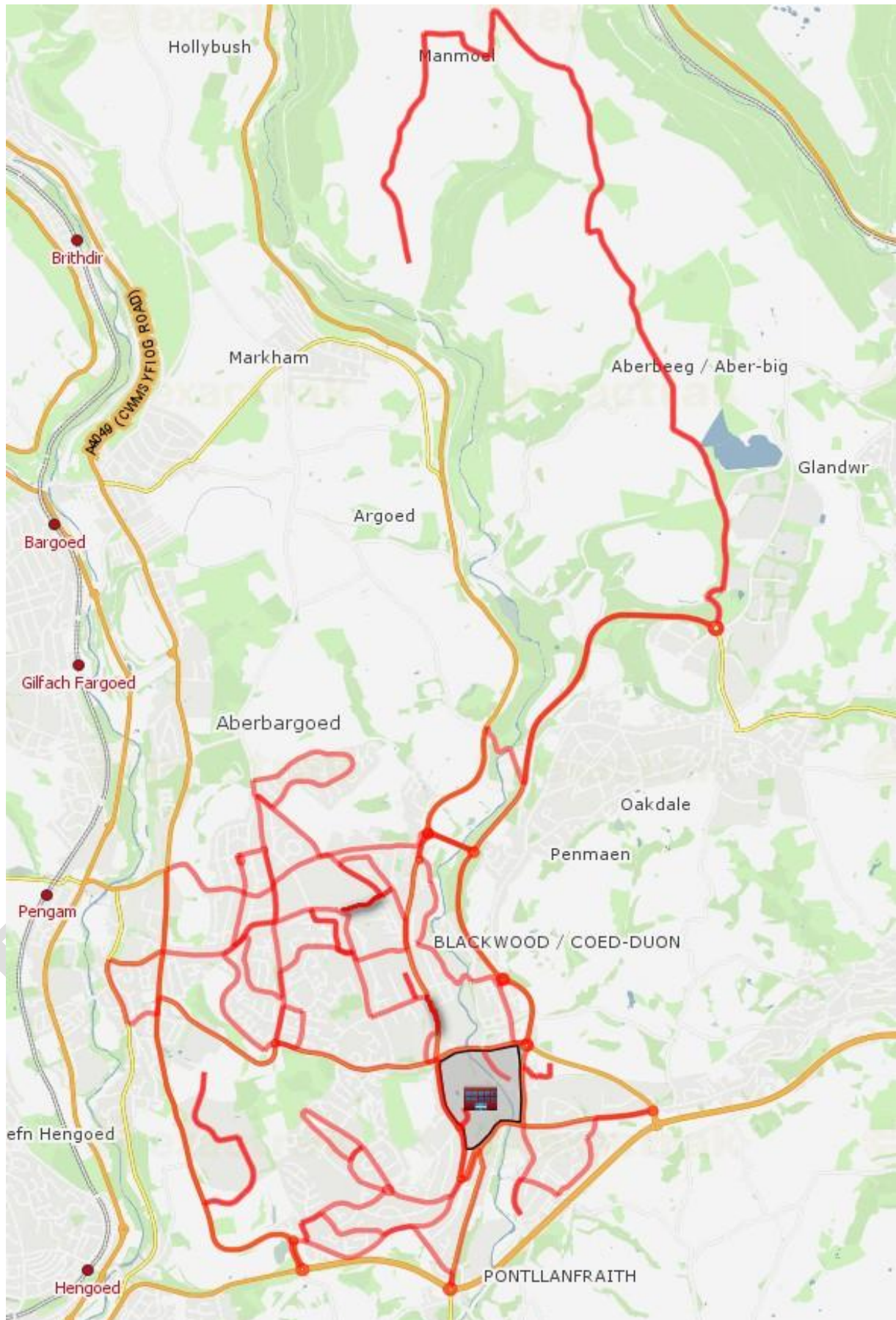


51 F Continue - Travel FAIRVIEW to PWLLGLAS ROAD  
52 F Turn left onto BRYN ROAD. Grit  
53 T Turn right - Grit TWYNYFFALD ROAD  
54 T At roundabout take exit 2 to CEFN ROAD  
55 T Turn left onto SOUTHVIEW ROAD  
56 T Turn right - Grit PENTWYN ROAD  
57 T Turn right onto HIGH STREET  
58 T Continue - Grit HIGH STREET  
59 T Turn right onto LIBANUS ROAD  
60 T Turn left onto LIBANUS ROAD  
61 T Turn left onto HIGH STREET  
62 T At roundabout take exit 1 to GORDON ROAD  
63 T Continue - Complete a loop of the BUS STATION.  
64 T Turn right onto GORDON ROAD  
65 T Continue - Grit GORDON ROAD  
66 T Turn right onto ALBANY ROAD  
67 T Continue - Grit ALBANY ROAD to ATTLEE ROAD  
68 T Turn left onto APOLLO WAY  
69 T Turn right onto CHARTIST WAY  
70 T At roundabout take exit 3 onto BLOOMFIELD ROAD  
71 T Continue - Grit BLOOMFIELD ROAD to SOUTHVIEW ROAD.  
72 T Turn left onto LEWIS LEWIS AVENUE  
73 T Continue - Grit LEWIS LEWIS AVENUE. End of salting  
74 F Turn left onto CEFN ROAD  
75 F Turn right onto BLOOMFIELD ROAD. Grit  
76 T Turn left onto ATTLEE ROAD.  
77 T Continue - Grit ATTLEE ROAD to APOLLO WAY. End of salting.  
78 T Turn right onto ATTLEE ROAD. End of salting  
79 F Travel - Turn right onto APOLLO WAY  
80 F Travel - Turn right onto CHARTIST WAY  
81 F Continue - Travel CHARTIST WAY. Grit  
82 T Enter roundabout salting and take exit 1 to BLOOMFIELD ROAD  
83 T Continue - Grit BLOOMFIELD ROAD  
84 T Turn left onto BRYN ROAD  
85 T Continue - Grit BRYN ROAD  
86 T At roundabout take exit 1 to HIGHFIELDS WAY  
87 T Turn left onto COED LIBANUS  
88 T Turn left onto CLOS COED BACH  
89 T Turn left onto BRYN ROAD  
90 T At roundabout take exit 3 to HEOL Y DDERWEN  
91 T Continue - Grit HEOL Y DDERWEN  
92 T Turn right onto FAIRVIEW  
93 T Turn right onto ELGAR CLOSE  
94 T Continue - Grit ELGAR CLOSE TO GRANGE HILL. End of salting  
95 F Turn left onto BRYN ROAD  
96 F Continue - Travel BRYN ROAD. Grit  
97 T Turn right - Grit APOLLO WAY  
98 T Continue - Grit APOLLO WAY  
99 T Turn right onto ATTLEE ROAD  
100 T Turn left onto WOODBINE ROAD  
101 T Continue - Grit WOODBINE ROAD  
102 T Turn left onto HIGH STREET  
103 T Continue - Grit HIGH STREET

104	T	At roundabout complete a circuit and take exit 1 to HIGH STREET
105	T	At roundabout take exit 4 to HIGH STREET
106	T	At roundabout take exit 1 to CLIFF ROAD
107	T	At roundabout take exit 1 to CLIFF ROAD
108	T	At roundabout take exit 1 to HALL STREET
109	T	Continue - Grit HALL STREET to BRIDGE STREET
110	T	Continue - Grit BRIDGE STREET to PARK TERRACE
111	T	Continue - Grit PARK TERRACE
112	T	Turn left onto WOODFIELD TERRACE
113	T	At roundabout take exit 4 to WOODFIELD TERRACE
114	T	Continue - Grit WOODFIELD TERRACE
115	T	Turn Left onto B4254
116	T	At roundabout take exit 3 to PENMAEN ROAD
117	T	Turn left - Grit WOODFIELD SIDE BUSINESS CENTRE
118	T	U-turn - Grit WOODFIELD SIDE BUSINESS CENTRE to PENMAEN ROAD
119	T	Turn left - Grit B4251 to LLANARTH ROAD
120	T	Continue - Grit LLANARTH ROAD to CWMALSIE CRESCENT
121	T	Continue - Grit CWMALSIE CRESCENT to MILL ROAD. End of Salting
122	F	U-turn - Travel CWMALSIE CRESCENT to WOODLAND ROAD. Grit
123	T	Turn right - Grit WOODLAND ROAD to UPLAND ROAD
124	T	Turn left - Grit UPLAND ROAD
125	T	Continue - Grit UPLAND ROAD to MILLBROOK ROAD
126	T	Turn right - Grit MILLBROOK ROAD to NEWBRIDGE ROAD
127	T	Turn right - Grit NEWBRIDGE ROAD
128	T	At roundabout take exit 4 back to NEWBRIDGE ROAD
129	T	Continue - Grit NEWBRIDGE ROAD to COMMERCIAL STREET
130	T	Continue - Grit COMMERCIAL STREET.
131	T	At roundabout take exit 1 to SIR IVORS ROAD
132	T	Continue - Grit SIR IVORS ROAD
133	T	At roundabout complete a circuit and take exit 1 to A472
134	T	Continue - Grit A472
135	T	At roundabout complete a circuit and take exit 4 back to A472
136	T	Continue - Grit A472
137	T	At roundabout take exit 3 to SIR IVORS ROAD. End of salting
138	F	Travel - Turn left onto GELLI LANE. Grit
139	T	Turn left - Grit BRYN ROAD
140	T	Continue - Grit BRYN ROAD
141	T	Turn right onto CROWN LANE
142	T	Bear right onto BRYN LANE
143	T	Continue - Grit BRYN LANE to RUSHMERE ROAD
144	T	Continue - Grit RUSHMERE ROAD to THE CIRCLE
145	T	At roundabout complete a circuit and take exit 2 on to ST MARY'S ROAD
146	T	Bear left - Grit ST MARY'S ROAD to FLEUR-DE-LYS AVENUE
147	T	Turn left - Grit FLEUR-DE-LYS AVENUE to HIGHMEAD
148	T	Continue - Grit HIGHMEAD to ST MARY'S ROAD
149	T	Turn left - Grit ST MARY'S ROAD to FLEUR-DE-LYS AVENUE
150	T	Turn right - Grit FLEUR-DE-LYS AVENUE to THE CIRCLE
151	T	At roundabout take exit 3 to MANOR ROAD
152	T	Continue - Grit MANOR ROAD
153	T	Turn left onto BRYN ROAD
154	T	At roundabout complete a circuit and take exit 1 to BLACKWOOD ROAD
155	T	At roundabout take exit 3 to CIVIC CENTRE
156	T	Continue - Grit CIVIC CENTRE. End of salting

157 F U turn - Travel CIVIC CENTRE to roundabout  
158 F At roundabout take exit 1 to BLACKWOOD ROAD. Grit  
159 T Enter roundabout gritting take exit 1 to COMMERCIAL STREET  
160 T At roundabout take exit 3 back to COMMERCIAL STREET  
161 T At roundabout take exit 1 to BRYN ROAD  
162 T Continue - Grit BRYN ROAD  
163 T Turn right onto FOREST HILL  
164 T Continue - Grit FOREST HILL. End of salting  
165 F Turn left - Travel BRYN LANE  
166 F Bear left - Travel CROWN LANE. Grit  
167 T Turn Right - Grit BRYN ROAD  
168 T At roundabout complete a circuit and take exit 1 to A472  
169 T At roundabout complete a circuit and take exit 4 to A472  
170 T At roundabout take exit 1 to A4049  
171 T Continue - Grit A4049  
172 T Turn right onto HAWTIN PARK  
173 T Continue - Grit HAWTIN PARK. End of salting  
174 F U turn - Travel HAWTIN PARK. Grit  
175 T Turn right onto A4049  
176 T Continue - Grit A4049. End of salting.  
177 F Turn left - Travel ST DAVIDS ROAD  
178 F Turn left - Travel HIGH STREET. Grit  
179 T Turn left - Grit PLAS ROAD  
180 T Continue - Grit PLAS ROAD  
181 T Turn left - Grit A4049  
182 T Turn right - Grit B4254  
183 T Continue - Grit B4254  
184 T At roundabout complete a circuit and take exit 3 to HIGHFIELDS WAY  
185 T Continue - Grit HIGHFIELDS WAY  
186 T Turn right onto BLACKWOOD ROAD  
187 T At roundabout take exit 4 to BLACKWOOD ROAD  
188 T Turn right onto B4254  
189 T Continue - Travel B4254 to PENMAEN ROAD INDUSTRIAL ESTATE  
190 T Turn right onto PENMAEN ROAD INDUSTRIAL ESTATE  
191 T Turn left into DEPOT

Pre-salting Route 4 (Penmaen)



## Pre-salting Route 5 (Penmaen)

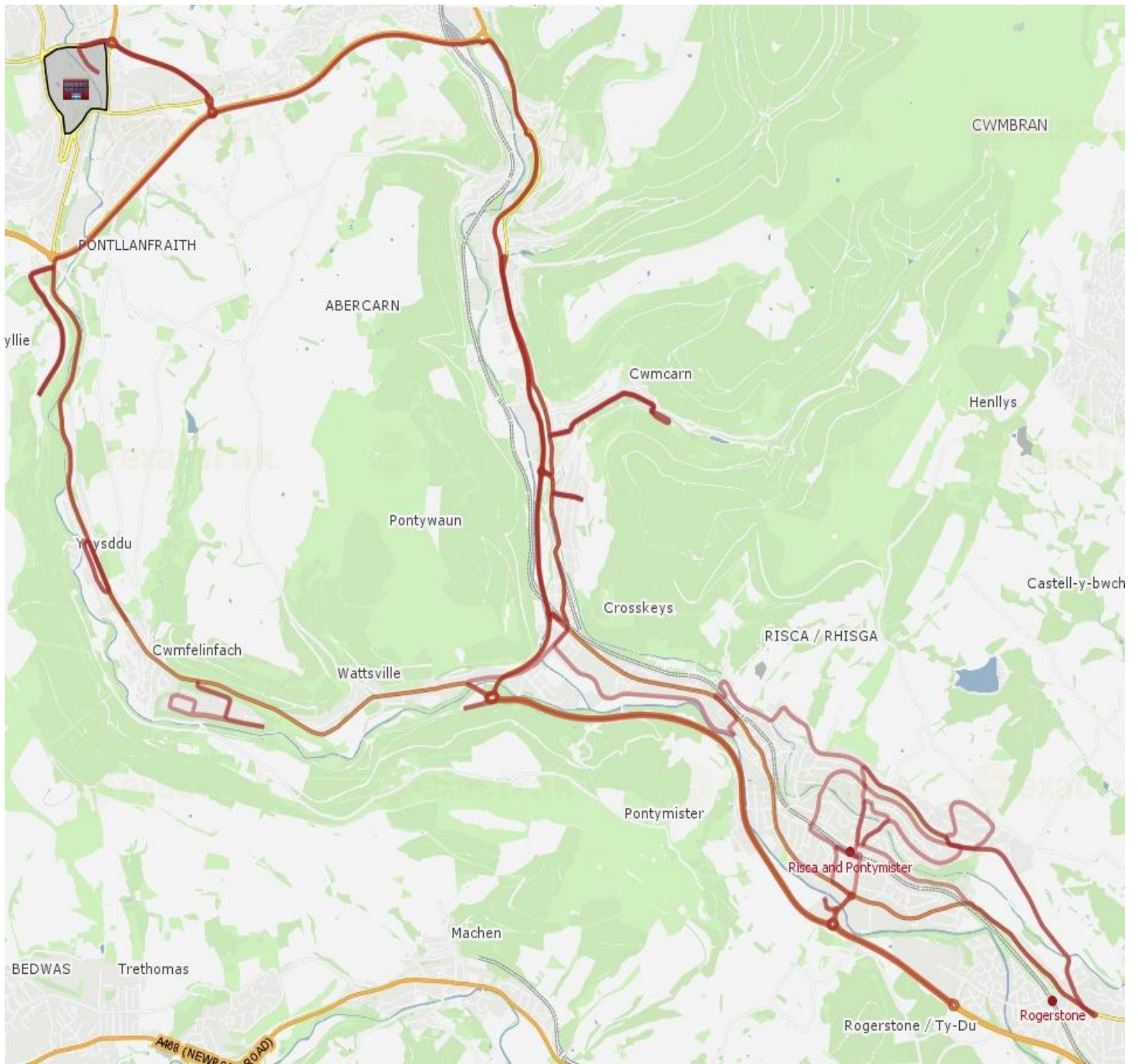
No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn right - Travel B4254
3	F At roundabout take exit 2 onto A4048
4	F At roundabout take exit 2 onto A4048
5	F At roundabout take exit 3 onto A472. Grit
6	T Enter roundabout salting and take exit 1 onto B4251
7	T Turn right onto HEOLDDU ROAD
8	T Turn left - Grit WYLLIE ROAD to GLANHOWY ROAD
9	T Continue - Grit GLANHOWY ROAD to End of Salting
10	F U-turn - Travel GLANHOWY ROAD to WYLLIE ROAD
11	F Continue - Travel WYLLIE ROAD to HEOLDDU ROAD
12	F Turn right - Travel HEOLDDU ROAD to B4251. Grit
13	T Turn right - Grit B4251
14	T Continue - Grit B4251
15	T Turn right onto HIGH STREET LINK
16	T Continue - Grit HIGH STREET LINK to HIGH STREET
17	T Continue - Grit HIGH STREET LINK to HIGH STREET
18	T Turn right onto B4251
19	T Continue - Grit B4251
20	T Continue - Grit B4251 to MAINDEE ROAD
21	T Turn right onto GREENMEADOW ROAD
22	T Turn left onto HEOL GLAN-YR-AFON
23	T U-turn - Grit HEOL GLAN-YR-AFON
24	T Continue - Grit HEOL GLAN-YR-AFON to HEOL TIR TON.
25	T Continue - Grit HEOL TIR TON.
26	T Turn left onto GREENMEADOW ROAD
27	T Turn right onto B4251
28	T Continue - Grit B4251 to ISLWYN ROAD
29	T At roundabout take exit 4 onto ISLWYN ROAD
30	T Turn right onto GLADSTONE STREET
31	T Continue - Grit GLADSTONE STREET to HIGH STREET
32	T Continue - Grit HIGH STREET to TWYNCARN ROAD
33	T Turn right onto SILVER STREET. End of salting
34	F U-turn - Travel SILVER STREET to TWYNCARN ROAD. Grit
35	T Turn right - Grit TWYNCARN ROAD
36	T At roundabout take exit 4 to TWYNCARN ROAD
37	T Turn left onto NEWPORT ROAD
38	T Turn right onto IVOR STREET
39	T Turn left - Grit BERNARD STREET
40	T Continue - Grit NANTCARN ROAD
41	T Turn right - Grit NANTCARN ROAD
42	T Turn left - Grit VISITOR CENTRE ACCESS ROAD. End of Salting
43	F U-turn - Travel VISITOR CENTRE ACCESS ROAD to NANTCARN ROAD
44	F Turn right - Travel NANTCARN ROAD
45	F Turn left - Travel NANTCARN ROAD
46	F Continue - Travel BERNARD STREET
47	F Turn right - Travel IVOR STREET. Grit
48	T Turn right - Grit B4591 NEWPORT ROAD
49	T Continue - Grit NEWPORT ROAD
50	T Turn left onto ABERCARN LINK ROAD
51	T Turn left onto A467

52	T	Continue - Grit A467
53	T	At roundabout complete a circuit and take exit 2 to A467
54	T	At roundabout complete a circuit and take exit 1 to A467
55	T	At roundabout complete a circuit and take exit 2 to A467
56	T	At roundabout complete a circuit and take exit 3 to A467
57	T	At roundabout take exit 2 to A467
58	T	At roundabout take exit 1 to FULL MOON ACCESS ROAD
59	T	U-turn - Grit FULL MOON ACCESS ROAD
60	T	At roundabout take exit 2 to A467
61	T	Turn right onto CROSSKEYS ACCESS ROAD
62	T	Continue - Grit HIGH STREET
63	T	Continue - Grit HIGH STREET to CROMWELL ROAD
64	T	Continue - Grit CROMWELL ROAD to ST MARY STREET
65	T	Continue - Grit ST MARYS STREET to TREDEGAR STREET
66	T	At roundabout complete a circuit and take exit 2 to PONTYMISTER LINK ROAD
67	T	At roundabout salting and take exit 3 on to TESCO ACCESS ROAD.
68	T	Continue - Grit TESCO ACCESS ROAD to PRIVATE ROAD
69	T	U-turn - Travel TESCO ACCESS ROAD to roundabout
70	T	At roundabout take exit 3 on to PONTYMISTER LINK ROAD
71	T	At roundabout take exit 4 onto PONTYMISTER LINK ROAD
72	T	AT roundabout take exit 2 to PONTYMISTER LINK ROAD
73	T	At roundabout take exit 3 to NEWPORT ROAD
74	T	Continue - Grit NEWPORT ROAD to RISCA ROAD
75	T	At roundabout take exit 3 to RISCA ROAD
76	T	Turn right onto PONTYMASON LANE
77	T	Continue - Grit PONTYMASON LANE
78	T	At roundabout take exit 1 to ELM DRIVE
79	T	Turn right onto HOLLY ROAD
80	T	Turn right onto COTSWOLD WAY
81	T	Continue - Grit COTSWOLD WAY
82	T	At roundabout take exit 2 to ELM DRIVE. End of salting
83	F	Turn right - Travel HOLLY ROAD
84	F	Continue - travel HOLLY ROAD. Grit.
85	T	Turn left -Grit ROWAN ROAD
86	T	Continue - Grit THISTLE WAY
87	T	Continue - Grit LOWER WYNDHAM TERRACE
88	T	Continue - Grit MILL STREET
89	T	At roundabout take exit 3 to TREDEGAR STREET
90	T	Turn right onto MARYLAND ROAD
91	T	Turn right - Grit Park & RIDE
92	T	Turn right - Grit MARYLAND ROAD
93	T	Continue - Grit MARYLAND ROAD
94	T	Turn right onto GELLI AVENUE
95	T	Continue - Grit GELLI AVENUE to ELM DRIVE
96	T	Continue - Grit ELM DRIVE
97	T	Turn right onto MANOR WAY
98	T	Continue - Grit MANOR WAY to MANOR ROAD
99	T	Turn right onto CHANNEL VIEW
100	T	At roundabout take exit 3 to LOWER WYNDHAM TERRACE
101	T	Continue - Grit LOWER WYNDHAM TERRACE to THISTLE WAY
102	T	Turn right onto ALMOND AVENUE
103	T	Turn right onto MAPLE AVENUE. End of salting
104	F	Turn right - Travel MANOR ROAD. Grit
105	T	Turn left - Grit CHANNEL VIEW

106	T	Continue - Grit CHANNEL VIEW to HERBERT AVENUE
107	T	Continue - Grit HERBERT AVENUE. End of salting
108	F	Turn left - Travel NEWPORT ROAD
109	F	Continue - Travel NEWPORT ROAD to RISCA ROAD
110	F	At roundabout take exit 3 to RISCA ROAD
111	F	Turn right onto PONTYMASON LANE
112	F	Continue - Travel PONTYMASON LANE
113	F	At roundabout take exit 1 to ELM DRIVE. Grit
114	T	Turn right -Grit HOLLY ROAD
115	T	Continue - Grit HOLLY ROAD to FERNLEA
116	T	Continue - Grit FERNLEA
117	T	Turn right onto DARRAN ROAD
118	T	Continue - Grit DARRAN ROAD. End of salting
119	F	Turn left - Travel ST MARY STREET. Grit
120	T	Turn right - Grit GROVE ROAD
121	T	Continue - Grit GROVE ROAD to CRESCENT ROAD
122	T	Continue - Grit CRESCENT ROAD to NEW PARK ROAD
123	T	Continue - Grit NEW PARK ROAD to WAUNFAWR PARK ROAD
124	T	Continue - Grit WAUNFAWR PARK ROAD to COBDEN STREET
125	T	Continue - Grit COBDEN STREET
126	T	Turn right onto GLADSTONE STREET
127	T	Turn left onto CROSSKEYS ACCESS ROAD
128	T	Turn right onto A467
129	T	At roundabout take exit 2 to A467
130	T	Continue - Grit A467 to ABERCARN. End of salting
131	F	Continue - Travel A467
132	F	At roundabout take exit 2 to A467
133	T	Enter roundabout gritting and take exit 1 to A472
134	T	Continue - Grit A472
135	T	At roundabout take exit 3 back onto A472
136	T	Continue - Grit A472. End of salting
137	F	At roundabout take exit 4 to A472
138	F	At roundabout take exit 3 to A4048
139	F	At roundabout take exit 2 to A4048
140	F	At roundabout take exit 2 to B4254
141	F	Turn left into PENMAEN INDUSTRIAL ESTATE
142	F	Turn left into DEPOT



Pre-salting Route 5 (Penmaen)





## Pre-salting Route 6 (Penmaen)

No	GRITTING ROUTE_CARD
1	F Leave yard travel to junction B4254.
2	F Turn right - Travel B4254
3	F At roundabout take exit 3 onto PENMAEN ROAD
4	F Turn right - Travel COMMERCIAL STREET
5	F At roundabout take exit 1 to SIR IVORS ROAD
6	F Continue - Travel SIR IVORS ROAD to NEWPORT ROAD. Grit
7	T Enter roundabout gritting - Take exit 3 to A472
8	T At roundabout take exit 2 to A472 to MAESYCWMMER
9	T Continue - Grit A472 MAIN ROAD
10	T Continue - Grit A472 to A469
11	T Turn right onto YSBYTY YSTRAD FAWR
12	T At roundabout complete a circuit and take exit back to A469
13	T Turn right onto A469
14	T At roundabout complete a circuit and take exit 4 back onto A469
15	T Bear left - Grit YSBYTY FAWR access road
16	T Enter Roundabout salting and return back to A469.
17	T Bear left - Grit A469
18	T Bear right - Grit A469 to A472 MAIN ROAD
19	T Continue - Grit A472
20	T Turn right onto TABOR ROAD
21	T Continue - grit TABOR ROAD to PARK ROAD
22	T Turn right onto SPRINGFIELD
23	T Turn right onto PLEASANT VIEW
24	T Turn right onto PARK ROAD
25	T Turn left onto HILL VIEW
26	T Continue - Grit HILL VIEW to ST DAVIDS ROAD
27	T Turn left onto ERASMUS TERRACE
28	T Continue - Grit ERASMUS TERRACE to JENKIN STREET
29	T Turn right onto TABOR ROAD. End of salting.
30	F Travel - TABOR ROAD
31	F Turn left onto A472
32	F Travel - A742 to A469
33	F Enter roundabout and take exit 3 to DUFFRYN INDUSTRIAL ESTATE
34	F Enter roundabout and take exit 3 to TWYN ROAD. Grit
35	T Turn right - Grit CAERPHILLY ROAD.
36	T Continue - Grit Caerphilly Road
37	T Turn left - Complete a circuit of TY GRADDFA
38	T Turn left - Grit CAERPHILLY ROAD
39	T At roundabout complete a circuit and take exit 1 onto A472 to NELSON
40	T At roundabout complete a circuit and take exit 1 onto A472 to NELSON
41	T Continue - Grit A472
42	T At roundabout complete a circuit and take exit 1 onto A472
43	T At roundabout complete a circuit and take exit 2 onto A472
44	T At roundabout take exit 4 onto A472
45	T At roundabout take exit 3 onto A472
46	T At roundabout take exit 1 onto CAERPHILLY ROAD
47	T Turn left onto HEOL FAWR
48	T Continue - Grit HEOL FAWR to MOUNTAIN VIEW. End of salting
49	F U-turn - Travel MOUNTAIN VIEW to COMMERCIAL STREET. Grit
50	T Turn left - Grit COMMERCIAL STREET

51 T At roundabout complete a circuit and take exit 2 to COMMERCIAL STREET

52 T Turn left onto HIGH STREET

53 T Continue - Grit HIGH STREET

54 T Turn left onto LLWYNCELYN TERRACE

55 T Turn left onto A472

56 T At roundabout take exit 2 to DYNEVOR TERRACE

57 T Continue - Grit DYNEVOR TERRACE

58 T At roundabout take exit 1 to COMMERCIAL STREET

59 T Continue - Grit COMMERCIAL STREET to SHINGRIG ROAD

60 T Continue - Grit SHINGRIG ROAD

61 T Turn right onto GELLIGAER ROAD

62 T Continue - Grit GELLIGAER ROAD to CHURCH ROAD

63 T Continue - Grit CHURCH ROAD

64 T Turn right onto PENALLTA ROAD

65 T Continue - Grit PENALLTA ROAD

66 T Turn right onto HEOL CATTWG

67 T Continue - Grit HEOL CATTWG to ANEURIN BEVAN AVENUE

68 T Turn right onto CHURCH ROAD. End of salting.

69 F Travel - Turn right onto PENALLTA ROAD

70 F Travel to HEOL CATTWG. Grit

71 T Continue - Grit PENALLTA ROAD to PEN-Y-BRYN TERRACE

72 T Turn right onto GELLIARGWELLT ROAD

73 T Turn right onto TROSNANT CRESCENT

74 T Turn right onto PENALLTA ROAD

75 T Continue - Grit PENALLTA ROAD to PEN-Y-BRYN TERRACE

76 T Continue - Grit PEN-Y-BRYN TERRACE

77 T Turn left onto WEST ROAD

78 T Turn right onto EAST ROAD

79 T Turn left onto NORTH ROAD. End of salting

80 F U-turn. Travel NORTH ROAD. Grit

81 T Turn left - Grit EAST ROAD

82 T At roundabout complete a circuit and take exit 4 to EAST ROAD

83 T Turn left onto SOUTH ROAD

84 T Continue - Grit SOUTH ROAD. End of salting.

85 F U-turn, travel SOUTH ROAD.

86 F Travel - Turn left onto EAST ROAD

87 F Travel - Turn left onto WEST ROAD

88 F Travel WEST ROAD. Grit.

89 T Turn left - Grit PENALLTA ROAD

90 T Turn left onto CWM CALON ROAD.

91 T U-turn - Travel CWM CALON ROAD. Grit

92 T Turn left - Grit PENALLTA ROAD

93 T Turn left - Grit PENALLTA ROAD

94 T At roundabout take exit 1 to BEDWLWYN STREET

95 T At roundabout take exit 2 to PENGAM ROAD

96 T Continue - Grit PENGAM ROAD

97 T At roundabout complete a circuit and take exit 2 to A469

98 T At roundabout complete a circuit and take exit 4 back to A469

99 T Continue - Grit A469

100 T At roundabout take exit 2 to PENGAM ROAD

101 T Turn right onto DAVIES STREET

102 T Turn left onto BEDWLWYN ROAD

103 T Continue - Grit BEDWLWYN ROAD.

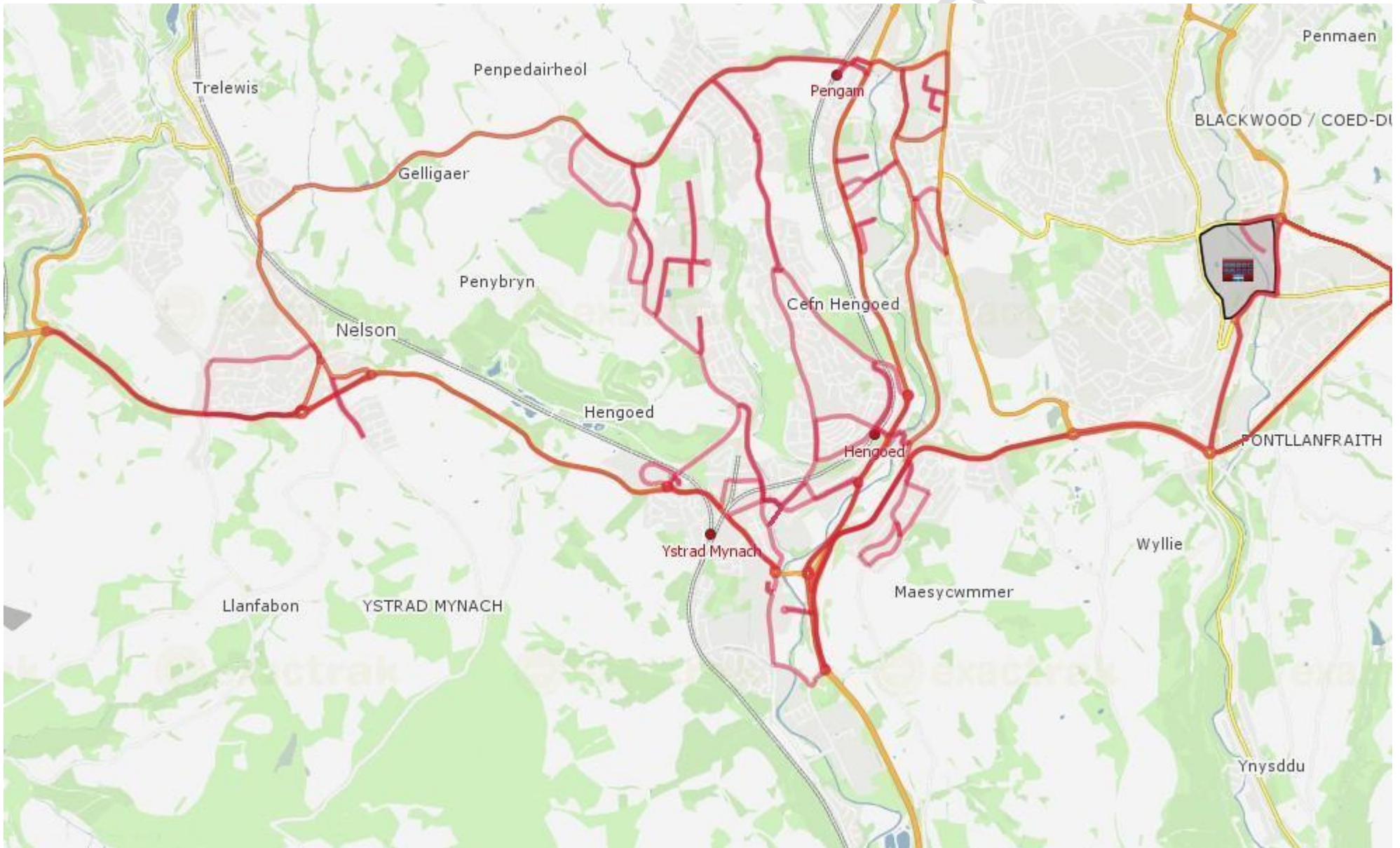
104	T	At roundabout take exit 2 to BEDWLWYN ROAD
105	F	Turn right onto PENALLTA ROAD. End of salting
106	F	Travel - At roundabout take exit 2 to PENALLTA ROAD
107	F	Travel - PENALLTA ROAD. Grit
108	T	Turn left - Grit PENALLTA LINK ROAD
109	T	At roundabout take exit 3 to TY PENALLTA
110	T	Continue - Grit TY TREDOMEN
111	T	Continue - Grit TY PENALLTA
112	T	Continue - Grit TREDOMEN BUSINESS CENTRE
113	T	Continue - Grit TREDOMEN GATEWAY
114	T	Turn left onto PENALLTA LINK ROAD
115	T	At roundabout take exit 1 to A472 CAERPHILLY ROAD
116	T	Turn left onto STATION ROAD
117	T	Turn right onto PANTYCELYN STREET
118	T	Continue - Grit PANTYCELYN STREET. End of salting
119	F	Turn right onto PENALLTA ROAD. Grit
120	T	Enter roundabout gritting - take exit 3 to LEWIS STREET
121	T	Continue - Grit LEWIS STREET. End of salting
122	F	Travel - Turn left onto A472 CAERPHILLY ROAD
123	F	Travel CAERPHILLY ROAD. Grit
124	T	Enter Roundabout gritting take exit 1 to COMMERCIAL STREET
125	T	Continue - Grit COMMERCIAL STREET to PENALLTA ROAD
126	T	At roundabout take exit 3 to BEDWLWYN STREET
127	T	At roundabout take exit 1 to BEDWLWYN ROAD
128	T	Continue - Grit BEDWLWYN ROAD to HENGOED ROAD
129	T	Continue - Grit HENGOED ROAD to GELLIGAER ROAD
130	T	Turn right onto HENGOED AVENUE
131	T	Continue - Grit HENGOED AVENUE
132	T	Turn right onto BRYNAVON TERRACE
133	T	Turn right onto KINGS HILL. End of salting
134	F	Turn left - Travel HENGOED ROAD. Grit
135	T	Turn left - Grit PARK ROAD. End of salting
136	F	Travel - PARK ROAD TO BRYNAVON TERRACE
137	F	Continue - Travel BRYNAVON TERRACE. Grit
138	T	Turn right - Grit HENGOED AVENUE
139	T	At roundabout complete a circuit and take exit 1 to A469
140	T	Continue - Grit A469
141	T	Turn right onto TIR-Y-BERTH INDUSTRIAL ESTATE
142	T	Continue - Grit ENTERPRISE HOUSE
143	T	U-turn - Grit to A469
144	T	Turn right onto A469
145	T	Continue - Grit A469
146	T	Turn right into TIR-Y-BERTH DEPOT
147	T	U-turn - Grit to A469
148	T	Turn right onto A469
149	T	Continue - Grit A469
150	T	Turn left onto CARDIFF ROAD
151	T	Turn right onto THE SQUARE
152	T	Turn right onto A469
153	T	Turn right onto CARDIFF ROAD
154	T	Turn left onto B4254 PENGAM ROAD
155	T	Turn left onto PENGAM PARK & RIDE
156	T	Continue - Grit PENGAM PARK & RIDE

157	T	U-turn - return to B4254
158	T	Turn left onto B4254 PENGAM ROAD
159	T	Continue - Grit PENGAM ROAD
160	T	Turn left onto HENGOED ROAD
161	T	At roundabout complete a circuit and take exit 2 to HENGOED ROAD
162	T	Continue - Grit HENGOED ROAD. End of salting
163	F	U turn - Travel HENGOED ROAD
164	F	Travel - At roundabout take exit 2 to HENGOED ROAD
165	F	Travel - HENGOED ROAD. Grit
166	T	Turn left - Grit B4254 CHURCH ROAD
167	T	Continue - Grit B4254 CHURCH ROAD. End of salting.
168	F	U-turn - Travel B4254 CHURCH ROAD
169	F	Continue - Travel CHURCH ROAD to PENGAM ROAD
170	F	Continue - Travel PENGAM ROAD to THE SQUARE. Grit
171	T	Continue - Grit HIGH STREET
172	T	Turn right onto COMMERCIAL STREET
173	T	Turn left onto ST DAVIDS ROAD
174	T	Turn left onto A4049
175	T	Turn left onto ST DAVIDS INDUSTRIAL ESTATE
176	T	Continue - Grit ST DAVIDS INDUSTRIAL ESTATE
177	T	U-turn - Grit St DAVIDS INDUSTRIAL ESTATE
178	T	Turn left onto A469.
179	T	Turn left onto HIGH STREET
180	T	Turn left onto COMMERCIAL STREET
181	T	Continue - Grit COMMERCIAL STREET
182	T	Continue - Grit COMMERCIAL STREET to HIGH STREET
183	T	Turn right onto FORD ROAD
184	T	Continue - Grit FORD ROAD to BEATTY STREET
185	T	Turn right - Grit HORNER STREET to A469
186	T	Turn left onto A469.
187	T	Turn left onto BEATTY STREET
188	T	Continue - Grit BEATTY STREET to FORD ROAD
189	T	Turn right onto HIGH STRET
190	T	Turn left onto PLAS ROAD
191	T	Turn right onto GELLI HAF ROAD
192	T	Turn left onto A4049
193	T	Turn left onto PLAS ROAD
194	T	Turn left onto VICTORIA ROAD
195	T	Continue - Grit VICTORIA ROAD
196	T	Turn right onto VIADUCT LANE
197	T	Turn left onto A469.
198	T	At roundabout take exit 4 back to A469
199	T	Turn left onto KINGS HILL
200	T	U-turn - Grit KINGS HILL
201	T	Turn left onto A469.
202	T	At roundabout take exit 3 back to A469
203	T	Turn left onto VIADUCT LANE
204	T	Turn right onto THOMAS STREET
205	T	Continue - Grit THOMAS STREET. End of salting
206	F	Turn right onto A472.
207	F	Travel A472. Grit
208	T	Turn right onto DANCE CENTRE ROUNDABOUT SLIP ROAD
209	T	At roundabout take exit 4 onto A472 SLIP ROAD

210	T	Bear left onto A472. End of salting
211	F	Travel A472. Grit
212	T	Enter roundabout gritting - Take exit 2 to A472
213	T	Continue - Grit A472.
214	T	At roundabout take exit 2 to A472.
215	T	Continue - Grit A472. End of salting
216	F	At roundabout take exit 1 to A4048
217	F	At roundabout take exit 2 to A4048
218	F	At roundabout take exit 2 to B4254
219	F	Turn left into PENMAEN ROAD INDUSTRIAL ESTATE
219	F	Turn left into DEPOT

EXAMPLE

Pre-salting Route 6 (Penmaen)



## Pre-salting Route 7 (Bedwas)

No	GRITTING ROUTE_CARD
1	F Leave yard - Grit GREENWAY INDUSTRIAL ESTATE
2	T Turn right - Grit A468
3	T At roundabout take exit 3 to CROSSWAYS INDUSTRIAL ESTATE
4	T At roundabout complete a circuit and take exit 2 to PARC PONTYPANDY
5	T At roundabout complete a circuit and take exit 2 to PARC PONTYPANDY
6	T At roundabout complete a circuit and take exit 3 to A468 link road
7	T At roundabout take exit 3 back to A468 link road
8	T At roundabout take exit 1 to PARC PONTYPANDY
9	T At roundabout take exit 3 to HEOL TY MERCHANT
10	T Continue - Grit HEOL TY MERCHANT
11	T Turn right onto HEOL BRO WEN
12	T Continue - Grit HEOL BRO WEN
13	T Turn right onto HEOL TY MERCHANT
14	T Turn left onto HEOL BRO WEN
15	T AT roundabout complete a circuit and take exit 2 to HEOL BRO WEN
16	T Turn right onto PONTYGWINDY ROAD
17	T Take 2nd left onto PONTYGWINDY INDUSTRIAL ESTATE
18	T Turn left onto PONTYGWINDY INDUSTRIAL ESTATE
19	T Turn left onto PONTYGWINDY ROAD
20	T Continue - Grit PONTYGWINDY ROAD
21	T Turn right onto CATNIC
22	T U-turn - Grit CATNIC
23	T Turn right onto PONTYGWINDY ROAD
24	T Continue - Grit PONTYGWINDY ROAD. End of salting
25	F At roundabout take exit 3 to A469
26	F Continue - Travel A469. Grit
27	T Enter roundabout gritting take exit 1 to COED-Y-BRAIN ROAD
28	T Continue - Grit COED-Y-BRAIN ROAD to HIGH STREET
29	T Continue - Grit HIGH STREET to GLENVIEW TERRACE
30	T Continue - Grit GLENVIEW TERRACE
31	T Turn right onto WINGFIELD TERRACE ACCESS ROAD
32	T At roundabout take exit 3 back to WINGFIELD TERRACE ACCESS ROAD
33	T Turn right onto WINGFIELD TERRACE
34	T Continue - Grit WINGFIELD TERRACE
35	T Continue - Grit WINGFIELD TERRACE to CAERPHILLY ROAD
36	T Continue - Grit CAERPHILLY ROAD
37	T Turn right onto DUFFRYN INDUSTRIAL ESTATE
38	T Turn left onto DUFFRYN INDUSTRIAL ESTATE
39	T At roundabout take exit 2 to A469 ACCESS ROAD
40	T At roundabout take exit 4 back to A469 ACCESS ROAD
41	T At roundabout take exit 3 to TWYN ROAD
42	T Turn left onto CAERPHILLY ROAD
43	T At roundabout take exit 1 to CAERPHILLY ROAD
44	T Continue - Grit CAERPHILLY ROAD. End of salting
45	F Turn left - Travel DUFFRYN INDUSTRIAL ESTATE
46	F Turn left - Travel DUFFRYN INDUSTRIAL ESTATE
47	F At roundabout take exit 2 to A469 ACCESS ROAD
48	F At roundabout take exit 3 to A469
49	F At roundabout take exit 1 to A469
50	F At roundabout take exit 2 to A469. Grit
51	T Enter roundabout gritting take exit 4 to A468

52 T At roundabout complete a circuit and take exit 2 to A468

53 T At roundabout complete a circuit and take exit 5 to A468

54 T At roundabout take exit 2 to A468

55 T At roundabout take exit 1 to HEOL PWLLYPANT

56 T Continue - Grit HEOL PWLLYPANT

57 T Turn right onto HEOL LAS

58 T Turn left onto Y CILGANT

59 T At mini roundabout take exit 2 onto HEOL ANEURIN

60 T Continue - Grit HEOL ANEURIN to BUS TERMINAL

61 T U-Turn - Grit HEOL ANEURIN

62 T Turn left onto HEOL-Y-GOGLEDD

63 T Bear right - Grit PEN-Y-BRYN

64 T Turn right onto HEOL LAS

65 T Turn left onto HENDRE

66 T Continue - Grit HENDRE

67 T Turn right onto HEOL LAS

68 T Continue - Grit HEOL LAS to HEOL CWARREL CLARK

69 T U-turn - Grit HEOL LAS

70 T Turn right onto Y CILGANT

71 T At mini roundabout take exit 1 to HEOL ANURIN

72 T Continue - Grit HEOL ANEURIN

73 T Turn right on CALEDFRYN WAY

74 T Continue - Grit CALEDFRYN WAY to HEOL CWM IFOR

75 T At roundabout take exit 4 to HEOL CWM IFOR. End of salting.

76 F Travel HEOL CWM IFOR

77 F Travel CALEDFRYN WAY. Grit

78 T Turn right - Grit HEOL ANEURIN

79 T Bear left onto HEOL ANEURIN & complete a circuit of TRAFFIC ISLAND

80 T Turn right onto B4263

81 T Continue - Grit B4263 to THOMS STREET

82 T Continue - Grit THOMAS STREET to HIGH STREET

83 T Continue - Grit HIGH STREET to COMMERCIAL STREET

84 T Continue - Grit COMMERCIAL STREET to BUS TERMINUS.

85 T Continue - Grit BUS TERMINUS to CENYDD TERRACE LINK ROAD

86 T Continue - Grit CENYDD TERRACE LINK ROAD to BUS TERMINUS. End of salting.

87 F Travel BUS TERMINUS to COMMERCIAL STREET. Grit

88 T Turn left - Grit HIGH STREET

89 T Continue - Grit HIGH STREET

90 T Turn right onto SCHOOL STREET

91 T Turn left onto UPPER BRYNHYFRYD TERRACE

92 T Turn left onto YSGOL IFOR BACH ACCESS ROAD

93 T Turn left onto HIGH STREET

94 T Turn left onto SCHOOL STREET

95 T Turn right onto LOWER BRYNHYFRYD TERRACE

96 T Bear right onto LOWER BRYNHYFRYD TERRACE

97 T Turn left onto HIGH STREET

98 T Turn left onto B4263

99 T Turn left onto CAERPHILLY ROAD

100 T Continue - Grit CAERPHILLY ROAD. End of salting

101 F Turn left onto B4263

102 F Travel B4263. Grit

103 T Turn right - Grit WINDSOR COLLIERY ACCESS

104 T Continue - Grit to YSGOL IFOR BACH. End of salting.

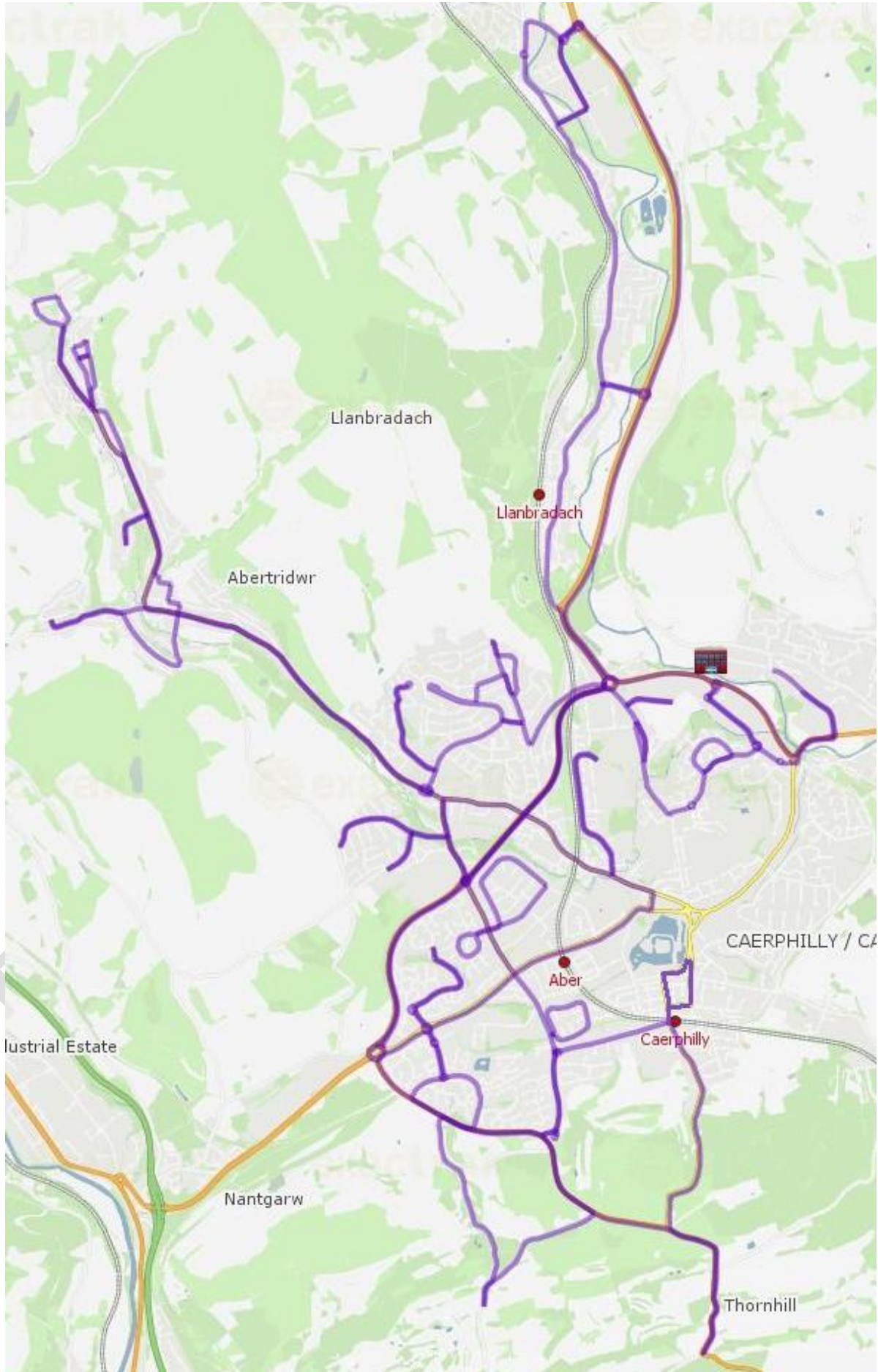
105 F U-turn - Travel WINDSOR COLLIERY ACCESS



106 F Turn right - Travel B4263  
 107 F Continue - Travel B4263 to HIGH STREET. Grit  
 108 T Turn left - Grit BROOK STREET  
 109 T Continue - Grit BROOK STREET to BRYNHAFOD ROAD  
 110 T Continue - Grit BRYNHAFOD ROAD  
 111 T Turn left onto KING STREET  
 112 T Turn right onto ACCESS ROAD  
 113 T Continue - Grit ABERFAWR ROAD  
 114 T Turn right onto ILAN ROAD  
 115 T Continue - Grit ILAN ROAD to TRIDWR ROAD  
 116 T Turn left onto CHURCH ROAD  
 117 T Continue - Grit CHURCH ROAD to WOODLAND TERRACE  
 118 T U-turn - at junction WOODLAND TERRACE and HENDRE ROAD  
 119 T Continue - Grit WOODLAND TERRACE to CHURCH ROAD  
 120 T Continue - Grit CHURCH ROAD. End of salting.  
 121 F Turn right onto B4263  
 122 F Travel - B4263 THOMAS STREET. Grit  
 123 T Enter roundabout gritting take exit 3 to STATION TERRACE  
 124 T Continue - Grit STATION TERRACE  
 125 T Turn right onto HENDREDENNY DRIVE  
 126 T Continue - Grit HENDREDENNY DRIVE. End of salting  
 127 F U-turn Travel HENDREDENNY DRIVE. Grit  
 128 T Turn right - Grit GROESWEN DRIVE. End of salting  
 129 F U-turn at PEMBROKE COURT  
 130 F Travel GROESWEN DRIVE  
 131 F Turn right - Travel HENDREDENNY DRIVE. Grit  
 132 T Turn right - Grit ST CENYDD ROAD  
 133 T At roundabout take exit 4 back to ST CENYDD ROAD. End of salting  
 134 F Travel ST CENYDD ROAD  
 135 F Travel ST CENYDD ROAD to STATION TERRACE  
 136 F Travel STATION TERRACE. Grit  
 137 T Enter roundabout gritting take exit 3 to MILL ROAD  
 138 T Continue - Grit MILL ROAD  
 139 T Turn left onto CAENANT ROAD  
 140 T Continue - Grit CAENANT ROAD to LEWIS DRIVE  
 141 T Continue - Grit LEWIS DRIVE. End of salting  
 142 F U-turn - Travel LEWIS DRIVE. Grit  
 143 T Turn left - Grit MILL ROAD  
 144 T Bear right onto TAFWYS WALK  
 145 T Turn right onto NANTGARW ROAD  
 146 T Continue - Grit NANTGARW ROAD  
 147 T At roundabout complete a circuit and take exit 3 to HEOL TYWYSOG DU  
 148 T At roundabout complete a circuit and take exit 3 to HEOL TYWYSOG DU  
 149 T Continue - Grit HEOL TYWYSOG DU to FFORD PEHRHOS. End of salting  
 150 F U-turn - Travel FFORD PENRHOD  
 151 F Continue - Travel HEOL TYWYSOG DU  
 152 F At roundabout take exit 1 to HEOL TYWYSOG DU. Grit  
 153 T Enter roundabout salting take exit 2 to FFORD TRAWS CWM  
 154 T At roundabout complete a circuit and take exit 2 to FFORD TRAWS CWM  
 155 T At roundabout complete a circuit and take exit 3 to CAE CROES HEOL  
 156 T Turn left onto A469  
 157 T Turn left onto FFORD TRAWS CWM  
 158 T At roundabout take exit 2 to FFORD TRAWS CWM  
 159 T At roundabout take exit 3 to FFORD TRAWS CWM

160 T At roundabout take exit 2 to FFORD TRAWS CWM  
 161 T At roundabout take exit 1 to NANTGARW ROAD  
 162 T At roundabout take exit 1 to A469  
 163 T Continue - Grit A469  
 164 T Turn left onto WATFORD ROAD  
 165 T Turn right onto TURNING AREA  
 166 T U-turn in TURNING AREA  
 167 T Turn right onto WATFORD ROAD  
 168 T Turn right onto ST MARTINS ROAD. Grit TRAFFIC ISLAND  
 169 T Continue - Grit ST MARTINS ROAD. End of salting  
 170 F Turn left - Travel CARDIFF ROAD  
 171 F Continue - Travel CARDIFF ROAD to CASTLE STREET  
 172 F Turn right - Travel MARKET STREET  
 173 F Continue - Travel WHITE STREET. Grit  
 174 T Turn right - Grit BARTLETT STREET  
 175 T Turn left - Grit MOUNTAIN ROAD  
 176 T Continue - Grit MOUNTAIN ROAD  
 177 T Turn left onto A469  
 178 T Continue - Grit A469  
 179 T U-turn - Grit A469  
 180 T Continue - Grit A469  
 181 T Turn left onto BLACKBROOK ROAD  
 182 T Turn right onto WAUNWAELOD WAY  
 183 T Continue - Grit WAUNWAELOD WAY  
 184 T U-turn - Grit WAUNWAELOD WAY  
 185 T Continue - Grit WAUNWAELOD WAY. End of salting  
 186 F Turn left - Travel A469  
 187 F Turn right - Travel WATFORD ROAD. Grit  
 188 T Continue - Grit WATFORD ROAD to LON-Y-LLYN  
 189 T Turn right onto ST CHRISTOPHERS DRIVE  
 190 T Turn left onto ST CHRISTOPHERS DRIVE  
 191 T Continue - Grit ST CHRISTOPHERS DRIVE  
 192 T Turn left onto ST CHRISTOPHERS DRIVE  
 193 T Turn right onto LON-Y-LLYN  
 194 T Continue - Grit LON-Y-LLYN to ST CENYDD ROAD  
 195 T Continue - Grit ST CENYDD ROAD  
 196 T Turn left onto CAER FFERM  
 197 T Continue - Grit CAER FFERM  
 198 T Turn right onto CAER FFERM  
 199 T Continue - Grit FIRST AVENUE  
 200 T Turn left - Grit EAST AVENUE  
 201 T Continue - Grit EAST AVENUE to THE CRESCENT  
 202 T At roundabout take exit 1 to THE CRESCENT  
 203 T Continue - Grit THE CRESCENT to WEST AVENUE  
 204 T Turn right onto FIRST AVENUE  
 205 T Turn right onto ST CENYDD ROAD  
 206 T Continue - Grit ST CENYDD ROAD. End of salting  
 207 F Travel - At roundabout take exit 3 to A468  
 208 F Travel - At roundabout take exit 4 to A468  
 209 F Travel - At roundabout take exit 1 to A468  
 210 F Travel - At roundabout take exit 1 to A468  
 211 F Turn left into GREENWAY INDUSTRIAL ESTATE  
 212 F Continue - Travel GREENWAY INDUSTRIAL ESTATE  
 213 F Turn left into DEPOT

Pre-salting Route 7 (Bedwas)



## Pre-salting Route 8 (Bedwas)

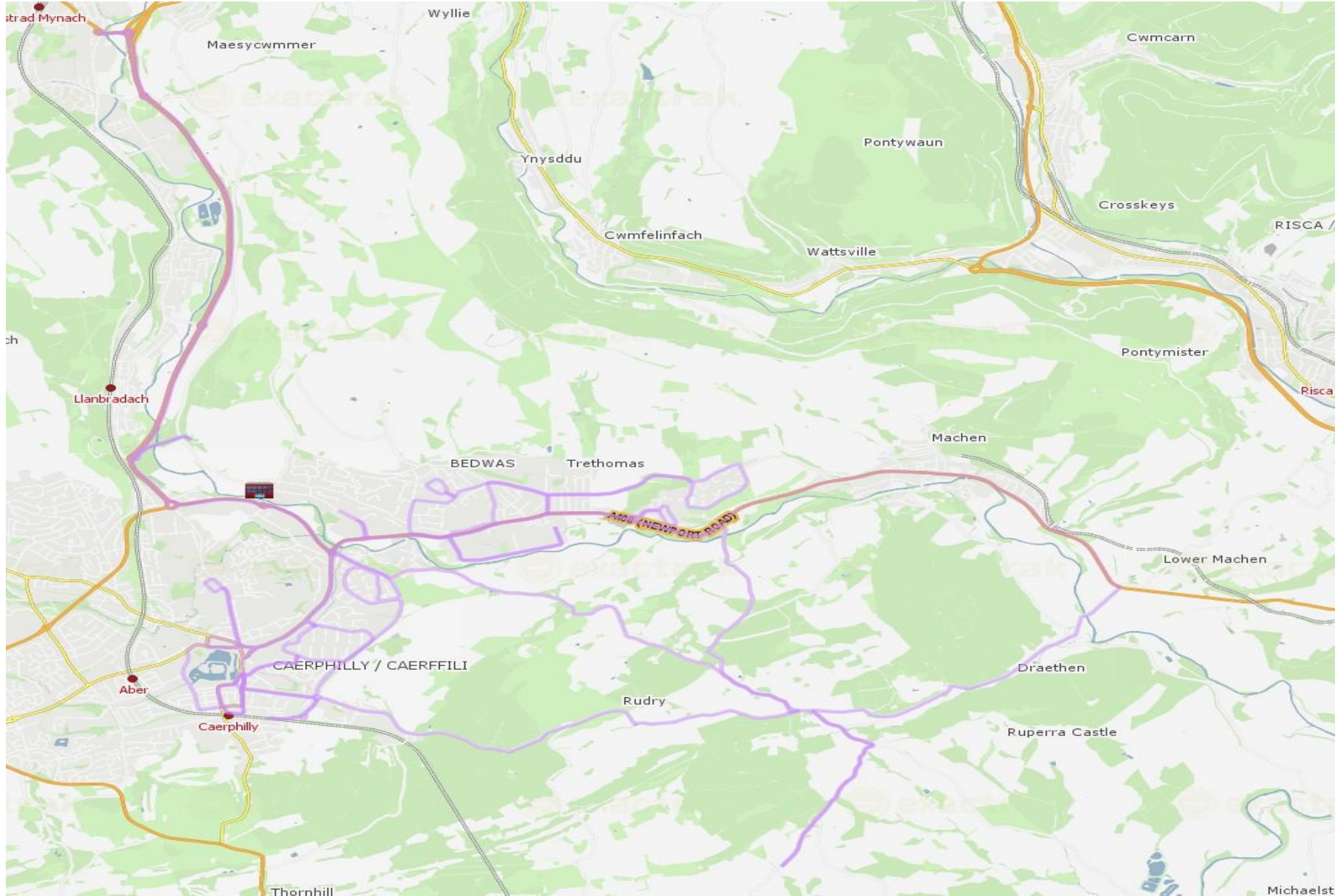
No	GRITTING ROUTE_CARD
1	F Leave yard - Travel GREENWAY INDUSTRIAL ESTATE. Grit
2	T Turn left - Grit A468
3	T Continue - Grit A468
4	T Turn right into PANT GLAS INDUSTRIAL ESTATE
5	T Continue - Grit PANT GLAS INDUSTRIAL ESTATE. End of salting
6	F U-Turn - Travel PANT GLAS INDUSTRIAL ESTATE. Grit
7	T Turn right - Grit A468
8	T Turn left onto NAVIGATION ROAD
9	T Turn left onto LLANFABON DRIVE
10	T At roundabout take exit 2 to LLANFABON DRIVE
11	T Continue - Grit LLANFABON DRIVE to BRYNFEDW
12	T Turn right onto BRYN GLAS
13	T Continue - Grit BRYN GLAS
14	T Turn left onto BRYN GOLAU
15	T Turn Left onto BRYN TIRION
16	T Turn right onto BRYN GLAS
17	T Turn right onto BRYNFEDW
18	T Continue - Grit BRYNFEDW to HILLSIDE TERRACE
19	T Continue - Grit HILLSIDE TERRACE
20	T Turn left onto CHURCH STREET
21	T Turn left onto A468
22	T Turn left onto NEWPORT ROAD
23	T Turn right onto NEWPORT ROAD
24	T Continue - Grit NEWPORT ROAD to THE BRYN
25	T Continue - Grit THE BRYN. End of salting
26	F At roundabout take exit 3 to LLANFABON DRIVE
27	F Continue - Travel LLANFABON DRIVE. Grit
28	T Continue - Grit STANDARD STREET
29	T Continue - Grit ADDISON WAY. End of salting
30	F Turn right - Travel ADDISON WAY.
31	F Continue - Travel STANDARD STREET
32	F Turn left onto NAVIGATION STREET. Grit
33	T Turn left - Grit A468
34	T Turn left - Grit RIDGEWAY
35	T Turn right onto ST DAVIDS DRIVE
36	T Turn left onto SUMMERFIELD LANE
37	T Turn left onto RIDGEWAY
38	T Turn left onto A468
39	T Continue - Grit A468
40	T Turn right onto DRAETHEN ROAD
41	T Continue - Grit MAENLLWYD
42	T Turn left onto RUDRY ROAD
43	T Continue - Grit RUDRY ROAD. End of salting.
44	F U-Turn - Travel RUDRY ROAD. Grit
45	T Turn left at MAENLLWYD
46	T Continue - Grit VAN ROAD
47	T At roundabout complete a circuit and take exit 1 to PARK & RIDE
48	T At roundabout complete a circuit and take exit 2 to PARK & RIDE
49	T Continue - Grit PARK & RIDE
50	T U-turn - Travel PARK & RIDE
51	T At roundabout take exit 1 to VAN ROAD

52	T	At roundabout take exit 1 to VAN ROAD
53	T	Continue - Grit THE TWYN
54	T	Turn right onto CASTLE STREET
55	T	Continue - Grit CASTLE STREET to PICCADILLY
56	T	Turn right onto TON-Y-FELIN ROAD
57	T	Turn right onto CASTLE STREET LINK ROAD
58	T	Turn left - Grit CASTLE STREET
59	T	Continue - Grit MARKET STREET
60	T	Continue - Grit WHITE STREET
61	T	Turn right - Grit BUS STATION
62	T	Bear left onto STATION TERRACE
63	T	Turn right onto CARDIFF ROAD
64	T	Continue - Grit CARDIFF ROAD to CASTLE STREET. End of salting
65	F	Turn right - Travel MARKET STREET
66	F	Continue - Travel WHITE STREET. Grit
67	T	Turn right - Grit STATION TERRACE.
68	T	Continue - Grit CLIVE STREET
69	T	Turn right - Grit LUDLOW STREET
70	T	Continue - Grit LUDLOW STREET to CRESCENT ROAD
71	T	Turn right onto NANTGARW ROAD
72	T	Turn left onto PONTYGWINDY ROAD
73	T	Turn left onto MILL ROAD
74	T	Turn left onto TAFWYS WALK
75	T	Turn left onto NANTGARW ROAD
76	T	Turn left onto PONTYGWINDY ROAD
77	T	Continue - Grit PONTYGWINDY ROAD
78	T	Turn left onto RHOS STREET
79	T	Turn left onto WAUN FACH STREET
80	T	Turn left onto WAUN GANOL STREET
81	T	Continue - Grit WAUN GANOL STREET. End of salting
82	F	Turn right- Travel PONTYGWINDY ROAD. Grit
83	T	Turn left - Grit TON-Y-FELIN ROAD
84	T	Turn right - Grit CASTLE STREET LINK ROAD
85	T	Turn left - Grit CASTLE STREET
86	T	Turn left onto NORTH VIEW TERRACE
87	T	Continue - Grit BRYNAU ROAD
88	T	Turn left onto CASTLE PARK LINK ROAD
89	T	At roundabout take exit 3 back to CASTLE PARK. End of salting.
90	F	Turn right - Travel BRYNAU ROAD
91	F	Continue - Travel NORTH VIEW TERRACE.
92	F	Turn left - Travel MARKET STREET
93	F	Turn left - Travel VAN ROAD. Grit
94	T	Enter roundabout gritting take exit 1 to LANSBURY PARK DISTRIBUTOR ROAD
95	T	Continue - Grit LANSBURY PARK DISTRIBUTOR ROAD
96	T	Turn left onto PEN-Y-CAE
97	T	Continue - Grit PEN-Y-CAE
98	T	Turn left - Grit LANSBURY PARK DISTRIBUTOR ROAD
99	T	At roundabout take exit 1 to BEDWAS ROAD
100	T	Continue - Grit BEDWAS ROAD
101	T	Take 2nd left onto LANSBURY PARK
102	T	At junction near MAXTON COURT - Grit TRAFFIC ISLAND
103	T	Continue - Grit MAXTON COURT to HALDANE COURT
104	T	At junction near HALDANE COURT - Grit TRAFFIC ISLAND
105	T	Turn right onto LANSBURY PARK DISTRIBUTOR ROAD

106 T Turn right onto LANSBURY PARK  
 107 T Continue - Grit WEDGEWOOD COURT to MAXTON COURT  
 108 T Turn left onto BEDWAS RAOD  
 109 T Bear left onto CASTLE STREET LINK ROAD  
 110 T Turn right onto MARKET STREET  
 111 T Turn right onto TON-Y-FELIN ROAD. End of salting  
 112 F Continue - Travel TON-Y-FELIN ROAD  
 113 F Continue - Travel BEDWAS ROAD  
 114 F At roundabout take exit 4 to LANSBURY PARK DISTRIBUTOR ROAD  
 115 F Continue - Travel LANSBURY PARK DISTRIBUTOR ROAD. Grit  
 116 T Turn left - Grit RUDRY ROAD  
 117 T Continue - Grit RUDRY ROAD to STARBUCK STREET  
 118 T Continue - Grit STARBUCK STREET to MAENLLWYD  
 119 T U-turn around the junction. End of salting.  
 120 F Travel - to RUDRY PRIMARY SCHOOL. Grit  
 121 T Turn right - Grit WATERLOO ROAD  
 122 T Continue - Grit WATERLOO ROW. End of salting.  
 123 F Turn left onto A468  
 124 F Continue - travel A468. Grit  
 125 T Enter roundabout gritting complete a circuit and take exit 4 to A468  
 126 T At roundabout complete a circuit and take exit 2 to A468  
 127 T At roundabout complete a circuit and take exit 4 to A469  
 128 T At roundabout complete a circuit and take exit 2 to A469  
 129 T At roundabout complete a circuit and take exit 2 to A469  
 130 T At roundabout complete a circuit and take exit 2 to A469  
 131 T At roundabout complete a circuit and take exit 1 to A472  
 132 T At roundabout take exit 4 to A472  
 133 T At roundabout take exit 3 to A469  
 134 T At roundabout take exit 2 to A469  
 135 T At roundabout take exit 1 to A469  
 136 T At roundabout take exit 1 to TRE-HIR TIP  
 137 T Continue - Grit TIP ACCESS ROAD. End of salting  
 138 F U-turn - Travel to roundabout. Grit  
 139 T Enter roundabout salting and take exit 1 to A469  
 140 T At roundabout take exit 2 to A469  
 141 T At roundabout take exit 1 to A468  
 142 T At roundabout take exit 1 to A468  
 143 T Turn left onto GREENWAY INDUSTRIAL ESTATE. End of salting.  
 144 F Continue - Travel GREENWAY INDUSTRIAL ESTATE  
 145 F Turn left into DEPOT



Pre-salting Route 8 (Bedwas)



## **Appendix B.**

### **Pre-salting Routes (above 300m) 10 & 11.**

#### **Route 10**

1. Not Salting. Leave Penmaen Deopt and travel along the Oak Terrace by pass, the A4049 and the A469 to Pontlottyn Police Station.
2. Start salting, turn left and proceed to the junction of Brynhyfryd. Turn right and proceed through Brynhyfryd to the junction with Hill Rd. Turn left and proceed up Hill Rd to the junction. At the junction turn left and proceed back down the hill to the junction with Brynhyfryd. Stop salting.
3. Not salting, proceed to the junction with the A469. Turn left and proceed to the junction of the B4257 and Moriah Street.
4. Start salting, turn right onto Moriah Street, and proceed to the junction of Hill Street. Turn right and proceed to the junction of Tan-Y-Bryn. Turn right and complete a loop through Tan-Y-Bryn and Garden City back onto Hill Street, and continue through to the county boundary by Rhymney Golf Course. Stop salting.
5. Not salting, turn the vehicle and proceed back to the junction of Hill Street and Moriah Street.
6. Start salting, proceed back along hill Street to its junction by Lady Tyler Terrace. Turn right and continue through High St and Upper High Street to the junction with Carno Street. Turn left onto Carno Street and proceed to "Skinners" roundabout. Stop salting.
7. Not salting, proceed back along Carno Street to its junction with Upper High St.
8. Start salting, turn left onto Upper High St and proceed to the junction with Merthyr Road. At the junction, turn right and proceed along Merthyr Rd to the county boundary at Princetown. Stop salting.
9. Not salting, turn the vehicle and proceed back along Merthyr Rd to its junction with Upper High Street.
10. Start salting, and proceed to the roundabout by Butetown. At the roundabout proceed south along the A469 to the junction with the old "Mid Glamorgan" yard at Pontlottyn, making a complete circuit of all roundabouts on route. Stop salting.
11. Not salting, turn the vehicle and proceed back along the A469 to the roundabout by Butetown.
12. Start salting and proceed along the common road to the county boundary with Merthyr, completing a circuit of all roundabouts on route. Stop salting.
13. Not salting, turn the vehicle and proceed to the junction of the Common Rd and Trecatti Tip road.



14. Start salting, turn right and proceed past Trecatti Tip to the junction at Glenview Terrace, Pentwyn. At the junction, turn left and proceed through Fochriw to the junction with Hill Road Pontllytyn, completing a circuit of the Glan-Y-Nant estate on route. Stop salting.
15. Not salting, turn the vehicle and return to the junction with South Tunnel Road.
16. Start salting, turn right and proceed along South Tunnel Road to its junction by the "Tunnel Tavern" stop salting.
17. Not salting, turn left and proceed again to the junction at Glenview Terrace.
18. Start salting, and proceed through Glenview Terrace past Parc Cwm Darran to the junction of Hillside Terrace, Deri. Stop salting.
19. Not salting turn the vehicle and return to Glenview Terrace, Fochriw and the mountain road.
20. Start salting, turn left onto the mountain road and proceed south past Gelligaer Quarry and Heolddu School to the junction with Moorland Road. Turn right onto Moorland Road and continue through Western Drive to its junction with Oak Place. Stop salting.
21. Not salting return to Penmaen Depot.

Approximate Salting Distance: 28.15 Km (17.6 miles)  
Approximate Distance Not Salted: 40.2 Km (25.1 miles)  
Route Efficiency 41.2 %

## **Route 11.**

1. Not salting, leave Penmaen Depot and travel to Glanshon Court, Pantside.
2. Start salting, turn left onto the unnamed mountain road and proceed along this road to its junction with the A472 at Hafodyrynys. Stop salting.
3. Not salting, turn left and proceed down the hill to the traffic signals. Turn right at the signals then left onto the Kendon Hill. Proceed up the hill and through Trinant to the junction with Christchurch Road.
4. Start salting, turn left and proceed to the roundabout on Pen-Y-Fan Ind Est. At this roundabout, take the Manmoel turnoff and proceed through Manmoel Village to the bus depot. Stop salting.
5. Not salting, turn the vehicle and proceed back through the village, the roundabout on the ind est, the SEW Chartist Bridge the A4048 and Maes Manor Lane to the entrance to the Maes Manor.
6. Start salting, and proceed from this junction to the junction by Bedwellty Church. Turn right at this junction and proceed through to the mini roundabout at Markham. At this roundabout, turn left and left again, completing a circuit back to the "New Inn P.H." at Bedwellty. Stop salting.
7. Not salting, turn left and again proceed to the mini roundabout at Markham.
8. Start salting, proceed along the mountain road towards New Tredegar. At the junction with Jubilee Rd. New Tredegar, stop salting.
9. Not salting travel via Bedwellty Road and Bedlwyn Road, Philipstown to its junction with Dafalog Terrace.
10. Start salting, proceed through Bedlwyn Road to the start of Fothergills Road. Stop salting.
11. Not salting, proceed to the mini roundabout at Markham.
12. Start salting, proceed along Pantycefn Road to its junction with Heol Pen-Rhiwr-Eglwys. Stop salting.
13. Not salting, turn right and proceed along Heol Pen-Rhiwr-Eglwys to its junction by the "New Inn P.H." At this junction turn left and proceed to the junction with Maes Manor Lane.
14. Start salting at this junction and proceed along Heol Y Bedw-Hirion and Heol Y Cefn to the junction with Harrys Hill. Stop salting.
15. Not salting, return to Penmaen Depot.

Approximate Salting Distance: 19.45 Km (12.1 miles)  
Approximate Distance Not Salted: 41.72 Km (26 miles)  
Route Efficiency 31.8 %

## Appendix C.

### Strategic Salting Routes.

#### Route A. (PENMAEN)

- Leave Penmaen Depot along SEW to Pentwymawr roundabout and back to Penmaen Rbt then up to Chartist Bridge looping all SEW roundabouts.
- Up to Hollybush boundary. Return to Chartist Bridge (not salting)
- Cross Chartist Bridge up to Penyfan Industrial Estate and across to traffic lights (top Kendon Hill)
- Turn down through Oakdale to Woodfieldside Rbt. Loop Rbt and back to traffic lights (top Kendon Hill) (Not Salting)
- Down Kendon Hill and up Hafodyrynys Hill to Boundary. Turn around and return (Not Salting)
- At lights turn left and Follow A467 down Risca bypass (loop Rbts) past boundary turn at Morrisons Rbt and back up Bypass still salting
- At Fullmoon Rbt head up through Wattsville and continue to Wyllie Rbt A472
- Follow A472 Bypass to Newbridge Rbt looping all Rbts. At Newbridge Rbt turn and head back to Wyllie Rbt along A472 Bypass.
- Continue up to Crown Rbt. Through Maesycymmer to Ty Penallta and Tredomen Offices.
- Come out of offices and then follow A472 to Nelson (Loop Rbts) and on to boundary (towards A470). Turn back to Nelson (Not Salting).
- Salt through Nelson and on through Gelligaer B4254 to Pengam lights.
- Straight through lights across Valley and onto A4049, Turn right and down to council offices Hawtin Park. Back to A4049 and continue to Crown roundabout.
- Head for Brynmeadows Rbt and then down hill to Wyllie Rbt on A472.
- At Wyllie Rbt turn left past Switchgear, then up past Tredegar Arms and Blackwood Civic Centre.
- From Civic Centre head up to Blackwood Bus Station and then to Cefn Fforest Fire Station.

**ROUTE FINISHED.** Travel back to Depot not salting.

## Route B. (PENMAEN)

- Leave Penmaen depot up to Libanus lights.
- Turn left head for Crown Rbt and then Bryn Meadows Rbt.
- Head to Dance Centre Rbt (Not Salting)
- Dance Centre Rbt start salting and head towards Tir y Birth on A469
- Clear Rd into Tir y Birth Depot then continue to Gilfach on A469
- Go into Bargoed Fire Station, Bus Station and Social Services offices then through High Street onto New Bargoed Bypass.
- Run along whole of bypass loop Rbts only salt in One Direction, finish at Bargoed Railway Station.
- Head up through Deri, through Fochriw to Pontlloftyn.
- From Pontlloftyn head south then across top road Brithdir and back towards Bargoed Ambulance Station.
- Cross to Aberbargoed side and then head north A4049 through New Tredegar to Pontlloftyn.
- Keep on A4049 / A469 to Heads of the Valleys Road loop Rbts and come back down through Rhymney High Street.
- Turn across into Abertysswg do not salt on return.
- Salt down to Pontlloftyn Viaduct. Stop salting
- Travel down to lights in Aberbargoed, start salting through Aberbargoed to Capels Garage. Stop salting.

**ROUTE FINISHED.** Travel back to Depot not salting.

### Route C. (BEDWAS)

- Leave Bedwas Depot onto A468 through Bedwas, Machen and to County Boundary.
- Turn around and return to Peters Pies only salt where road is separated by island or is four lane.
- Salt from Peters Pies up to Caerphilly Town via Bedwas Road.
- Loop town centre and include Bus Depot then head up Caerphilly Mtn to Burger van.
- Turn left over to Travellers Rest. Turn around and return to Burger van.
- Continue straight past Burger van to Penrhos Rbt.
- At Penrhos Rbt turn to Trecenydd Rbt
- Turn up to Sengenydd. Salt right up to bus turning area by Saw Mills. Stop salting and return to Trecenydd Rbt.
- Turn Left to Cedar Tree Rbt and then up Llanbradach Bypass, Loop Rbts and Ysbyty Ystrad Fawr
- Turn into Duffryn Industrial Estate and Duffryn House Offices.
- Continue to Dance Centre Rbt.
- Come back down bypass to Cedar Tree Rbt. Stop salting.

**ROUTE FINISHED.** Travel back to Depot.

## **Appendix D.**

### **Footbridge Locations.**

#### **Footbridge Locations**

##### **Area 1**

- A4049, Tirphil Square.
- A4049, White Rose Primary School, New Tredegar.
- Over railway, Brithdir to White Rose Primary School, New Tredegar.
- Over river, Pontlottyn to Rhymney Comprehensive School.

##### **Area 4**

- A467, Old Swan Inn, Abercarn.
- A467, High Meadow, Abercarn. (2 number)
- A467, Panside, Newbridge.
- Calzaghe Footbridge, Newbridge.

##### **Area 5**

- A468, Trecenydd, Caerphilly.

##### **Area 7**

- A468, Court Road, Energlyn.
- Groeswen Road, Hendredenny.

## Appendix E.

### Contact Details.

#### Highway Operations Group. Key Contact Details

<b>NAME</b>	<b>DESIGNATION</b>	<b>TELEPHONE</b>	<b>MOBILE</b>	<b>HOME</b>
Graham Parry	<b>Highway Operations Group Manager</b>	01495 235748		
Gareth Richards	Maintenance Team Manager	01495 235723	07901 712353	01443 832454
Chris Adams	Construction Team Manager	01495 235740	07901 712354	
Steve Hodges	Network Management Team Manager	01495 235738	07768 288362	029 20883247
Michelle Johnson	Senior Engineer	01495 235797	07770 508098	
Tom Llewelyn	Senior Engineer	01495 235785	07768 507944	
Joe Williams	Senior Engineer	01495 235788	07901712360	07545 123972
Dean Clarke	Senior Assistant Engineer	01495 235746	07768 701099	01443 836032
Gavin Barry	Senior Assistant Engineer	01495 235718	07766 418867	01685 842553
Mike Snell	Senior Assistant Engineer	01495 235746	07770 508097	029 20254606
Andrew Gould	Assistant Engineer	01495 255746	07766 406412	01443 833896
Craig Fletcher	Assistant Engineer	01495 235716	07717 871515	
Ian Shephard	Assistant Engineer	01495 235703	07919 415399	01443 440235
Max Nebe	Inspector	01495 235757	07768 701092	
Sue Morgan	Inspector	01495 235757	07786 730947	
Darren Jones	Inspector	01495 235757	07768701094	07967 441416
Nicola Tiley	Inspector	01495 235757	07768 701093	01495 200272
Paul Roberts	Inspector	01495 235757	07770 508099	
David Haines	Inspector	01495 235757	07768 701098	01495 226813
Darren Bilton	Inspector	01495 235757	07901 713357	07854 621061
Chris Williams	Technician	01495 235737		
Gethin Jones	Technician	01495 235794	07768 507948	
Jeff Witts	Supervisor	01495 235704	07901 712356	01495 228963
Nathan Jones	Supervisor	01495 235705	07768 701096	01443 833293
Penmaen Depot		01495 235724	Fax	01495 235751
Bedwas Depot		02920 852331	Fax	01222 880860
<b>Winter Emergency Officer</b>		<b>24 hour line</b>		<b>Rota held by T-Y-B control room.</b>
Out of Hours	Tir-Y-Berth control room	01443 875500		

## Other Service Contacts.

- COUNTY POLICE HEADQUARTERS

Gwent (Cwmbran) 01633 838111  
South Wales (Bridgend) 01656 655555

**GWENT POLICE -Main Police Stations**

Blackwood 01495 223673  
Caerphilly 02920 852999  
Cwmbran 01633 838999  
Pontypool 01495 764711  
Risca 01633 612391  
Tredegar 01495 723161

- SOUTH WALES FIRE SERVICE

HQ 01443 232000

- SOUTH AND EAST WALES AMBULANCE TRUST.

Divisional Headquarters 01495 765401 (Office Hours)  
Mamhilad Park Estate 01495 769834 (Control Centre)

- MID GLAMORGAN AMBULANCE NHS TRUST.

All enquiries through Control Room Tel: 01443 205331

All ambulance station locations listed in appendix J

- EMERGENCY PLANNING

Caerphilly County Borough Council.

Sheryl Andrews- Emergency Planning Manager 01443 864425  
Ian John Martin – Emergency Planning Officer 01443 864222  
Stuart Lee Morgan – Emergency Planning Officer 01443 864427

## NEIGHBOURING AUTHORITIES

- BLAENAU GWENT COUNTY BOROUGH COUNCIL

Office Hours

Name	Designation	Telephone	Fax
A Reed	Acting Highway & Transport Manager	01495 355612	01495 312357
Neil Hughes	(access to salt supplies)	01495 355629	07971 893377
Outside Office Hours Emergency Service		01495 311556	



- CARDIFF COUNTY AND CITY COUNCIL

Office Hours Name	Designation	Telephone	Fax
L Norvill	Engineer	029 20785200	029 20785218

- NEWPORT COUNTY BOROUGH COUNCIL

Office Hours Name	Designation	Telephone	Fax
F. Powell	Assistant Engineer	01633 232656	01633 233296
R. Lloyd	Asst.Maint Manager	01633 232694	“ “
Out of Hours		01633 253447	(ex-directory)

- TORFAEN COUNTY BOROUGH COUNCIL

Office Hours Name	Designation	Telephone	Fax
Andrew Pritchard	Structures and Network Officer	01495 766747	01495 766709
Outside Office Hours Duty Officer	(All Emergencies)	01495 762200	

- MERTHYR TYDFIL COUNTY BOROUGH COUNCIL

Office Hours Name	Designation	Telephone	Fax
J Morgan	Network Group Man.	01685 724931	01443 693872
M Williams	Team Leader	01685 724932	01685 693872
M. Thomas	Head of Env. Services	01685 725345	
Lifeline		01685 725336	01685 387740
Outside Office Hours -Duty Officer		07800 708591	

- RHONDDA CYNON TAFF COUNTY BOROUGH COUNCIL

Name	Designation	Telephone	Fax
Dan Bond	Sen. Eng. Roads.	01443 494793	01443 494705
Howard Thomas	H/w Infrastructure & Asset Manger	01443 494801	01443 494705
Out of Hours-Duty Officer		0831 141900	

- TRUNK ROAD AGENCIES

Neath Port Talbot (South Wales Trunk Road Agency)

Name	Designation	Telephone	Fax
Rodry Paul	Network Resilience Engineer	01792 325927	01792 325905
Out of Hours-Duty Officer		02920 629421	

- MONMOUTH COUNTY BOROUGH COUNCIL.

Name	Designation	Telephone	Fax
Glyn Edmunds	Highway & Waste Operations Manager	01600 712354	01600 712293
Outside Office Hours Emergency Service	01633 873274		

## Appendix F.

### Social Service Locations.

<b>SOCIAL SERVICES</b>	
<b>OFFICES</b>	
Avenue House	2 King Edward Avenue, Caerphilly, CF1 1PC
Bargoed	43 William St, Gilfach, Bargoed, CF81 8ND
Brodawel House (adj. HFE)	Court Road, Energlyn, Caerphilly, CF83 2QW
Caerphilly, Cwm Ifor	Caledfryn Way, Penyrheol, Caerphilly, CF83 2XZ
Caerphilly, Mill Road Office	Mill Road, Caerphilly, CF83 3SD
Caerphilly	6 Piccadilly Square, Caerphilly, CF83 1PB
Caerphilly SS Facilities	De Clare House, Pontygwindy Ind. Est. Caerphilly, CF83 2WB
Cameron House	Ystrad Mynach, Hengoed, CF83 1HG
Pontllanfraith, Lansing Linde SS Offices	Newbridge Road, Ind. Est. Pontllanfraith, NP12 2XF
Rhymney, Ramsden Street SS Office	Ramsden Street, Rhymney, NP2 5NS
Risca, Brooklands Bungalow	Brooklands Road, Risca, NP1 6BU
Ty Mynyddislwyn Office	16 Ty Mynyddislwyn, Pontllanfraith, NP12 2JE
<b>RESIDENTIAL ACCOMMODATION</b>	
Beatrice Webb HFE, Blackwood	Bloomfield Road, Blackwood, NP2 1QB
Brodawel HFE, Caerphilly	Court Road, Energlyn, Caerphilly, CF83 2QW
Castle View HFE, Caerphilly	Claude Road, Caerphilly, CF83 1UZ
Hengoed Group Home	14 Graig Road, Hengoed, CF82 7SJ
Heol Aneurin Community Home for children	22 - 24 Heol Aneurin, Caerphilly, CF83 2PB
Min-y-Mynydd HFE, Rhymney	Eglwys Fan, Hill Street, Rhymney, NP22 5JJ
Montclair Avenue Residential Home	65 - 67 Montclair Avenue, Blackwood, NP2 1EF
Ty Clyd HFE, Bargoed	Heol Fargoed, Bargoed, CF81 8PP
Ty Clyd bungalow - CHAD	Heol Fargoed, Bargoed, CF81 8PP
Ty Iscoed HFE,	Woodland Drive, Newbridge, NP1 5FQ
Ty Gwilym Residential Home, Caerphilly	Court Road, Energlyn, Caerphilly, CF83 2LU
<b>DAY/FAMILY CENTRES</b>	
Brondeg Day Centre, Blackwood	Bloomfield Road, Blackwood, NP12 1QB
Brooklands Risca Adult Day Centre, Risca	Brooklands Road, Risca, NP1 6BU
Brooklands Risca Family Centre	Brooklands Road, Risca, NP1 6BU
Cwm Ifor Family Centre / Variety Club	Caled Fryn Way, Penyrheol, Caerphilly, CF83 2BW
Caerphilly Day Centre for older people	Station Terrace, Caerphilly, CF83 1HD

Caerphilly Independant Living	22 The Crescent, Trecenydd, Caerphilly
Caerphilly Retirement Project	St Johns Ambulance Hall, Bryncenydd, Caerphilly
Fochriw Family Centre (inside Comm Centre)	Pontlottyn Road, Rhymney, CF81 9LS
Hafod Deg Day Centre, Rhymney	High Street, Rhymney, NP2 5LP
Markham Resource Unit	Pantycefn Road, Markham, NP2 0RX
Oakdale Resource Unit / Family Centre	57 Central Avenue, Oakdale, NP2 0DX
Oaklands Day Centre, Rhymney	Oaklands Terrace, Rhymney, NP2 SEP
Pentrebane Drop-in Centre	18 Pentrebane Street, Caerphilly, CF83 1FR
Springfield Adult Day Centre,	Glanynant, Pengam, NP12 2XG
Ystrad Mynach Day Care Centre	Caerphilly Road, Ystrad Mynach, CF82 7EP

## Appendix G

### Major / Minor Shopping Areas.

<u>Major Shopping Centres</u>	<u>No. of Staff Req</u>	<u>Minor Shopping Centres</u>	<u>No. of Staff Req</u>
Bargoed	8	Aberbargoed	2
Bedwas	8	Abercarn	2
Blackwood	8	Abertridwr	2
Caerphilly	8	Cefn Fforest	2
Nelson	4	Cross Keys	2
Newbridge	8	Crumlin	2
Rhymney	4	Cwmfelinfach	2
Risca	8	Deri	2
Ystrad Mynach	8	Fleur-De-Lys	2
	<b><u>64</u></b>	Fochriw	2
		Gelligaer	2
		Glan-y-nant	2
		Graig-Y-Rhacca	2
		Lansbury Park	2
		Llanbradach	2
		Maesycwmmmer	2
		Markham	2
		New Tredegar	2
		Oakdale	2
		Pantside	2
		Penllwyn	2
		Penpedairheol	2
		Pentwynmawr	2
		Pontlottyn	2
		Senghenydd	2
		Trethomas	2
		Trinant	2
		Ty-Sign	2
			<b><u>56</u></b>

## Appendix H

### School Locations

<b>Area</b>	<b>SCHOOLS</b>
4	Abercarn Primary - Chapel of Ease, Abercarn, NP11 5LH
1	Abertysswg Primary - Walter Street, Abertysswg, NP22 5AQ
7	Bedwas High School - Newport Road, Bedwas, CF83 8BJ
7	Bedwas Infants - St Mary's Street, Bedwas, CF83 8EE
7	Bedwas Junior - Church Street, Bedwas, CF83 8EB
2	Blackwood Comprehensive - Ty Isha Terrace, Blackwood, NP12 1ER
2	Blackwood Primary - Apollo Way, Blackwood, NP12 1WA
2	Bryn Primary - Forest Hill, The Bryn, Pontllanfraith, NP12 2PL
1	Bryn Awel Primary - Eglwys Fan, Rhymney, NP22 5JJ
2	Cefn Fforest Primary - Cefn Fforest Avenue, Cefn Fforest, NP12 3JX
3	Coed Y Brain Primary - School Street, Llanbradach, CF83 3LD
4	Crumlin High Level Primary - Commercial Road, Crumlin, NP11 4PX
3	Cwm Glas Infants - Pant Glas, Llanbradach, CF83 3PD
5	Cwm Ifor Primary - Heol Aneurin, Penyrheol, Caerphilly, CF83 2PG
7	Cwmaber Infants - Bryngelli Terrace, Abertirdwr, CF83 4FF
7	Cwmaber Junior - Brynhafod Road, Abertridwr, CF83 4BH
4	Cwmcarn High School - Chapel Farm, Cwmcarn, NP11 7NG
4	Cwmcarn Primary - Newport Road, Cwmcarn, NP11 7LZ
6	Cwmfelinfach Primary - King Street, Cwmfelinfach, NP11 7HL
5	Cwrt Rawlin Primary - Cae Meillion, Caerphilly, CF83 1SN
1	Deri Primary - Glynmarch Street, Deri, CF81 9HZ
3	Derwendeg Primary - Hengoed Road, Cefn Hengoed, CF82 7HP
2	Fleur-de-Lys Primary - School Street, Fleur-de-Lys, NP12 3UX
1	Fochriw Primary - Pontlottyn Road, Fochriw, CF81 9LL
3	Gilfach Fargoed Primary - Vere Street, Gilfach, Bargoed, CF81 8LB
3	Glyngaer Primary - Oxford Street, Glyngaer, Gelligaer, CF82 8FF
5	Graig y Rhacca Primary and Nursery Community School - Machen, CF83 8WW
3	Greenhill Primary - Penywrlod, Gelligaer, CF82 8EU
5	Hendre Infants - St Cenydd Road, Trecenydd, Caerphilly, CF83 2RP
5	Hendre Junior - St Cenydd Road, Trecenydd, Caerphilly, CF83 2RP
5	Hendredenny Park Primary, White Cross Lane, Hendredenny, Caerphilly, CF83 2RL
3	Hengoed Primary - Chapel Terrace, Hengoed, CF82 7JU
3	Heolddu Comprehensive - Mountain Road, Bargoed, CF81 8XL
3	Lewis Girls Comprehensive - Oakfield Street, Ystrad Mynach, CF82 7WW
3	Lewis School Pengam - Gilfach, Bargoed, CF81 8LJ

2	Libanus Primary - Libanus Road, Blackwood, NP12 1EH
7	Llancaeacch Junior - Commercial Street, Nelson, CF46 6NF
7	Llanfabon Infants - Bryncelyn Avenue, Nelson, CF46 6HL
5	Machen Primary - Commercial Road, Machen, CF83 8NA
6	Maesycwmmmer Primary - Tabor Road, Maesycwmmmer, CF82 7PU
2	Markham Primary - Pantycefn Road, Markham, NP12 0QD
7	Nant y Parc Primary - Universal Site, Senghenydd, CF83 4GL
4	Newbridge Comprehensive - Bridge Street, Newbridge, NP11 5FE
4	Oakdale Comprehensive - Penmaen Road, Blackwood, NP12 0DT
4	Pantside Primary - Old Pant Road, Newbridge, NP11 5DE
2	Park Primary - Park Crecsent, Bargoed, CF81 8PN
2	Pengam Primary - Commercial Street, Pengam, NP12 3ST
2	Penllwyn Primary - Fleur De Lys Avenue, Pontllanfraith, NP12 2NT
4	Pentwynmawr Primary - Tonypistill Road, Newbridge, NP11 4HJ
1	Phillipstown Primary - Cefn Rhychdir Road, Phillipstown, NP24 6XE
5	Plasyfelin Primary - Lewis Drive, Churchill Park, Caerphilly, CF83 3FT
2	Pontllanfraith Comprehensive - Coed Cae Du Road, Pontllanfriath, NP12 2DA
4	Pontllanfraith Primary - Penmaen Road, Pontllanfraith, NP12 2DN
1	Pontlottyn Primary - Fochriw Road, Pontlottyn, CF81 9RG
5	Rhydri Primary - Rudry, Caerphilly, CF83 3DF
1	Rhymmey Comprehensive - Mill Field, Abertyswg, NP22 5XF
6	Risca Comprehensive - Pontymason Lane, Rogerstone, NP11 6YY
6	Risca Primary - Danygraig Road, Risca, NP11 6DB
5	St Cenydd Comprehensive - St Cenydd Road, Trecenydd, Caerphilly, CF83 2RP
3	St Gwladys Bargoed School - Church Place, Bargoed, CF81 8RN
5	St Helens Catholic Primary - Lansbury Park, Caerphilly, CF83 1QH
5	St James' Primary School - Lansbury Park, Caerphilly, CF83 1QH
5	St Martins Comprehensive - Hillside, Caerphilly, CF83 1UW
3	Tir-Y-Berth Primary - New Road, Tir-Y-Berth, Hengoed, CF82 8AU
4	Trinant Primary - Conway Road, Pentwyn, Crumlin, NP1 4JN
3	Trinity Fields Special School - Caerphilly Road, Ystrad Mynach, CF82 7DT
5	The Twyn School - East View, Caerphilly, CF83 1UT
6	Ty Isaf Infants - Mill Street, Risca, NP11 6EF
6	Ty Sign Primary - Elm Drive, Risca, NP11 6HJ
4	Tynewydd Primary - Greenfields, Newbridge, NP11 4QZ
7	Tyn-Y-Wern Primary - Heol yr Ysgol, Trethomas, CF83 3BR
1	Upper Rhymney Primary - Oakland Terrace, Rhymney, NP22 5EP
6	Waunfawr Primary - Waunfawr Road, Cross Keys, NP11 7PG
1	White Rose Primary - School Street, Elliotstown, NP24 6DW

6	Ynysddu Primary - High Street, Ynysddu, NP11 7HL
1	Ysgol Bro Sannan - Ty Fry Road, Aberbargoed, CF81 9FN
2	Ysgol Gyfun Cwm Rhymni - Fleur De Lys, Blackwood, NP12 3JQ
3	Ysgol Gymraeg Bro Allta - Central Street, Ystrad Mynach, CF82 7XQ
4	Ysgol Gymraeg Cwm Derwen - Beech Grove, Oakdale, NP12 0JL
2	Ysgol Gymraeg Gilfach Fargoed - Commercial Street, Gilfach, Bargoed, CF81 8JG
4	Ysgol Gymraeg Trelyn - Commercial Street, Pengam, NP12 3ST
5	Ysgol Gynradd Gymraeg Caerffili - Parcfelin Street, Caerphilly, CF83 3AH
4	Ysgol Gymraeg Cwm Gwyddon - Gwyddon Road, Abercarn, NP11 6GX
7	Ysgol Ifor Bach - Upper Brynhyfryd Terrace, Senghenydd, CF83 4GL
5	Ysgol Gynradd Gymraeg Y Castell - Crescent Road, Caerphilly, CF83 1WH
1	Ysgol y Lawnt - Surgery Hill, Station Road, Rhymney, NP22 5LS
3	Ystrad Mynach Primary - Lewis Street, Ystrad Mynach, CF82 7AQ
4	Rhiw-Syr-Dafydd Primary - Maes y Garn Road, Oakdale, NP12 0NA
3	Ysgol Penalltau – Cwm Calon Road, Hengoed, CF82 7QX
3	The Learning Centre – Hanbury Street, Glan y Nant, NP12 3XP



## Appendix I

### Weather Forecast (example)

#### 24 Hour Domain Forecast for Capita Gwent Consultancy

Valid from noon on Tuesday 23 Feb 2012 to noon on Wednesday 24 Feb 2012

<b>Minimum Temperature and Hazard Summary</b>										
<b>Domain</b>	<b>Readiness Colour</b>	<b>Min RST</b>	<b>Time Below Zero</b>	<b>Min Air</b>	<b>Ice</b>	<b>Hoar Frost</b>	<b>Snow</b>	<b>Fog</b>	<b>Strong Wind</b>	<b>Rain</b>
Monmouthshire under 300m	<b>AMBER</b>	PS01	N/A	PS02	N/L	N/H	Y/L	N/L	Y/L	N/L
Monmouthshire over 300m	<b>RED</b>	PS00	N/A	MS02	N/L	N/H	Y/H	N/L	Y/L	N/L
Caerphilly, Torfaen, Blaenau Gwent under 300m	<b>AMBER</b>	PS01	N/A	PS02	N/L	N/H	Y/L	N/L	Y/L	Y/L
Caerphilly, Torfaen, Blaenau Gwent over 300m	<b>RED</b>	MS01	1200-1500	MS02	Y/L	N/H	Y/H	N/L	Y/L	Y/L

<b>Details</b>	
<b>Wind (mph)</b>	E 10-15 gusting up to 25, becoming E 5 by midnight.
<b>Ice / Hoar Frost</b>	Some ice likely in Caerphilly, Torfaen and Blaenau Gwent this afternoon as some roads may still be below freezing, but road surface temperatures are slowly rising. No frost expected.
<b>Snow</b>	Snow 1200-2000, with temporary accumulations of 1-3 cm at low levels, and as much as 10-15 cm above 300 m.

<b>24 Hour Weather Summary</b>	
Monmouthshire	Rain and sleet will turn to snow this afternoon. This will last until mid-evening when it will tend to turn back to rain before fading over the coming hours. It will never completely dry up over night, staying cloudy and damp, and continuing so into Wednesday morning.
Caerphilly, Torfaen, Blaenau Gwent	As Monmouthshire

OpenRoad Forecaster: Dan Grey, Tel: 01392 XXXXXX

Transmitted by the Met Office on 23 February 2012 at 12:00 UTC

## Appendix J.

### Fleet Details.

#### Front Line vehicles.

<b>ROUTE</b>	<b>VEHICLE</b>	<b>REG. NO.</b>	<b>FLEET NO.</b>	<b>DEPOT</b>	<b>CAPACITY</b>
1	Mercedes	CN63BYG	9234	PENMAEN	6 m <sup>3</sup>
2	Mercedes	CN12CWR	9231	PENMAEN	6 m <sup>3</sup>
3	Mercedes	CN61BPK	9228	PENMAEN	6 m <sup>3</sup>
4	Mercedes	CN12CWP	9230	PENMAEN	6 m <sup>3</sup>
5	Mercedes	CN60AMK	9224	PENMAEN	6 m <sup>3</sup>
6	Mercedes	CN61BPO	9229	PENMAEN	6 m <sup>3</sup>
7	Mercedes	CN12CWT	9232	BEDWAS	6 m <sup>3</sup>
8	Mercedes	CE63KZY	9233	BEDWAS	6 m <sup>3</sup>

#### Reserve / Backup Vehicles.

<b>ROUTE</b>	<b>VEHICLE</b>	<b>REG. NO.</b>	<b>FLEET NO.</b>	<b>DEPOT</b>	<b>CAPACITY</b>
N/A	Mercedes	CN08BOU	9220	PENMAEN	6 m <sup>3</sup>
N/A	Mercedes	CN08BOJ	9221	PENMAEN	6 m <sup>3</sup>
N/A	Mercedes	CN60AMU	9226	PENMAEN	6 m <sup>3</sup>
N/A	Mercedes	CN60AMO	9225	PENMAEN	6 m <sup>3</sup>
N/A	Mercedes	CN61BPF	9227	BEDWAS	6 m <sup>3</sup>

#### Additional Vehicles.

<b>ROUTE</b>	<b>VEHICLE</b>	<b>REG. NO.</b>	<b>FLEET NO.</b>	<b>DEPOT</b>	<b>CAPACITY</b>
N/A	DAF	TBA	N/A	BEDWAS	1.5 m <sup>3</sup>
N/A	DAF	TBA	N/A	BEDWAS	1.5 m <sup>3</sup>
N/A	DAF	TBA	N/A	PENMAEN	1.5 m <sup>3</sup>
N/A	DAF	TBA	N/A	PENMAEN	1.5 m <sup>3</sup>
N/A	DAF	TBA	N/A	PENMAEN	1.5 m <sup>3</sup>
N/A	DAF	TBA	N/A	PENMAEN	1.5 m <sup>3</sup>
N/A	LAND ROVER	WU53WZL	N/A	PENMAEN	N/A
N/A	TOYOTA	FG61SBO	N/A	PENMAEN	N/A
N/A	TOYOTA	FG61SBU	N/A	PENMAEN	N/A
N/A	TOYOTA	FG61SBV	N/A	BEDWAS	N/A

## Appendix K.

### Document Distribution List.

<b>To Whom Sent.</b>	<b>Type of Copy &amp; Nr.</b>
Master Copy - Highway Operations Group Manager- Graham Parry	1 E
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Director of the Environment – Christina Harray	1 E
Head of Engineering Services - Terry Shaw	1 E
Maintenance Team Manager - Gareth Richards	1 E
Construction Team Manager - Chris Adams	1 E
Network Management Team Manager - Steve Hodges.	1 E
Senior Engineer - Michelle Johnson.	1 E
Senior Engineer - Tom Llewelyn.	1 E
Senior Engineer - Joe Williams.	1 E
Senior Assistant Engineer - Dean Clarke	1 E
Senior Assistant Engineer - Mike Snell.	1 E
Senior Assistant Engineer - Gavin Barry	1 E
Assistant Engineer - Craig Fletcher	1 E
Assistant Engineer - Ian Shephard	1 E
Operational Duty Officer - Lloyd Jones	1 E
Operational Duty Officer - Andrew Gould	1 E
Supervisor - Nathan Jones	1 E
Supervisor - Jeff Witts	1 E
Emergency Planning Officer - Sheryl Andrews @ Tredomen	1 E
Environmental Services - c/o Tony White	1 E
Customer Care Unit - c/o Dale Hammond	1 E
Insurance & Risk/St. Pauls Insurers c/o Sue Ruddock @ Ystrad Fawr	1 E
Out of Hours Control Room at Tir-Y-Berth - c/o Carl Nesling	1 E
Chief Engineer, Rhondda, Cynon, Taff, County Borough Council	1CD
Director of Engineering, Blaenau Gwent, County Borough Council	1CD
Head of Environmental Services, Torfaen County Borough Council	1CD
Chief Engineer, Newport County Borough Council	1CD
Engineering Manager, Merthyr Tydfil County Borough Council	1CD
Chief Engineer, City and County of Cardiff.	1CD
Chief Constable, Gwent Police	1CD
Chief Fire Officer	1CD
Chief Ambulance Officer	1CD
Meteorological Contractor	1CD
National Farmers Union	1CD
Farmers Union of Wales	1CD
Aber Valley Community Council	1CD
Argoed Community Council	1CD
Bargoed Community Council	1CD
Bedwas, Trethomas & Machen Community Council	1CD
Blackwood Community Council	1CD
Caerphilly Community Council	1CD
Darran Valley Community Council	1CD
Gelligaer Community Council	1CD
Llanbradach Community Council	1CD

Maesycwmmmer Community Council	1CD
New Tredegar Community Council	1CD
Nelson Community Centre	1CD
Penyrheol, Trecenydd & Energlyn Community Council	1CD
Rhymney Community Council	1CD
Rudry Community Council	1CD
Van Community Council	1CD
Councillor T. Davies, Chair Regeneration & Environment Scrutiny Committee	1CD
Councillor E. Aldworth, Vice Chair Regeneration & Environment Scrutiny Committee	1CD
Councillor T. Williams, Cabinet Member Highways, Transportation & Engineering	1CD
Councillor K James, Cabinet Member Regeneration, Planning & Sustainable Development	1CD
Sirhowy Enterprise Way Limited	E
Sirhowy Enterprise Way CCBC Nominee	E
All elected members , 1 copy each.	E

**Appendix L.**

**Document Amendment Record.**

- Amendment Record

NB Issue status of any page within the manual indicated by ‘footer’ at bottom left hand side of each individual page of the manual.

AMENDMENT		DISCARD		INSERT	
NO.	DATE	PAGE(S)	ISSUE NO.	PAGE(S)	ISSUE NO.
Version 1	1 October 2010	ALL		ALL	
Version 2	1 October 2011	ALL		ALL	
Version 3	1 October 2012	ALL		ALL	
Version 4	1 October 2013	ALL		ALL	
Version 5	1 October 2014	ALL		ALL	
Version 6	1 October 2015	ALL		ALL	

## Appendix M.

### Fire / Ambulance Station Locations.

□ Fire Stations

Rhymney	Havard's Row, Rhymney, NP22 5PA
Caerphilly	Waunfach Street, Caerphilly, CF83 3HL
Abercarn	Unit 16 Darren Drive, Prince of Wales Industrial Estate, Abercarn
Risca	New Park Road, Risca, NP11 7AE
Aberbargoed	Angel Way, Aberbargoed. CF81 9FX

□ Ambulance Locations.

Bargoed	Bedwellty Road, Aberbargoed, CF81 9AW
Nelson	Bryncelyn, Nelson, CF46 6HR
Caerphilly	Waunfach Street, Caerphilly, CF83 3HL
Blackwood	Lon Pennant, Cwmgelli, Blackwood, NP12 1YR