Portsmouth Public Highway PFI

Winter Maintenance Operational Plan 2016-17

(Draft for review)

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Document Control

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Section 1 – Scope

1.1 Introduction

This winter service plan describes the policy, objectives, procedures and operational arrangements for the delivery of winter service on the Portsmouth City Council (PCC) public highway network. Ensign as the Contractor & Colas as the Sub-Contractor have prepared this document as the annual Winter Service Plan for the 2016-2017 winter season.

The document serves a number of specific purposes:

Policy Document

The winter service plan sets out Ensign's policy and objectives in the context of local service delivery.

Contract Document

The winter service plan outlines the key contractual responsibilities of Ensign and their service provider, Colas.

Quality Plan

This winter service plan forms part of Colas' quality management system.

Contingency Plan

The winter service plan forms part of the Service Company's wider contingency arrangements.

Operations Manual

The winter service plan describes the processes, procedures and operational arrangements for those responsible for delivering winter services.

Reference Document

The winter service plan is a comprehensive reference document (see **Appendix H** for Reference Documents)

1.2 Requirement to produce a plan

1.2.1 The plan is produced in accordance with the requirement of the PFI Contract Performance Standard 3: Winter Service Operations. These requirements are in line with the Highways Act 1980 Amendment Clause 41 (1A), these place a duty on Highway Authorities to ensure so far as reasonably practical, that safe passage along a highway is not endangered by snow and ice.

1.2.2 This plan is in support of the national arrangements introduced following the implementation of the Civil Contingencies Act 2004, Regulations 2005. The supporting guidance and regulations to the Act set out clear expectations and responsibilities for Category One responders at the local level to ensure that they are prepared to deal effectively with the full range of emergencies from localised Major Emergencies through to Catastrophic Events.

1.2.3 Part 1 of the Civil Contingencies Act 2004 establishes a consistent level of civil protection activity across the United Kingdom. Category One Responders include the Emergency Services, Local Authorities and other agencies.

1.3 Objectives

The objectives of this plan are:

- To provide a framework for the Colas Winter Maintenance Service Manager to manage routine winter maintenance.
- To detail those responsible for the operation and management of routine or specific weather emergencies.
- To provide a framework for the Contract to manage the Highway Services' response to a severe weather emergency as part of a multi-agency response.
- To detail those responsible for the operation and management of the Highways' response to a severe weather emergency as part of a multi-agency response.
- To identify plan activation triggers and the action to be taken.

1.4 Policy Framework (Statement of Service)

Policy: It is PCC's and Colas' aim to ensure, so far as is reasonably practicable, that safe passage along the highway is not endangered by snow or ice.

Colas will implement PCC's policy in an efficient and safe manner and will endeavour, in so doing, to minimise delays to road users.

1.5 Contractual arrangements

Role of PCC: The City Council is responsible for following:

1) Setting the overall policy on the provision of winter services
2) PCC to contact other internal services annually for updates on schools, residential homes etc. for WMOP
3) Receiving notification of proposed actions or changes to proposed actions
4) Overseeing operation management and performance
5) Agreeing the escalation mechanism and cessation of other PFI activities to deploy resources towards winter maintenance *(details of mechanism can be found in section 2.3.1 and Appendix C)*
6) High-level liaison with the media
7) High-level liaison with elected representatives

8) Setting up of the Snow response Room to coordinate clearances across the city
9) Through the Snow Response Room PCC to communicate internally and externally on bus routes affected, school closures & road closures
10) Presentation to external stakeholders prior to winter season on Winter Maintenance Plan and any changes

Role of Ensign/Colas: Colas are responsible for following:

1) Development of the winter maintenance operational plan for Public Highway
2) Implementation, execution and delivery of the winter maintenance plan.
3) Design of winter service treatment routes
4) Procurement of weather forecasting services
5) Provision of ice prediction sensor stations
6) Day to day decision-making and operational management
7) Reporting to PCC
8) Provision of winter service compounds
9) Provision of winter service vehicles, plant, labour and materials for Public Highway
10) Maintenance and operation of vehicles, compounds and equipment
11) Day to day liaison with the media in co-ordination with PCC
12) Monitoring and reviewing performance

1.6 Network

1.6.1 Description and extent of Network

Colas are responsible for all adopted public highways network as described in the PFI contract. The Section 8 agreement with Hampshire County Council (HCC) is now signed and in place for cross boundary works. (**Appendix M**)

1.6.2 Local Problem Areas

The following areas have been identified as areas of risk, and will be salted whenever a Priority one salt run has been ordered.

Road	Extent	Reason
Christchurch Gardens	Carriageway	Gradient
Oakhurst Gardens	Carriageway	Gradient
Hilltop Crescent	Carriageway	Gradient
Beverly Grove	Carriageway	Gradient
Old Rectory Road	Carriageway	Gradient
Mulberry Lane	Carriageway	Gradient
Park Lane	Carriageway	Gradient
Norway Road	Bridge/Carriageway	Gradient on bridge

Road	Extent	Reason
Copnor Road	Bridge/Carriageway	Gradient on bridge
St. Mary's Road	Bridge/Carriageway	Gradient on bridge
Burrfields Road	Bridge/Carriageway	Gradient on bridge
Isambard Brunel Road	Footway under Railway Bridge	Footway leading to Civic Offices
Southampton Road	Rail Bridge	Gradient on bridge
Eastern Road	Rail Bridge/Carriageway	Gradient on bridge
Eastern Road	Water Bridge/Carriageway	Gradient on bridge
Fratton Road	Rail Bridge/Carriageway	Gradient on bridge
Somers Road	Rail Bridge/Carriageway	Gradient on bridge
Holbrook Road	Rail Bridge/Carriageway	Gradient on bridge
Northern Road	Rail Bridge/Carriageway	Gradient on bridge
Walton Road	Rail Bridge/Carriageway	Gradient on bridge
Portsdown Hill Road	The George Flyover Carriageway	Gradient
Northarbour Spur	Carriageway	Emergency service location
Froddington Road	Carriageway at rear of fire station	Emergency service location

1.7 Plan Maintenance

The Contracts Manager (Winter Maintenance Service Manager (WMSM)) in charge of the winter operations is responsible for maintaining this Operational Plan. The plan is updated on a yearly basis taking into consideration the events of the previous season.

Section 2 - Operations

2.1 Introduction (Operations)

The Service Company is responsible for making decisions concerning salting and snow clearance on the network during the winter maintenance period (from 1st October to 30th April). Detailed operational procedures have been developed for the delivery of winter services in the PCC area, including arrangements for liaison and co-operation with adjacent providers and reporting to the client.

The WMSM (Contract Manager for Operations) will control and is responsible for the operation of the winter maintenance service. During any periods of absence / annual leave etc. another Contract Manager will take his function and be responsible for the operation of this Plan.

In order to achieve a co-ordinated service across all boundaries liaison on salting routes has been undertaken with neighbouring maintenance authorities. The routes are defined in **Appendix D3.**

All designated site staff involved in Winter Service duties will receive instructions and training to ensure effective operation. Training would include; an appreciation of winter weather forecasting, effective decision-making, and operational procedures as appropriate to their duties.

2.2 General Arrangements and Decision Making

2.2.1 Decision Making and Instructions

The WMSM maintains a roster of senior staff that performs the duties of the Winter Maintenance Duty Officer (WMDO) throughout the winter season. The duty WMDO will be available 24/7 throughout their period of duty. During a snow or flood event two Duty Officers will be on call, one on the snow/flood desk and one on all other out of hour's issues.

The WMDO maintains computer contact with the Finley Irvine Ice Station Alert System, either from the office or through a laptop. Weather forecasts for a specific local site will be provided by the Met Office, supported by real time local information obtained from sensor sites, as below:

Morning summary and preliminary forecast	by 0800h
24-hour area forecast	by 1330h
Sensor site forecast (text & ice prediction graphs)	by 1330h
2 – 5 day forecast	by 1330h
Evening update forecast	by 1800h

The graphical computer information of existing road surface conditions at the sensor sites together with predictive and forecast information will enable the WMDO to form a decision on appropriate action throughout their period of duty. This action may be for stand-by, precautionary salting, repeat salting or

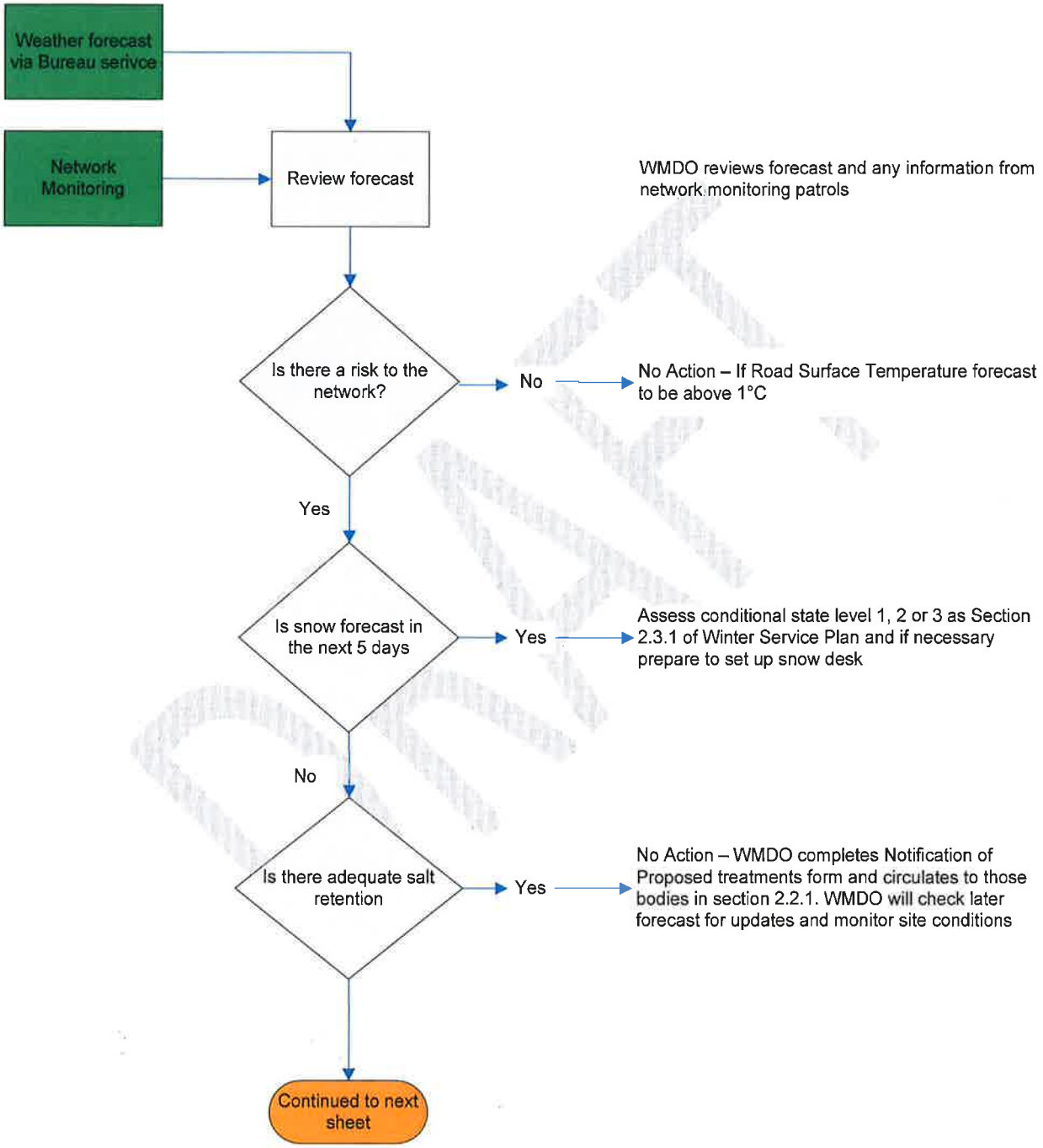
snow clearance. Confidence levels for forecasts will influence the timing of the decision.

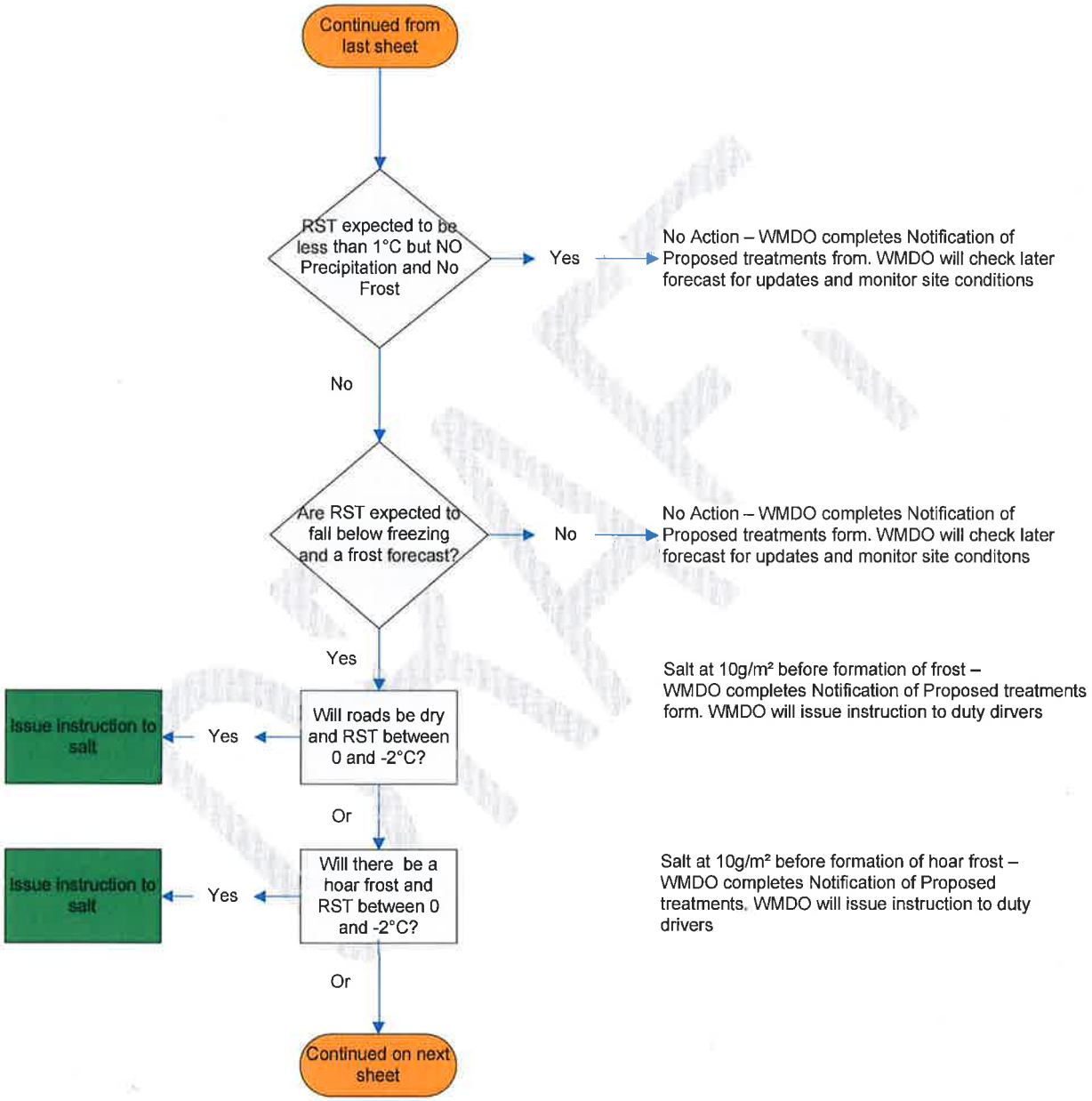
The WMDO will notify the operational staff by 16:00 hrs of any action required. If a decision has not been reached, it shall be delayed until 19.00hrs or other such time as circumstances dictate, when updated forecast information from the Met Office is available. The decision will specify the routes to be treated, timing of treatment or stand-by, spreading rates, ploughing requirements, etc.

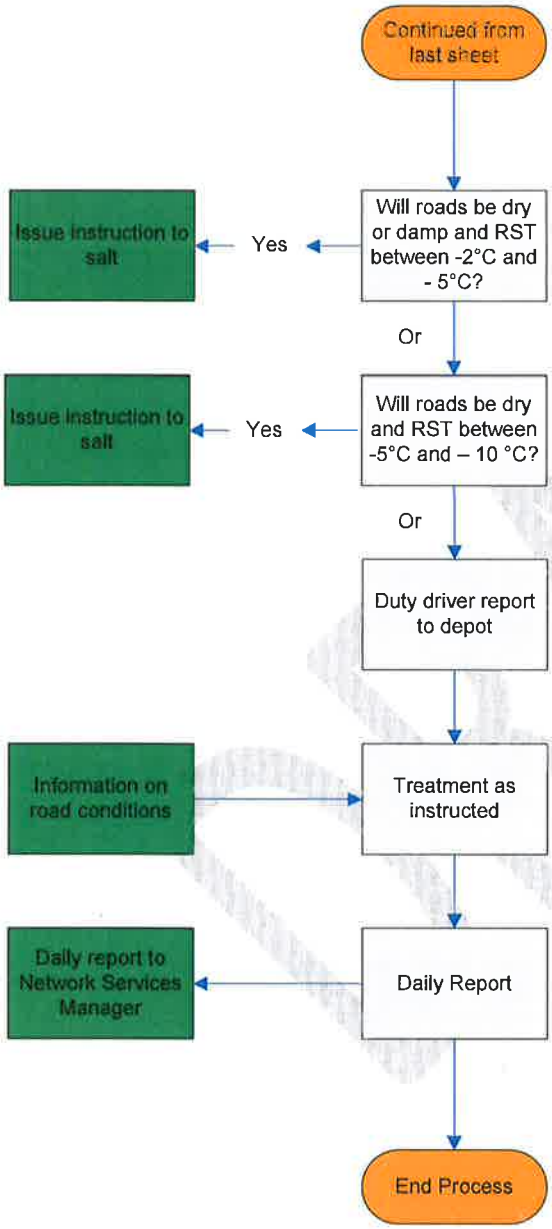
The WMDO will avoid treatment being undertaken in periods of peak traffic flow, if practicable, and during rainfall except where freezing rain is expected. The WMDO will also take into account current advice for low humidity conditions and the guidance given to increase the rate of spread/timing for Porous asphalt.

In the event of revised forecasts or unexpected conditions the WMDO may vary or change any previous decision at any time in the interests of the well-being of the Network. Updates/ changes of decision and any actions shall be notified by the WMDO to WMSM who will in turn notify if required PCC, emergency services, adjacent authorities and any party with legitimate need of such information.

2.2.2 Decision process




Continued from last sheet
RST expected to be less than 1°C but NO Precipitation and No Frost
Yes
No Action – WMDO completes Notification of Proposed treatments from. WMDO will check later forecast for updates and monitor site conditions
No
Are RST expected to fall below freezing and a frost forecast?
No
No Action – WMDO completes Notification of Proposed treatments form. WMDO will check later forecast for updates and monitor site conditons
Yes
Salt at 10g/m² before formation of frost – WMDO completes Notification of Proposed treatments form. WMDO will issue instruction to duty dirvers
Will roads be dry and RST between 0 and -2°C?
Yes
Issue instruction to salt
Or
Will there be a hoar frost and RST between 0 and -2°C?
Yes
Issue instruction to salt
Salt at 10g/m² before formation of hoar frost – WMDO completes Notification of Proposed treatments. WMDO will issue instruction to duty drivers
Or
Continued on next sheet



Salt at 15g/m² before formation of hoar frost – WMDO completes Notification of Proposed treatmentsform. WMDO will issue instruction to duty drivers

Salt at 20g/m² before formation of hoar frost – WMDO completes Notification of Proposed treatmentsform. WMDO will issue instruction to duty drivers

Drivers report to depot one hour prior to time of commencement of the designated action in order to prepare their vehicles, load salt, and collect their route cards.

Upon completion of their run each driver will inform the WMDO that the run is complete and update him on the road conditions.

WMDO will provide a daily operational report to the Network Services manager, detailing the treatments carried out over the last 24 hours.

2.2.3 Decision matrix guide (see Appendix C)

2.2.4 Special considerations

Hard packed snow
The treatment of hard packed snow/ice using salt alone can result in an uneven and slippery surface and therefore, in such circumstances, the addition of abrasives (5mm or 6mm sharp sand) will be considered.

Traffic calmed areas
With the exception of road marking techniques to influence traffic speeds all the features are likely to involve some level of conflict with winter maintenance operation. Traffic calming features will be indicated on the gritting routes and one or more of the following actions may be specified:

- Lift snowploughs and plough snow around the traffic calming features;
- Apply heavy salting locally this is to be carried [by traffic] onto the feature; and/or
- Adjust the spread rates or spinners to minimize overspreading

2.3 Escalation

During falls of snow or exceptional weather conditions responsibility for managing events will normally pass from the WMDO to a dedicated team and a Snow Desk will be established as detailed below. See **Appendix L** for Snow Desk content

PCC will be consulted in advance of establishing a Snow Desk to liaise the communications of the snow desk to their wider internal departments.

Emergency Service Plan arrangements will only be enacted if, after discussions with PCC, the Snow Desk response is considered insufficient to cope with the exceptional weather conditions or if an incident is compounded by a series of further incidents.

In the event that the DfT launch the Salt Cell, Colas will adapt the length of the network treated according to the guidance issued by the Salt Cell and according to salt supply. In this situation the WMSM will consult PCC before implementing any treatment decisions and will inform them twice a day, in the morning and in the afternoon of any developments.

2.3.1 Establishment of Snow Desk and escalation process

During periods where snowfall or severe weather is forecast, three conditional states will be recognised, Level 1, Level 2 & Level 3 as below.

Level 1
During marginal weather conditions, following the 5-day weather forecast, the WMDO will monitor the local weather and road surface conditions. He will liaise with the WMSM and report any local variations to the forecast state.

Level 2
During periods where severe weather is forecast, where snowfall is predicted, a "snow desk" will be setup and co-ordinated up by the WMDO and WMSM. A team from the Service Company will be established to operate the Snow Desk and they will continue to monitor local conditions and report back to the WMSM.

Colas and PCC will discuss the degree of severity and the level of resources that need to be diverted to snow clearance duty. 3 stages are forecasted. It is understood that the trigger of each of these stages will generate a relief event for underachievement of performance standard on the associated activities:

Stage 1
Activities suspended:
- Highways Maintenance
- Landscaping Activities
- Gully Cleansing
- Road Lining
- Street Cleansing (block sweep)

Stage 2
Activities suspended over and above Stage 1:
- Capital Works (schemes)
- Street Cleansing (gold zones, heritage areas & dog bins)
- Traffic Management

Stage 3
Activities suspended over and above Stage 1 & 2:
- All other services with the total workforce dedicated to winter maintenance operations

Level 3
During extended periods of severe weather, the "snow desk" will liaise with PCC, Service Company senior management, and Emergency Services to manage the situation. The Snow Desk will act, as a single point of contact and all instructions will be passed through the Snow Desk.

Once the decision has been made to set up the Snow Desk, a dedicated room at the Service Company's office will be used. This room will contain all the necessary equipment to effectively communicate with the gritting/snow clearance fleet, PCC, Police, adjacent Local Authorities and other parties. Once the decision to initiate the Snow Desk has been taken, all communications equipment will be tested and if necessary equipment will be drawn from store.

The PCC Snow Response Room will coordinate all clearance works across the city, liaising with Colas and other Internal Services for a joined up approach. This will also include the coordination of PCC volunteers to assist with footway clearances, some of whom are unable to carry out their day to day duties due to the weather conditions. In addition to this, the Snow Response Room will collate and distribute information internally and externally on items such as bus routes affected, schools closures and road closures.

Once the decision to initiate the snow desk has been taken the WMDO will produce a shift pattern based on the available personnel and forward this to the WMSM/PCC.

The WMSM will arrange for a change in shifts where it is predicted that the snow event will span more than 12 hours, allowing for a half hour handover period. Where necessary, personnel required to take part in shift arrangements will be housed in local hotels for the duration of the emergency.

The shifts will be organised to include 2 decision makers, 1 "Technical Assistant", responsible for keeping the Winter Service Log, and 1 "Information Officer". One of the decision makers will take a lead role and in the event of implementation of the Contingency Plan, the role of "Silver".

During shift changes each member of the team will handover to their direct replacement. The team leader from the previous shift will remain for a period not less than half an hour after the official handover.

In addition to the staff at the snow desk location the WMSM will, if considered necessary, arrange to place staff at the PCC Offices for the purposes of information collection and liaison.

2.3.2 Activation of PCC Emergency Plan

PCC Emergency Plan will be activated at PCC request when it becomes apparent that a major or critical incident has occurred or is likely to take place. The actions outlined in the plan shall immediately put in place.

Appendix D2 highlights the Emergency Priority route.

Section 3 – Treatments

3.1 Carriageway Treatment

3.1.1 All carriageways forming part of the public highway network have been allocated to one of the three groupings according to the following criteria;

Priority One

- main traffic routes ("A" class roads and M275 motorway)
- main access routes to important industrial and large educational establishments (500+ pupils)
- main access routes to major accident and emergency hospitals, and to important emergency service locations
- roads used as major bus routes (50 per day urban, 25 per day rural)
- roads passing through major shopping centres
- other routes busy during peak traffic periods

To be treated, as routine pre-salting, in advance of any forecast frost, ice, or snow.

After 3 days of treatments, if no rain/snow has fallen no further treatment should be undertaken unless conditions deem it necessary (WMSM decision).

Priority Two

- roads near to other schools
- roads used as other bus routes
- roads to other hospitals
- roads to minor fire and ambulance establishments
- roads passing through other shopping centres
- roads with gradients that make driving hazardous
- hollow spots.
- footways over prominent Bridges

To be treated only when there is prolonged and persistent frost, ice or snow which is expected to continue, or following snow, but only once Priority 1 routes have been cleared.

Priority Three

- other adopted public highways not covered by the above

Priority 3 roads will not be treated. However, in the case of heavy snowfall, once priority 1 and 2 roads have been cleared, we will endeavour to manually or mechanically clear lower-priority roads. In exceptional weather, salt may well be rationed by the government, as it was in January 2010 and they may also reduce the numbers of roads to be salted.

"treated" = either manually or mechanically depending on resources

See **Appendix D1** for the Carriageway categories 1 and 2

3.1.2 Spot Salting

Spot Salting is a non-routine activity carried out after the completion of Priority 1 salting. Spot Salting is undertaken on a priority basis at locations where there have been reported problems (from the Emergency services or others), or there is knowledge of specific problems of ice formation on the network. Spot Salting will not be undertaken when it is unlikely to be completed before the ice begins to melt, as road temperatures rise. Spot Salting can be undertaken either by mechanical spreader or by hand.

The process for ordering spot salting is included in **Appendix C.**

3.1.3 Extent of Carriageway to be Salted

- The full width of the running carriageway shall be treated at the specified rate of spread indicated on the agreed action treatment.
- Each carriageway of a dual-carriageway shall be treated individually.
- All slip roads at grade-separated junctions shall be treated individually.
- The full length of the carriageway at roundabouts and gyratory systems shall be treated.
- Isolated obstructions in the centre of a single carriageway road which exceed 5m in length shall be treated on both sides.
- Treatments will only extend to the City boundary except where agreed in the Section 8 cross boundary agreement with HCC

3.2 Footway Treatment

3.2.1 All footways and cycle ways shall be allocated to one of the three groupings according to the following criteria;

Priority One

All footways & cycle ways designated as Gold zones, Bridges & Hollow spots, and the Guildhall Square **(Appendix D),** Transport Hubs **(Appendix E2),** PCC managed residential homes **(Appendix E3),** as identified, to be treated only when there is prolonged and persistent frost, ice or snow is expected to continue, or following snow.

The list of footways/cycle ways will be reviewed/updated on an annual basis.

Priority Two

All footways & cycle ways designated as shopping areas, Schools access **(Appendix E)** & Hill Slopes designated as to be treated following significant snowfall but only once Priority 1 footways and cycle ways have been cleared.

Priority Three

Other footways & cycle ways to be cleared either manually or mechanically following significant snowfall but only once Priority 1 and Priority 2 footways and cycle ways have been cleared. This will include a list of all school crossing patrol sites within the city **(Appendix E1).**

3.2.2 Extent of Footway/Cycleway to be salted

The full width of the footway or running width of cycleway meeting the above criteria shall be treated.

3.2.3 Resources for Footway treatment

It is not possible to predict the level of resources required, at any one time, to ensure that the footways described above are clear of snow and ice. It is also very difficult to predict the level of resources effectively available at the time. However the escalation process described in paragraph 2.3.1 and recent historical events indicate a total number of operatives in excess of 200.

3.3 De-Icing Treatment

3.3.1 General considerations

De-icing will be achieved by the application of 6mm dry rock salt at the rates defined in the Treatment Matrix Guide in Section 2.2.2 and **Appendix C**.

When necessary sharp sand will be added and pre mixed with the 6mm rock salt before being loaded in the gritters.

3.3.2 Thin Surfacing

Many of the modern surfacing materials (TWC) have a 'negative texture' with a considerable number of voids in the finished surface. During the application of salt, a brine solution is often trapped in the voids and is drawn onto the surface by the action of tyres. On medium and lightly trafficked roads, however, the brine solution might be retained in the negative texture.

Experience indicates that TWC does not benefit from an increase in spread rate but that the effect of residual salt on the carriageway is reduced, particularly in areas of low traffic. Residual salt should not therefore be relied upon to provide protection.

The spread rate for TWC should remain as for HRA but less reliance should be placed upon residual protection provided by the previous treatment and the aim should also be to apply treatment as close, as is practicable, to the forecast time of freezing.

3.3.3 Low Humidity

The current practice for winter maintenance is based on the application of dry Sodium Chloride (NaCl) in the form of naturally occurring rock salt. In low humidity conditions the level of moisture is critical in the salt being effective. This is because dry rock salt has no direct melting action; melting occurs only after the salt forms a solution by absorbing moisture from the atmosphere or the road surface.

Below a relative humidity level of about 80%, the absorption of moisture by rock salt decreases rapidly and, at low levels of humidity, salt particles remain inert and ineffective. Dampening the salt with a wetting agent prior to spreading can accelerate the process of dissolving salt particles.

Low humidity and low temperature conditions are most likely to occur in December and January, although these conditions can occur throughout the normal winter maintenance season. The WMDO must be aware that the conditions occur and that they appear to be doing so more frequently.

Monitoring the condition of the network should be carried out to confirm that the treatment has been effective. If it has not been fully successful, contingency treatments should be considered to restore the network to a satisfactory condition. It should be noted that weather sensor systems require the presence of moisture to determine the concentration of residual salt on the road sensor.

3.4 Salt Bins

Some parts of the network not included in precautionary treatments could be especially vulnerable to icing. This is especially the case in the wards of Paulsgrove, Cosham, Drayton and Farlington where most of the roads present an important longitudinal gradient. Salt bins are being maintained at key locations to allow road users to spread ground rock salt in the local area on an as needs basis. It is to be noted that these bins should not be used by residents to salt private premises.

The total number of bins on the public highway 2016-2017 season is 80. Their location is shown in the **Appendix D4**. Requests for additional salt bins on the highway will be reviewed by PCC on a case by case basis.

Salt bins are cleaned and filled as a routine at the start of the season and before 1st November each year and will be refilled following extreme weather conditions. A dedicated cleansing operative will carry out a fortnightly inspection and the check sheet will be sent to PCC on a fortnightly basis. See **Appendix D5** for the Salt Bin Checklist. Please note that salt will be allocated in priority to CW treatment then FW treatment as per described in section 3.1 and 3.2.

3.5 Snow Clearance

3.5.1 Ploughing & Clearance Techniques and Operational Considerations

In moderate and heavy snowfall conditions it will be agreed with PCC to cease all normal highways work and re-direct all available resources to snow clearance.

Snow clearing routes are based upon a 40gm/m² application rate for the clearance of snow. This will normally be applied by way of two separate 20gm/m² runs. Precautionary treatment in advance of any snowfall will be at 20gm/m².

Snowfall less than 50mm deep will normally be cleared by the application salt at a rate of 40gm/m². This may take several successive applications.

Snowfall greater than 50mm will normally require ploughing, supplemented by the application salt at a rate of 40gm/m². The use of ploughs will be restricted to roads wide enough to allow their passage without risk due to the high levels of "on-street" parking and narrowness of side roads, combined with the need for traffic to be as free flowing as possible. All winter maintenance plant will, however, be equipped to carry ploughs.

While moderate or heavy snow is still falling only priority one roads will be ploughed and treated in order to concentrate resources and ensure the most important roads are kept open and maintained in a safe condition.

When snow has stopped falling or the priority one roads are considered safe, priority two roads will be ploughed and treated followed by priority three roads as resources and conditions permit.

The frequency of ploughing and the continuation of snow clearance operations will depend upon conditions and resources will be deployed according to the escalation process described in section 2.3.1.

The removal of snow from dual carriageways requires a different technique from two-way carriageways. In heavy snowfall the priority on a dual carriageway will be to maintain a single open lane. In most cases this will be the most heavily used inside lane and the first operation will be to plough from lane 1 to the verge. The clearance of other lanes will occur as conditions improve. The outside lane will normally be ploughed to the central reservation although it is essential to regulate the speed to avoid throwing snow onto the opposite carriageway. If the central reservation is not wide enough to accommodate the snow or the dual carriageway has three lanes then echelon ploughing (2 or more vehicles, moving in the same direction, one behind the other, in different lanes) will be used to move the snow to the nearside.

Where snow compaction has occurred and ice has formed it may be necessary to use salt/grit mixtures to break up the compacted snow and provide additional adhesion.

In extreme conditions after heavy snowfall it may be necessary to lift snow from streets. Snow will only be removed this way in exceptional circumstances, for example where existing piled snow is preventing further snow clearance from the road.

Snow dumps will be created as necessary at the following sites:-

Road	Location
Milton Common	Eastern Road
Western Road	King George V Playing Fields

Road	Location
Long Curtain Road	Long Curtain Car Park
Northern Parade	Alexandra Park
Portsdown Hill Road	Portsdown Hill
London Road	Hilsea Lido
Market Way	Former Tricorn Centre
Bransbury Road	Bransbury Park
Southsea Esplanade	Southsea Common
Milton Road	Milton Park
Eastern Road	Car Park A27
Eastern Road	Farlington Playing Fields

3.5.2 Aftercare and follow up Treatments

During the thaw the first priority will be to ensure, as far as possible, that road channels and footways are clear of snow in the vicinity of gullies etc. to allow melted snow to drain away. Only after gullies are clear should an attempt be made to clear any stockpiled snow.

As soon as practicable a special inspection of the network will be undertaken to identify any damage caused by the weather or the snow clearance operations.

3.5.3 Abandoned and Parked Vehicles

Where an abandoned or parked vehicle is hampering snow clearing operations the removal from the road, or removal to another part of the road, may be required. Wherever possible the owner will be contacted and requested to remove the vehicle directly but in certain circumstances this may not be possible.

Only police/traffic officers have the authority to move a vehicle in these circumstances and therefore contact will be made through the Snow Desk and an instruction sought from a police/traffic officer for the vehicle to be moved. The specific details of each vehicle, its location and the reason why it needs to be moved will be provided to the police/traffic officer and a log of all communications kept. The vehicle/s will only be moved once an instruction from a police/traffic officer has been received.

Section 4 – Weather Forecasting and Ice Prediction

4.1 General Arrangements

During the winter period Colas will use the "Open Road" forecasting service provided by the Meteorological Office (London Weather Centre). The forecast provided each day gives the following information;

- Area 24-Hour Forecast
- Site Specific Forecast
- Morning Summary
- Evening Update forecast
- Snow Prediction during any High Risk period
- 2– 5 day forecast
- 24 hr contact number for Met Office Weather Forecasters

The main features of the forecasts are:

- Readiness colour

Green	no snow or ice expected
Amber	risk of snow and/or ice
Red	snow, ice or drifting snow is expected

- Hazards - This section gives information on the hazards giving rise to the Red or Amber readiness colours as well as other potential hazards which could be present with a "Green" forecast (e.g. high winds, heavy rain, fog)

- Temperatures - Minimum road surface and air temperature are provided, these are generally given together with a confidence statement of High Medium or Low, by the forecaster.

- 24 Hour Summary - This gives a general summary of the weather forecast from 12.00 midday to12.00 midday the following day.

  - 5 day forecast - This is an outlook for the 4 days following the day of issue of the forecast information. It gives an indication of the likely minimum road surface temperatures, together with a yes/ no statement for ice, snow, hoar frost and fog.

  - In addition to the above, at approximately 1900 hours each day the London Weather Centre issues an evening forecast. This can be viewed by the WMDO and WMSM at home on a portable (laptop) computer. The WMDO can contact the duty forecaster at the London Weather Centre to discuss any complications that may arise in the forecast. This consultancy service is provided 24 hours a day.

4.2 Ice Prediction System

Colas have subscribed to the Finley Irvine Ice Station Alert System. The variables measured are: air temperature, road surface temperature, relative humidity, precipitation, wind speed and direction, surface condition (wet/dry)

and road temperature at 300 mm depth as well as salt residue. These are accessed by the London Weather Centre and fed into their forecasting model, enabling them to prepare a forecast specifically for the area.

The 2 Ice Prediction sensor stations are located as shown below. The selected Forecast site will be one of these two locations and will be determined in liaison with the chosen forecast provider. The sites are:

1. *Eastern Road, at the entrance to Great Salterns Quay by lamp column 205*

2. *Portsdown Hill Road, adjacent to the parking area just west of Hilltop Crescent by GPO pole DP 847*

Finley Irvine software is installed on 2 Desktop PC's and 2 Laptop PCs. One Laptop will remain with the WMDO. The Desktop PCs are located in the Service Company offices and for accessing by WMDO or other delegated officers during the working day. Further access to the forecasting information is available from any PC connected to the Internet via Finley Irvine Ice Station Alert System.

4.3 Records

The WMDO will keep detailed daily records of information using forms from the "Winter Maintenance Operational plan":

- weather forecast
- actual weather conditions
- reports received
- decisions made
- instructions given
- confirmations
- actions taken
- liaison and communications log

These records will comprise paper as well as electronic records. They will be maintained, together with the adjacent authorities' decisions, in the Winter Weather Records File. Records will be archived and retained.

Periodically analysis of the records will be carried out to identify non-conformances or trends and to ensure compliance with the Winter Maintenance Code.

Section 5 – Winter Weather Emergency Preparation and Planning

5.1 Health and Safety

Risk Assessments and Safe Working Methods assessments and safe working methods for office staff and operational staff engaged on winter maintenance are prepared by the WMSM and the WMDO and updated in the second fortnight of September.

5.2 Mutual Aid

The management of the interface between the PCC network and the Trunk Road and other networks is essential to the consistent provision of a winter service. For example, there are local roads at the PCC boundary which are essential to traffic flow within the City.

Mutual aid can be many different things, from the sharing of resources such as salt, the sharing of facilities or assistance to deal with specific problems that may occur near maintenance boundaries.

Whilst these arrangements are often ad hoc, inconsistent and rely upon the goodwill of the parties' involved, Colas is committed to the principle of mutual aid.

5.3 Review

Colas undertake a mid-season and end of season review of the Winter Maintenance Operations. This is initially undertaken by the WMSM and PCC and will cover communication issues, management and delivery of the Winter Service.

Issues may be identified at the initial meeting that may require later input from a third party e.g. the Police. The review will include:

- response and treatment times
- decision making
- command and control
- escalation and snow desk (if applicable)
- liaison and communications
- weather forecasting and ice prediction
- actual weather conditions
- operational issues
- records
- health and safety
- human resources
- vehicles and plant
- de-icing materials
- depots and facilities
- Identified problem areas on the network
- Innovation and new techniques

Please find below the main action taken after the review of the 2015-2016 winter season:

1) The Streets Ahead website remains under review/construction. Gritting routes and information continue to be published on the PCC website.

2) Temporary gritting route 12 (which was implemented last season to incorporate the one-way system which is in place for the duration of The Hard Development works) remains in place to accommodate the ongoing works.

3) The fleet of winter maintenance vehicles is due to be replaced, new vehicles are expected in October/November 2016.

4) Grit bin no. 42 (Walton Road) has been relocated from its original position adjacent to lamp column 30 to a more suitable location adjacent to lamp column 31.

5.4 Winter Service Timetable

The generic preparation table is presented in **Appendix G,** the table below sets out key dates in the delivery of the 2016-2017 winter service.

Date	Who	Action
July 2016	Colas	Preparation of WMOP update
31 July 2016	Colas	Submit WMOP to PCC for review
TBC	PCC	T&T Cabinet Briefing Meeting
n/a	Colas	Amend WMOP as required by PCC
16 September 2016	Colas	Submission of WMOP to PCC
TBC	PCC	T&T Cabinet Decision Meeting
23 September 2016	Colas	Issue WMOP
1 October 2016	n/a	Winter season commences
26 January 2017	Colas	Mid-season review
30 April 2017	n/a	Winter season concludes
24 May 2017	Colas/PCC	Post season review meeting
June 2017	Colas	Post season report to PCC

Section 6 - Resources

6.1 Introduction (Resources)

This section of the Winter Maintenance Operational Plan (WMOP) details the resources available for delivery of winter services including reserve and contingency arrangements. (refer ro Appendix B for list of the abbreviation)

6.2 Human Resources

The following table defines the key personal responsible for delivery of the services defined within this document:

Function	Title	Contact
Responsibility for Plan	WMSM	07717 665912
Decision maker	WMDO and WMSM if required	07717 665912
First Point of Contact	WMDO	07717 665912
Out of hours contact	WMDO	07717 665912

6.3 Training

The Service Company is committed to ongoing staff training and education. It is essential that the decision maker is competent and experienced in all likely weather conditions. Therefore all staff involved in winter service duties will receive instructions and training, as appropriate to their duties, to ensure effective operation. Training will include; an appreciation of winter weather forecasting, effective decision-making, and particularly the management of snow events and implementation of this WMOP.

It is also essential that there are adequate numbers of HGV drivers within the workforce, trained to drive the necessary machinery, for a prolonged snow event. Operational staff will have the appropriate driving license be trained to appropriate levels, such as City and Guilds Scheme winter service operatives' qualification. Records of all training are kept on file at the Service Company's office.

6.4 Winter Maintenance Exercise

6.4.1 A trial exercise shall be carried out in advance of each winter period to check all the plant, operatives and ancillary equipment are available and in working order.

6.4.2 This exercise will normally take place in late September. All pre-salting vehicles (including salt spreaders), snowploughs, as shown in **Appendix J** and relevant labour will be involved and tested.

6.4.3 The trial run shall consist of:

- Salting vehicles being loaded with spreading inserts
- A minimum amount of salt and loaded to test the correct operation of the unit
- Ploughs fitted and their operation tested
- Priority 1 routes run in full, checking route maps and schedules are available and correct
- Priority 2 routes, subject to agreement with the Winter Service Activity Manager

The results of this exercise shall be recorded on Checklist A in **Appendix J** and copied to PCC.

6.4.4 Briefing and induction

6.5 Manning Levels

There are 8 qualified drivers for winter service operations on the PCC network. This will provide a minimum resource level of 2 times the number of operational vehicles needed.

An additional 2 fully trained HGV drivers are available on request to provide winter emergency response.

In normal conditions 3 drivers will be on duty at any one time.

In a snow situation there will be sufficient HGV drivers to operate gritters for 24-hour cover for a prolonged period of severe weather.

6.6 De-Icing Material

6.6.1 Type and Specification (See **Appendix I**)

To minimise damage to third party property and vehicles and to reduce problems in periods of low humidity it is proposed to utilise 6mm nominal size rock salt as below. Abrasive grit may be used in periods of extreme weather.

- 6mm salt, to BS3247:1991
- Abrasives: 5 or 6mm sharp sand

Following "The Quarmby Review", issued by the Secretary of State for Transport, to consider the resilience of English transport systems, new guidance was issued in Oct 2010 to provide a comprehensive range of spread rates for different weather conditions and spreading capabilities for the UK road network. Whilst Colas has taken these into consideration, we will not be in a position to fully implement them until the existing fleet of vehicles is renewed.

This information has been reviewed in 2016 with no changes, however it is Colas' intention to replace the winter maintenance fleet during the 2016/2017 winter season.

6.6.2 Storage Locations

For the 2016/2017 winter season Colas salt is stored in the Walton Road depot. See **Appendix F** for Equipment, Store and Salt Barn location.

The UKRLG updated its recommendations regarding pre-season salt resilience stock level in its report "The resilience of England's Transport Systems in Winter" issued in October 2010. The resilience levels suggested are changing from 6 days/24 runs to 12 days/ 48 runs. This translates into a pre-season stock level for Portsmouth of 864t of salt. The storage capacity at Portsmouth depot is 970t (850t in a dedicated salt barn in Walton Road depot and 120t in a non-covered storage bay), 10% more than the recommended resilience level, which is fully stocked before the start of the winter season. For the record the total tonnage of salt used in 2015/2016 winter was in the region of 757t.

Colas still keeps a framework contract agreement with both main UK salt provider Salt Union and Cleveland Potash. Colas internal growth has increased the level of salt bought by the company, Colas Portsmouth can therefore draw on a privately owned 150,000t of salt.

In 2010, it was agreed that a New Emergency Network is to be considered in case of salt supply shortage. In extreme or prolonged weather conditions, the Government may establish the "Salt Cell", this will control the distribution of salt supplies nationally, and may require the reduction of the treated network. It is important to note that in these circumstances, the control of supply of salt is beyond our control.

Colas have also been in discussions with the Met Office who can now provide a more accurate weather report which highlights the road surface temperature at several locations throughout the City, this will allow us to take a decision with the agreement of PCC, whether to grit certain roads should there be an extreme salt shortage.

It is part of the WMSM's task to be responsible for the timely ordering of replacement salt.

Section 7 – Liaison and communication

7.1 Publicity

It is important that the all interested parties including the general public are aware of and understand Colas/PCC approach to winter maintenance of the public highway.

Queries and complaints from the public will be dealt with directly by Colas via the helpdesk as appropriate and will be recorded through the PEM system.

The plan will be circulated to the list of stakeholders listed in preamble of this plan.

Statements relating to policy, and the general level of service provided will only be made through PCC.

Subject to the approval of PCC, Colas will provide information on agreed relevant details contained in this WMOP for Public Highways to the general public using agreed means of communication. This includes a proposal for the content of PCC Winter Maintenance of public highway website section.

In order to achieve a consistent approach to winter service operations along routes that either enters or leave the PCC boundaries, liaison with HCC and the Highways Agency will take place. All communications will take place by email and telephone as necessary.

Colas will notify the bodies in section 2.2.1 of all proposed treatments once known, but not normally later than 16:00 each day. It will also notify them of other actions including changes to planned treatments, reactive treatments and snow clearance. Communications in severe weather conditions will include regular updates as determined by the prevailing circumstances

All notifications will be by email and phone unless agreement is reached with recipients for transmission by other electronic means.

Colas will consult with PCC, as soon as practicable, on any strategic decisions required or any events that may have a significant effect on the performance of the network, such as strategic road closures.

The form at **Appendix K** will be used for all notifications.

7.2 Reports

7.2.1 Daily reports

Before 9.30am each day the WMDO will provide a daily operational report to the WMSM, detailing the treatments carried out over the last 24 hours and any relevant issues that have arisen during that period. The report shall be submitted in the form defined at **Appendix K.** The reports will be archived on Colas data base and made available to PCC on request.

7.2.2 Regular Updates

During severe weather conditions Colas will provide PCC with regular updates describing the current condition of the network and detailing the ongoing and

proposed winter service operations. The report shall be submitted, by email, by the WMSM in the form defined in **Appendix K.**

7.3 Media Liaison

In order to provide information on the winter maintenance decisions and other routine matters the Service Company will inform PCC communication officer daily in case of severe weather condition and on an ad hoc basis otherwise as required by PCC.

Any direct communication between Colas and the media will first be vetted by PCC.

7.4 Internal Communication Arrangements

During the Winter Service period all normal internal operational communication and instructions will be via landline telephones, mobile telephones and/or emails. Instructions, actions and reports will be recorded.

All winter service depots and gritting vehicles will be equipped with mobile telephone communication to ensure contact can be made by the supervisors and WMDO's at all times.

Appendix A

Other Plans Containing Colas Highway Management Roles and Responsibilities

- Portsmouth City Council – Emergency Response Plan
- Colas – Emergency Incident Plan

Appendix B

Definitions and abbreviations

PCC	Portsmouth City Council
HCC	Hampshire County Council
WMSP	Winter Maintenance Service Plan
WMSM	Winter Maintenance Service Manager
WMDO	Winter Maintenance Duty Officer
RST	Road Surface Temperature
TWC	Tarmac Wearing Course

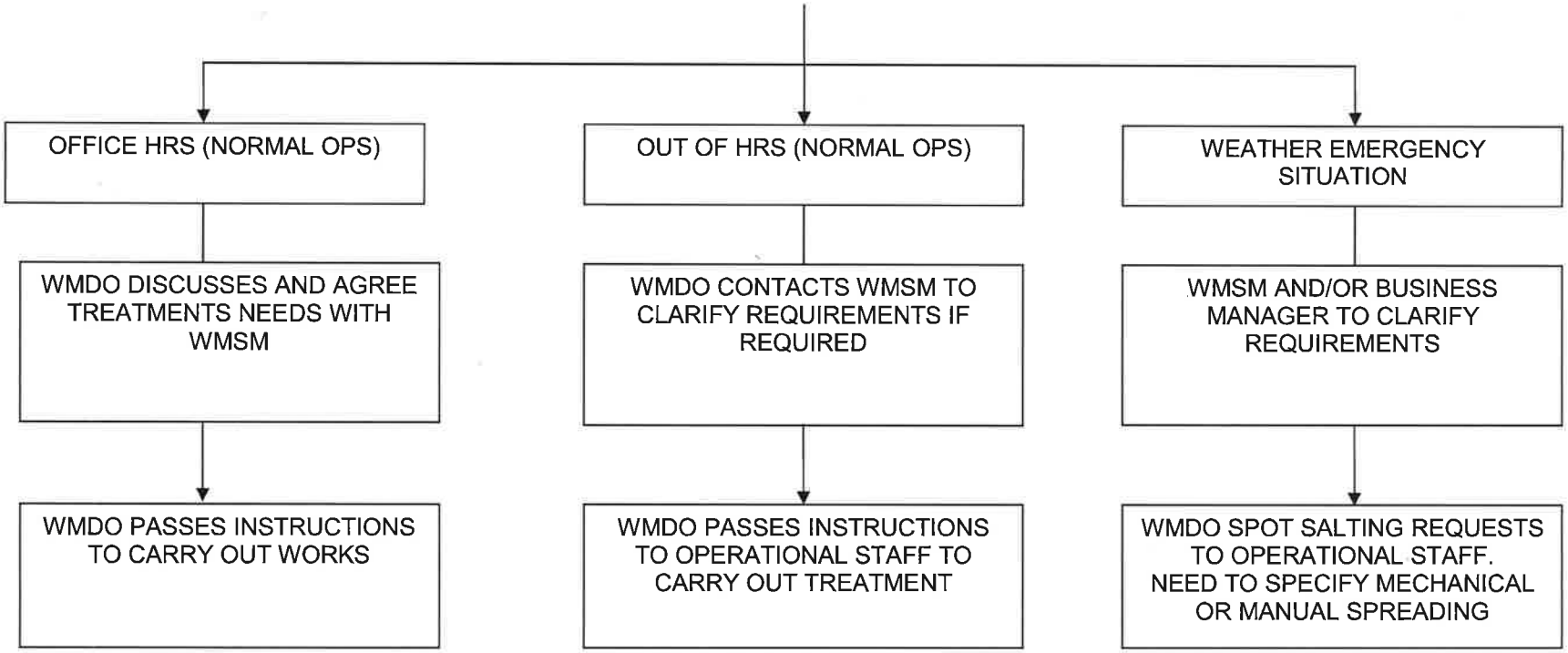
Appendix C
Guidelines for Decision Making

Forecast Conditions	Green	Amber			Red						
	Above Freezing	Borderline Freezing Conditions			Definite Freezing Conditions					Snow	
		No rain, freezing fog, or hoar frost, predicted	Rain, early morning freezing fog, or hoar frost predicted	Freezing in some places	No rain, freezing fog, or hoar frost predicted	Rain, freezing fog, or hoar frost predicted in places* ***If predicted for North of City only then Routes 1-4 only**	Rain predicted before freezing conditions	Rain predicted during freezing conditions	Early morning freezing fog, or hoar frost predicted	Light falls up to pprox.. 30mm	Moderate falls over 30mm
Road Conditions											
Road surface wet	1	2	2*	3	3	3	4	3 * and standby for possible repeat run	3 *	5 & 6 and standby for possible repeat run	5 twice & 6 and standby for possible repeat run
Wet patches on road surface											
Road surface wet but may dry											
Road surface dry	1	1	2*	1	1	3	4	3 *	3 *	5 & 6	24 twice & 6 Repeat if required
Routes pre-salted within 24 hours with no subsequent rain											

Recommended Action

1 No action necessary
2 Colas gritters operators to standby in depots (loaded or unloaded as agreed with the Winter Maintenance Duty Officer)
2* Colas gritters operators to standby in depots (loaded or unloaded as agreed with the Winter Maintenance Duty Officer)
3 & 24 Pre-salting to be completed before commencement of freezing conditions @ 15g/m²
3* Pre-salting to be completed before commencement of freezing conditions @ 15g/m²
4 Pre-salting to be programmed after rain has finished @ 15g/m²
5 Pre-salting to be carried out before predicted snow @ 20g/m²
6 Fit snow ploughs as appropriate
Note: M275 to follow Highways England gritting criteria to ensure uniformity

WMDO IDENTIFIES
NEED FOR SPOT SALTING TREATMENT



Timing of Action

Pre-salting needs to be timed for maximum de-icing effect, i.e. completed close to the commencement of the freezing period. However, it must be borne in mind that pre-salting operations during the early hours, after midnight, will have a serious effect on the ability of the work force to undertake a full day's work later in the day.

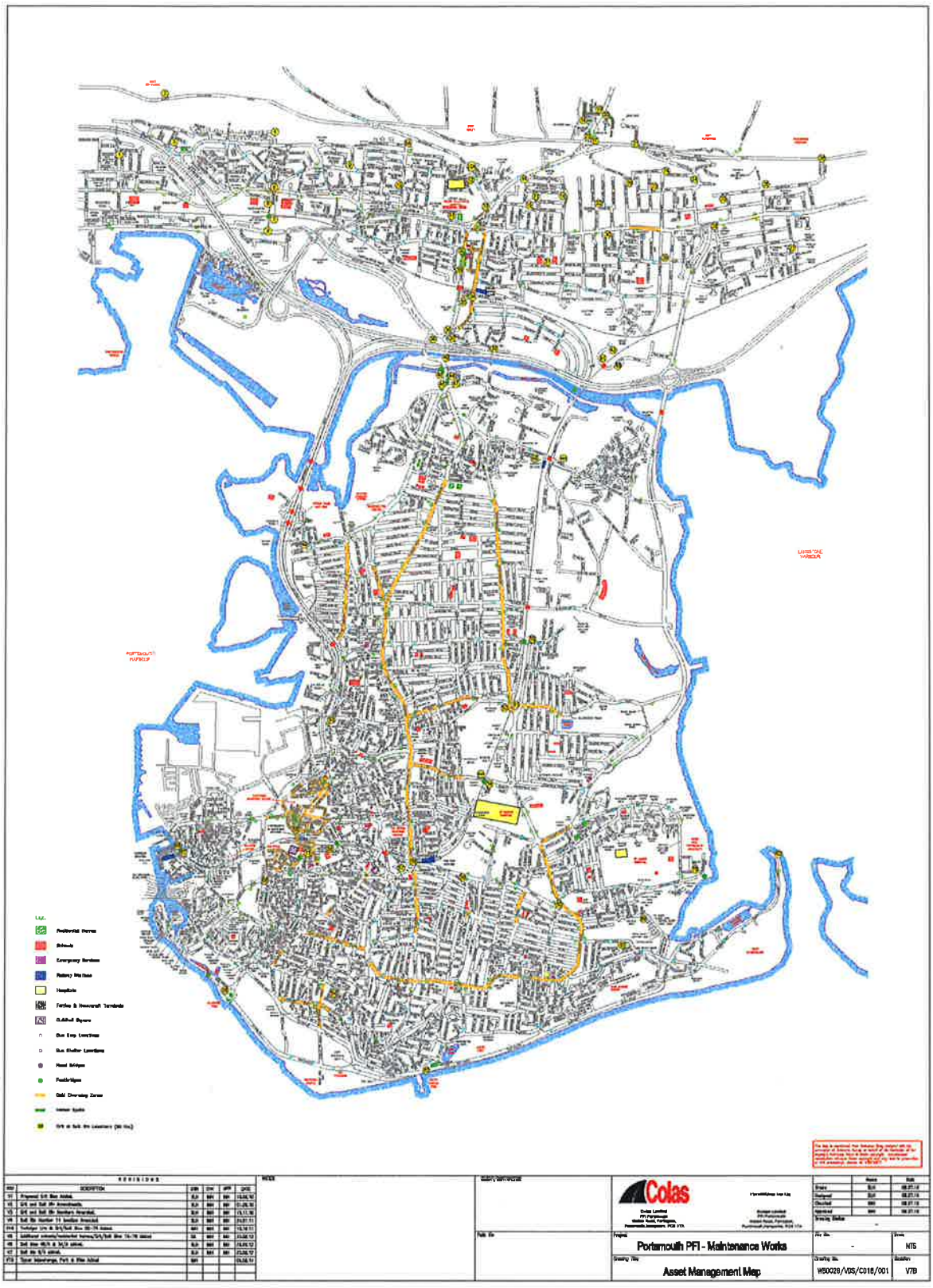
Where possible **and where prevailing weather and traffic conditions permit**, pre-salting should be timed for mid to late evening, starting between 1900 and 2000 hrs. Where there is a risk of any loss of de-icing effect the run should be timed for a later start.

Additionally, unless weather prevailing conditions dictate otherwise runs during the peak traffic periods should generally be avoided (0730 to 0930 and 1600 to 1830).

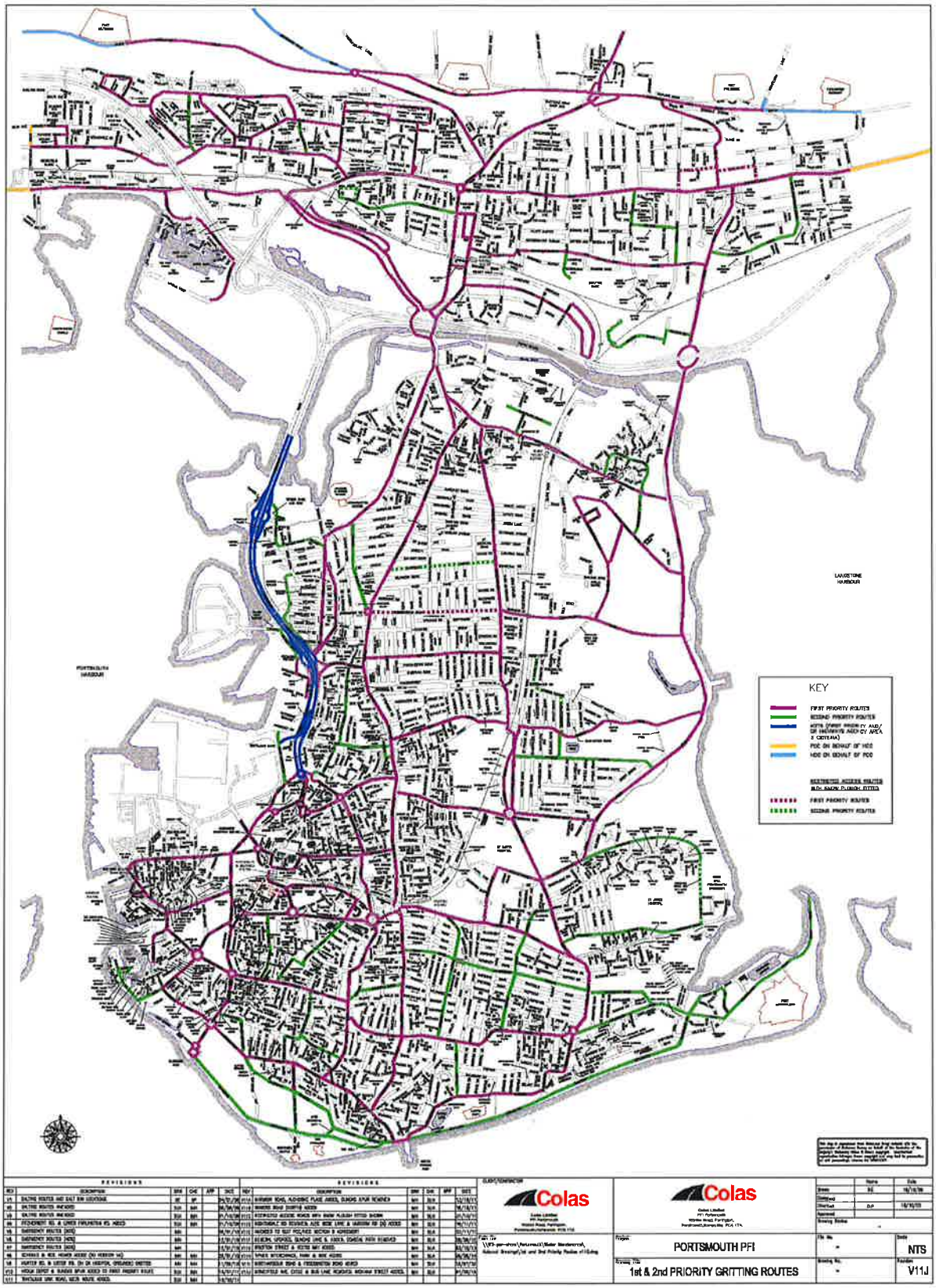
During periods of continuous shift working the runs can be timed to greatest operational effect as the workforce will not be required for other duties. However, the change of shift period should be avoided if at all possible.

Appendix D

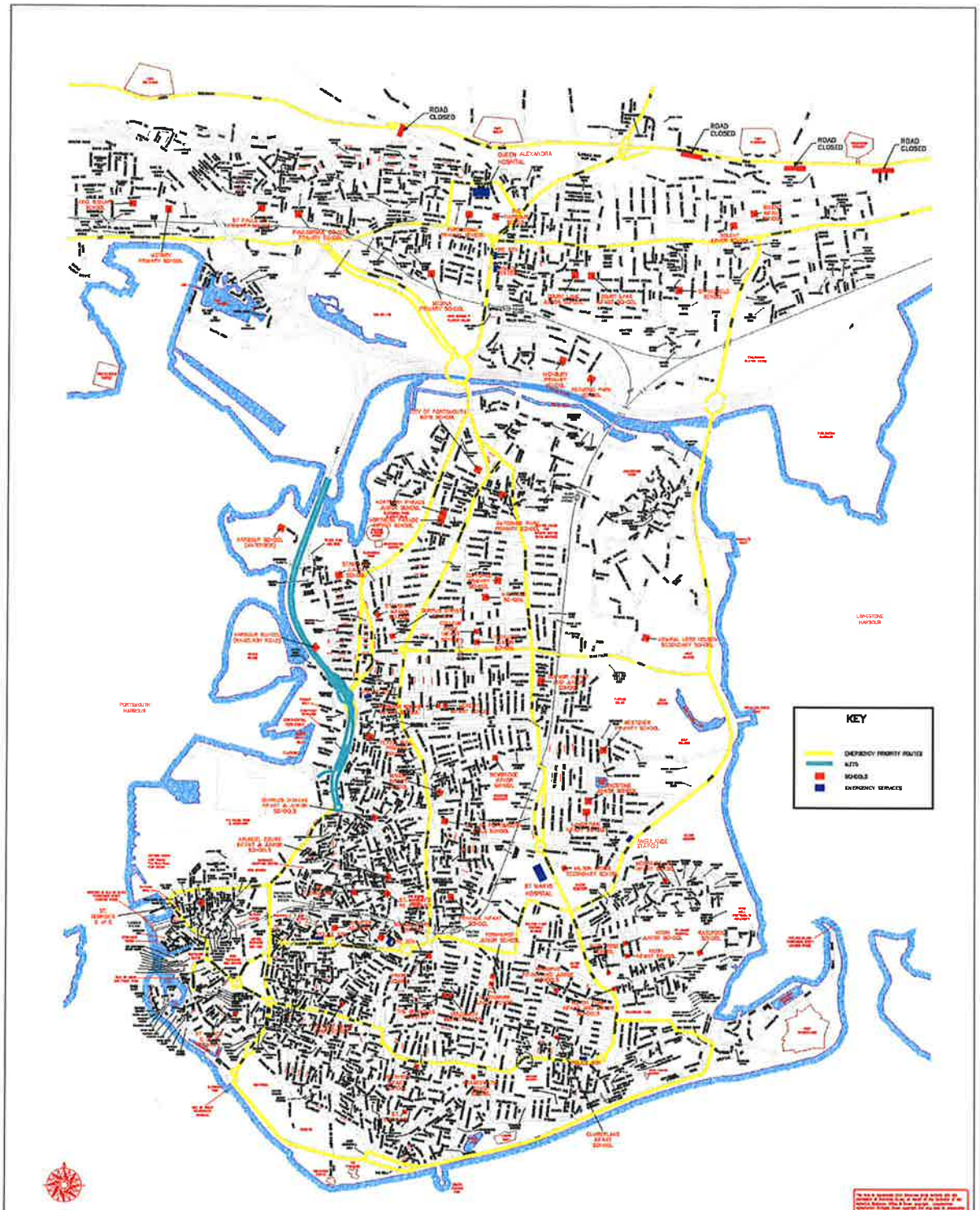
Gold Zones, Bridges, Hollow Spots, Transport Hubs, Residential Homes, Hospitals, Emergency Services and Salt Bins locations



Appendix D1
Carriageway categories 1 and 2



Appendix D2
Carriageway Emergency Network



Appendix D3
Carriageway salting routes details

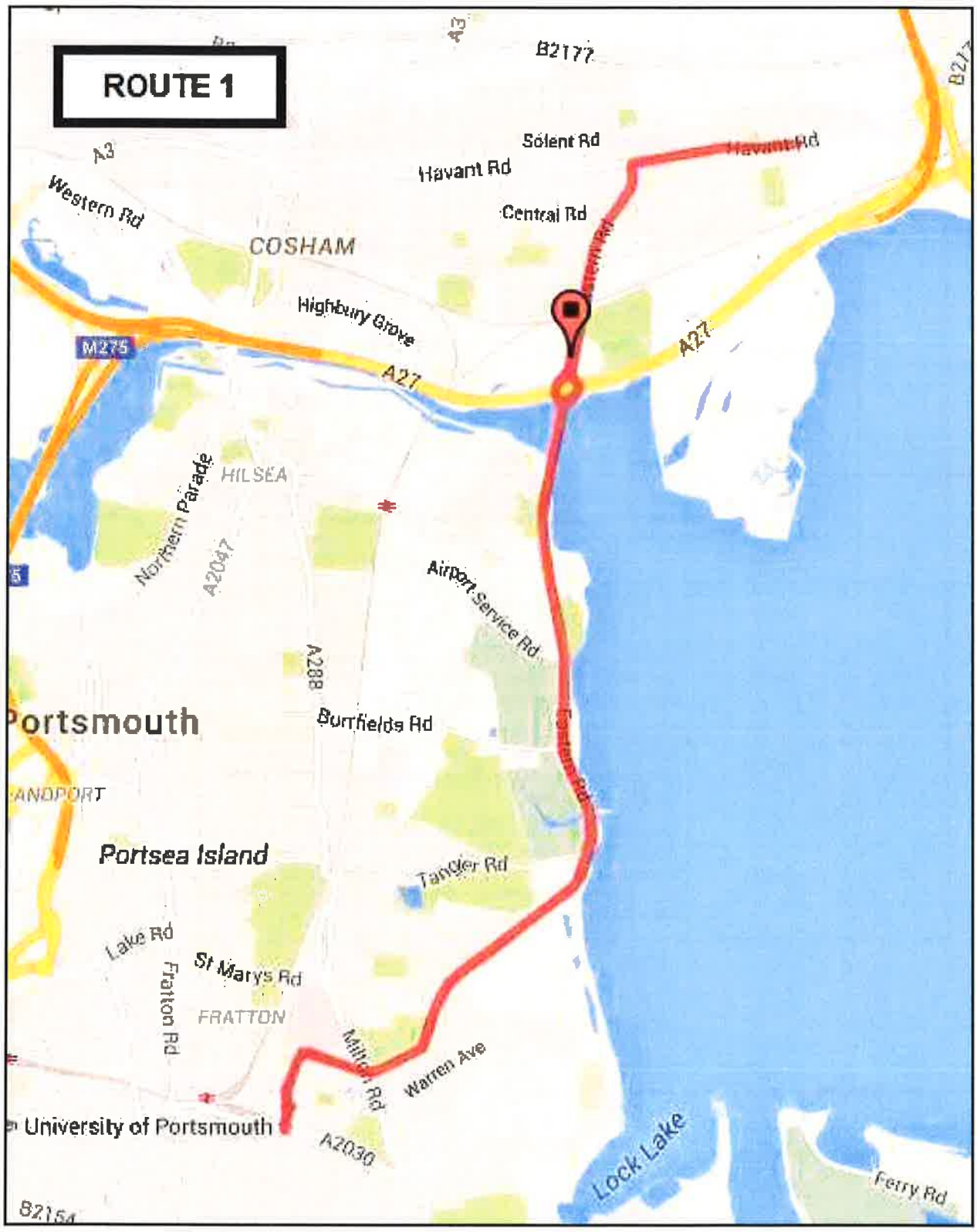
Summary of Priority 1 Salt Routes

Route No.	Route Area	Key Roads/Locations	Design Responsibility
1	Central	Eastern Road (from Walton Rd), Havant Road E (to boundary), Havant Road W, Eastern Road S, Velder Avenue, Rodney Road, Fratton Way (to Goldsmith Av RAB), Velder Avenue, Eastern Road N.	**SW**
2	North	Havant Road W (from Eastern Rd), Spur Road, Northern Road, London Road (Turn at Park Av), Portsdown Hill Rd W, James Callaghan Drive (up to Fort Southwick), Southwick Hill Road, Portsdown Hill Road E (turn at Crookhorn Lane) Farlington Avenue, Galt Road (to Evelegh Road), Evelegh Road (Galt Rd to Farlington Ave), Solent Road (to Portsdown Ave), Portsdown Avenue (Solent Rd to Havant Rd), Havant Road E (to Eastern Rd).	**SW**
3	North	Grove Road, Old Manor Way, Lonsdale Avenue, Knowsley Road, Cosham High Street (to Vectis Way), Vectis Way (to Wootton St), Wootton Street, Wayte Street (Wooton St to High St), Cosham High Street, Northern Road, Roebuck Close (and bus lanes), Portsmouth Road, Chatsworth Avenue, Highbury Grove (from Chatsworth Ave to Hawthorn Cres), Hawthorn Crescent (to Wembley Grove), Wembley Grove (Hawthorn Cres to Chatsworth Ave), Portsbridge RAB, Western Road, Northarbour Road, Southampton Road W, Port Way, East Street Portchester, Southampton Road E, Western Road S.	**SW**
4	North	Southampton Road E (from Western Rd), Allaway Avenue, Jubilee Avenue, Portsdown Road N, Newbolt Road, Connaught Lane, Rowland Road, Deerhurst Crescent, Raymond Road, Jubilee Avenue, Allaway Avenue, Hillsley Road, Winterbourne Road, Almondsbury Road, Leominster Road, Ludlow Road, Hempstead Road, Elkstone Road, Washbrook Road, Harleston Road, Mablethorpe Road, Boston Road, Peterborough Road, Lowestoft Road, Sevenoaks Road, Cavell Drive, Southampton Road E, Southampton Road W (to Western Rd).	**SW**
5	Central	Anchorage Road W, Norway Road W, Copnor Road N, Old London Road, London Road N, Copnor Road S, Norway Road E, Copnor Road S, Burrfields Road E, Eastern Road N, Airport Service Road W, Anchorage Road E, Eastern Road S, Burrfields Road W, Dundas Lane N (up to Veolia Entrance), Quartremaine Road N, Alchorne Place, Airport Service Road W, Dundas Lane South (to Quartremaine Rd).	**SW**
6	Central	Burrfields Road W (from Dundas Lane), Copnor Road N, Old London Road, London Road N, Portsbridge Bus Lanes, London Road S, Kingston Crescent, Rudmore RAB, Wharf Road (to Ferry Gate), Twyford Avenue, Northern Parade N, London Road N, London Road S, Northern Parade S, Stamshaw Road, Kingston Crescent, London Road N (to Old London Rd)	**SW**
7	Central	Tangiers Road (from Eastern Rd), Baffins Road, Milton Road N, Copnor Road N, Stubbington Avenue, London Road S, Chichester Road, Kingston Road S, Fratton Road S, Fratton Bridge RAB, Fratton Road N, New Road, Baffins Road, St Marys Road (to Fratton Rd)	**SW**

8	South	Langstone Road W (from Eastern Rd), Milton Road S, Eastney Road S, Highland Road W, Albert Road W, Elm Grove W, Kings Road W, Landport Terrace N, Hampshire Terrace N, Lord Montgomery Way N, St Michaels Road N, King Richard 1st Street E, Winston Churchill Avenue E, Victoria Road North, Goldsmith Avenue E, Milton Road N (to Langstone Rd)	**SW**
9	South	Mile End Road S, Church Street, Holbrook Road S, Holbrook Road N, Lake Road E, Fratton Road S, Arundel Street E, Holbrook Road N, Lake Road W, Bus Route Area, Unicorn Road, Edinburgh Road W, Alfred Road, Market Way, Hope Street, Commercial Road N Mile End N.	**SW**
10	South	Arundel Street W (from Fratton Rd), Station Street W, Commercial Road S, Isambard Brunel Road, Alec Rose Lane (to Charles Dickens St), Charles Dickens Street (rear of Civic Offices), Greetham Street, Raglan Street, Froddington Road (to rear of fire station), Somers Road, Winston Churchill Avenue E, Winston Churchill Avenue W, Lord Montgomery Way, St Michaels Road, King Richard 1st Street, Winston Churchill Avenue E, Isambard Brunel Road N, Stanhope Road, Edinburgh Road, Bishop Caspian Way E (to Queen Street).	**SW**
11	South	Cromwell Road (from RAB), St Georges Road, Eastern Parade, St Helens Parade, South Parade, Clarendon Road (to Circle), Victoria Road South, Victoria Road North, Fawcett Road, Lawrence Road, Waverley Road, Clarendon Road, Osborne Road, Duisburg Way (to RAB)	**SW**
12	South	Pier Road S, Pier Road N, Jubilee Terrace, Bellevue Terrace, Kings Terrace, Museum Road W, High Street, Pembroke Road, St Georges Road, Gunwharf Road, St Georges Road, The Hard, (Station Approach – Queen St, One Way), Queen St (The Hard – Wickham St, One Way), Wickham St (Queen St – Clock St, One Way), Clock St (turning left onto The Hard) and Station Approach including all bus lanes), Queen Street, Alfred Road, Market Way N, Market Way S, Alfred Road, Anglesea Road, King Richard 1st Street, Lord Montgomery Way, St Michaels Road N, Anglesea Road N. Queen Street S, The Hard E, Park Road.	**SW**

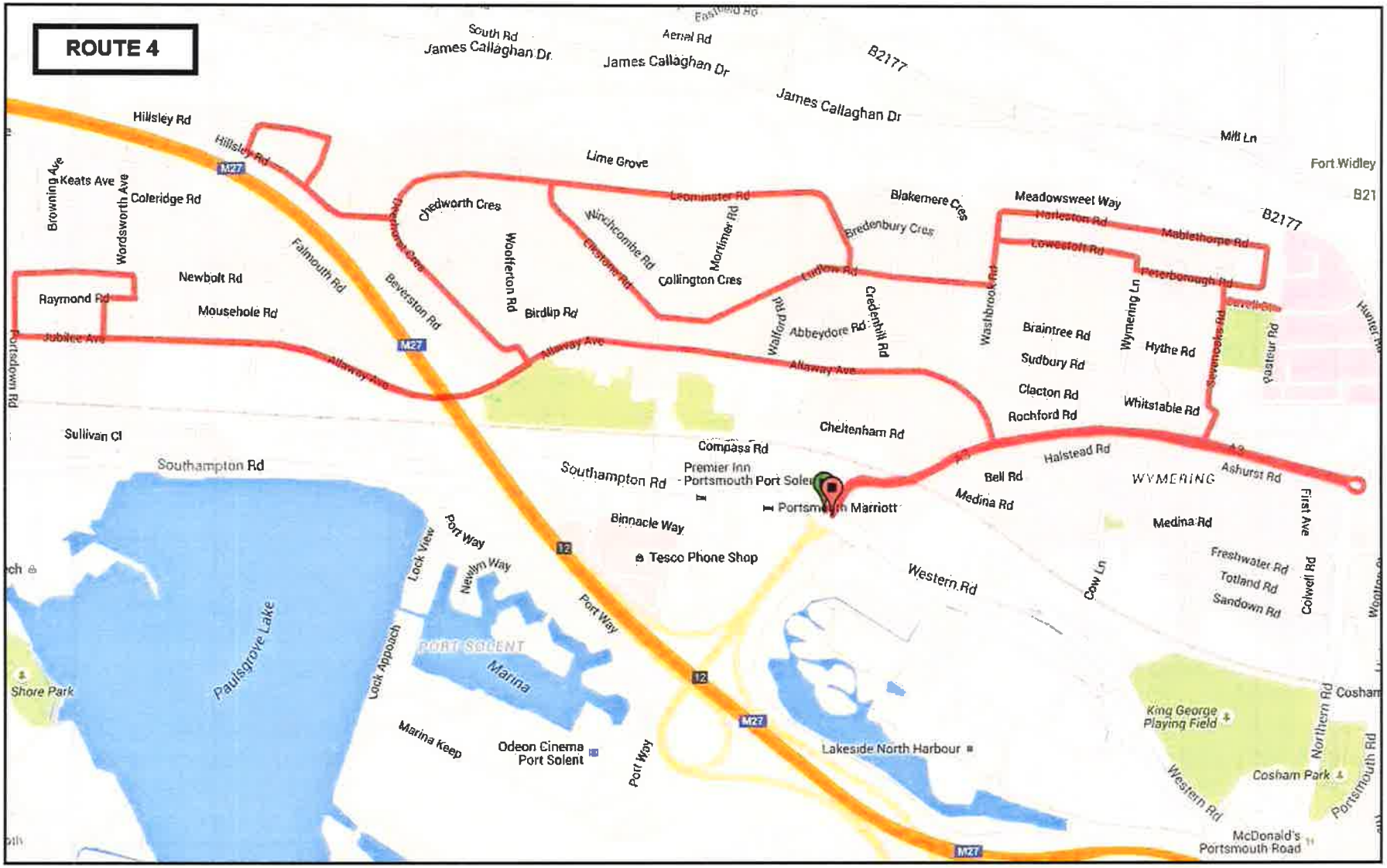
Summary of Priority 2 Salt Routes

Route No.	Route Area	Key Roads/Locations	Design Responsibility
13	North	Walton Road, Station Road, Central Road, Lower Drayton Lane, Court Lane	SW
14	North	Medina Road (Northern to Parr), Parr Road (Medina to Bell), Bell Road (Parr to Winterhill), Winterhill Road (Bell to Medina).	SW
15	North	Credenhill Road (Allaway to Ludlow), Woofferton Road	SW
16	North	Sywell Crescent, Robinson Way, Moneyfields Avenue Bus Lane, Moneyfields Avenue, Martin Road, Eastbourne Road, Cobden Avenue, Idsworth Road, Neville Road, Hayling Avenue	SW
17	South	Moorings Way, Furze Lane, Locksway Road, Priory Crescent	SW
18	Central	Gladys Avenue, Gunstore Road, Limberline Road, Mayfield Road	SW
19	Central	Tipner Lane, Range Green, Tipner Road, Walker Road	SW
20	South	Gamble Road, Malins Road, Sultan Road, Nelson Road, Wingfield Street (from Nelson Road to Church St)	SW
21	Central	Flathouse Road, Prospect Road, Whale Island Way	SW
22	South	Winter Road, Festing Road, Francis Avenue, Jessie Road, Devonshire Square, Devonshire Avenue	SW
23	South	Bransbury Road, Ferry Road, Lumsden Road, Fort Cumberland Road, Henderson Road, Eastney Esplanade, Southsea Esplanade	SW
24	Central	Somers Road South, Cottage Grove, Green Road, Norfolk Street, Eldon Street, Middle Street, High Street Old Portsmouth, Broad Street, Seagers Court, Trimmers Court, East Street	SW
25	South	Outram Road (Elm Grove to Campbell Rd), Campbell Road, Grove Road South, Marmion Road, Kent Road, Portland Road, Avenue De Caen, Clarence Esplanade W, Southsea Terrace, Western Parade, Clarence Parade, Clarence Esplanade E.	SW

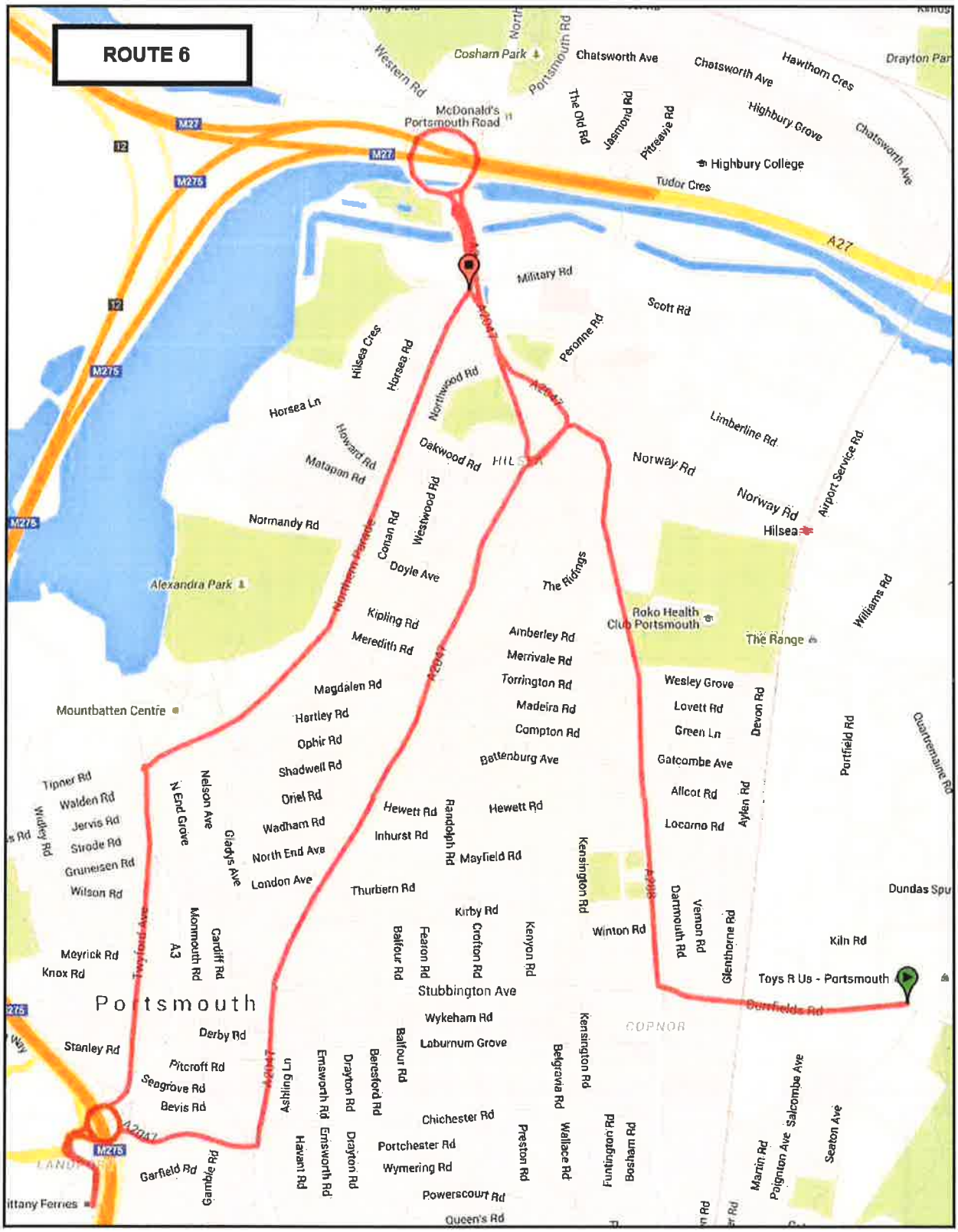

ROUTE 1
A3
B2177
Solent Rd
Havant Rd
Western Rd
COSHAM
Central Rd
Highbury Grove
M275
A27
HILSEA
Northern Parade
A2047
Airport Service Rd
A288
Burrfields Rd
Portsmouth
Portsea Island
Tangier Rd
Lake Rd
St Marys Rd
Fratton Rd
FRATTON
Warren Ave
University of Portsmouth
A2030
Lock Lake
Ferry Rd
B2154

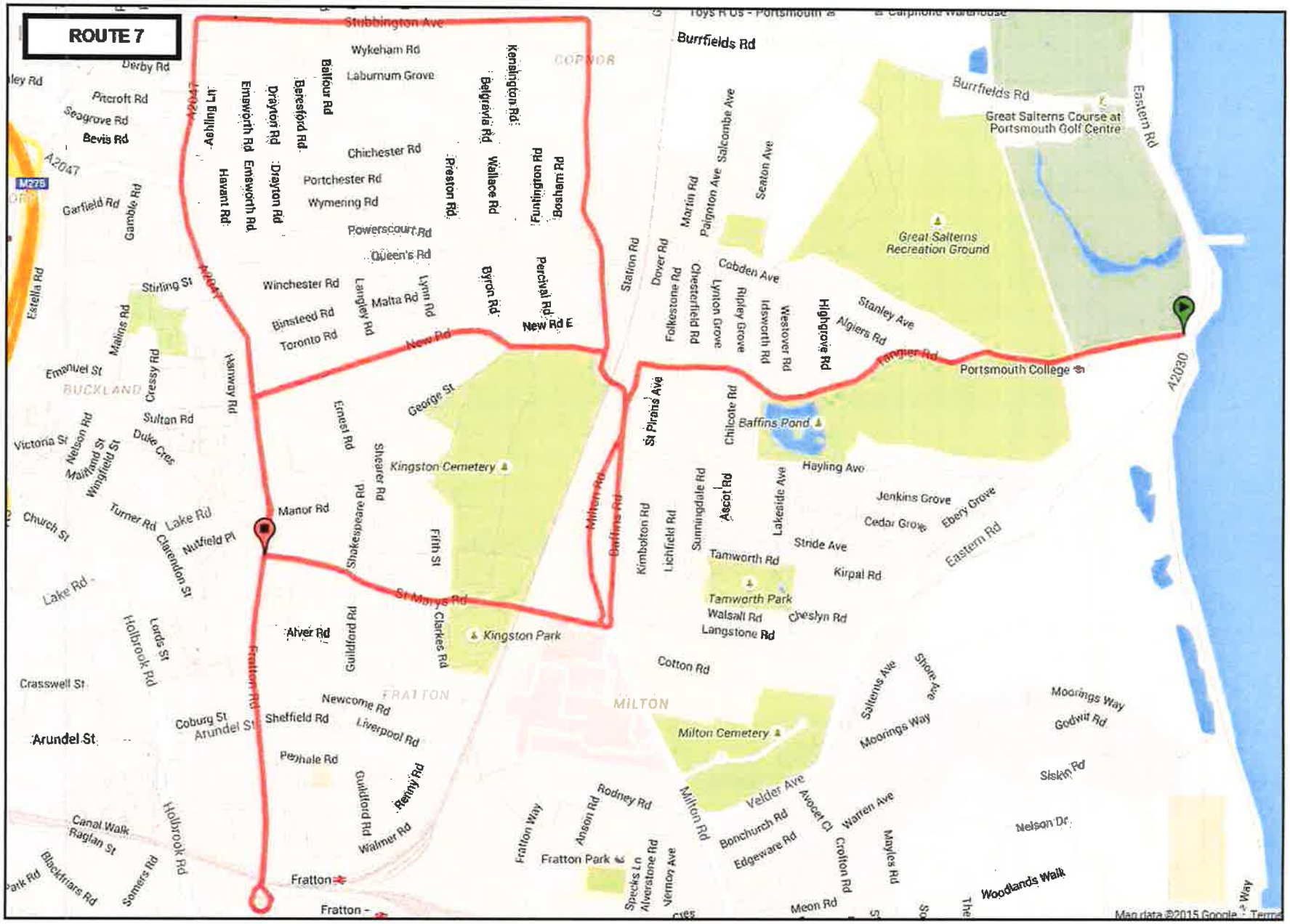

ROUTE 2
Widley
Park Ave
The Dale
Widley Walk
B2177
James Callaghan Dr
Mill Ln
Lime Grove
Leominster Rd
Harleston Rd
Ludlow Rd
Washbrook Rd
Wymering Ln
Queen Alexandra Hospital
Farlington Ave
Sea View Rd
Grant Rd
Solent Rd
Evelegh Rd
Drayton Ln
Havant Rd
FARLINGTON
Newbolt Rd
Deerhurst Cres
Woolferton Rd
Elkstone Rd
Allaway Ave
M27
A3
Southampton Rd
Medina Rd
Western Rd
PORT SOLENT
12
King George Playing Field
High St
COSHAM
Hilary Ave
Court Ln
Lonsdale Ave
Old Manor Way
Lower Drayton Ln
Station Rd
South Rd
Grove Rd
Eastern Rd
Fitzherbert Rd
Northern Rd
Hawthorn Cres
Highbury Grove
M275
A27
Military Rd
Hilsea Cres
HILSEA

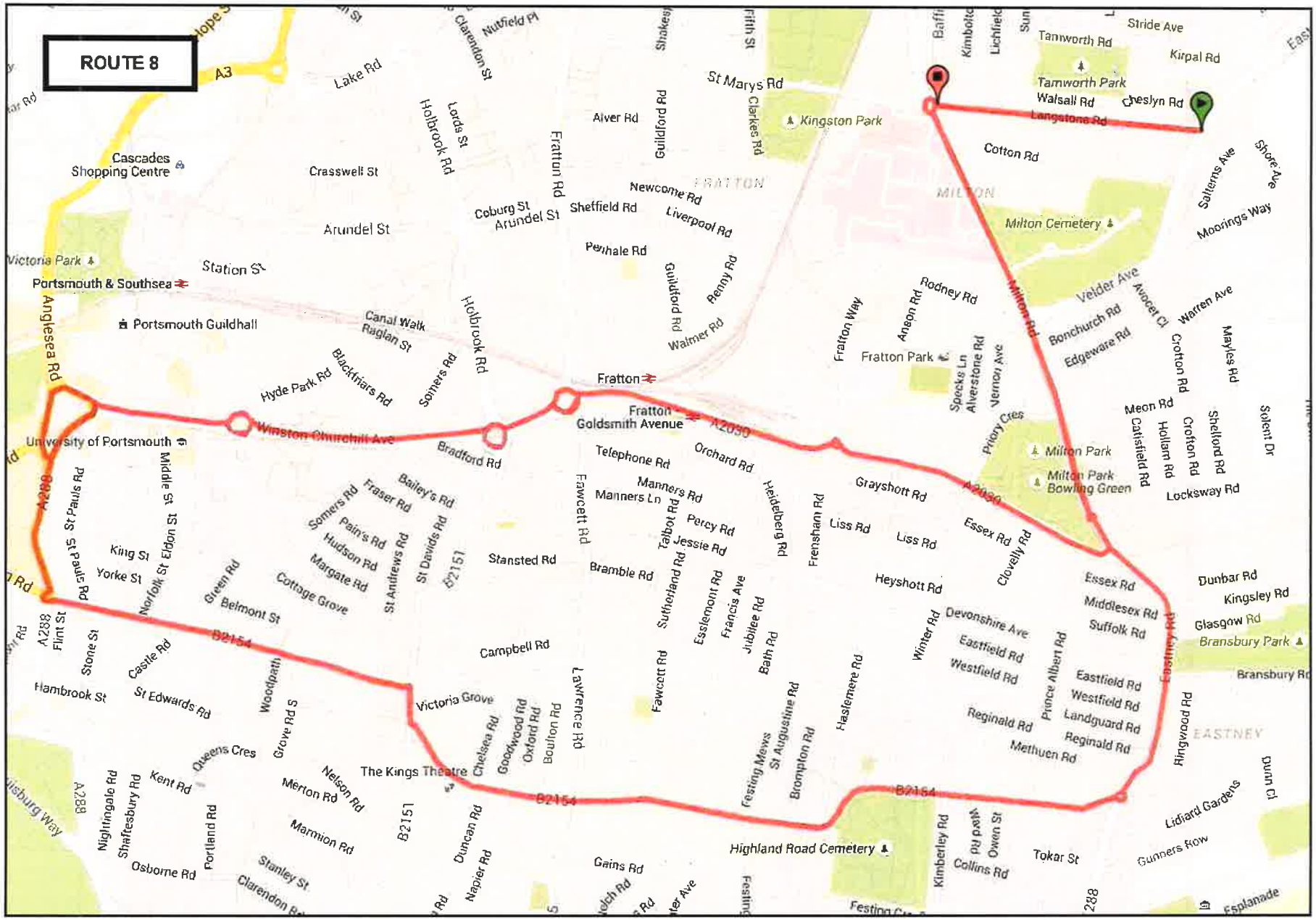

ROUTE 3
M27
Leominster Rd
Harleston Rd
B2177
Farlington Ave
Sea View Rd
Solent Rd
Drayton Ln
Havant Rd
Lower Drayton Ln
Station Rd
South Rd
Eastern Rd
Grove Rd
Old Manor Way
Lonsdale Ave
COSHAM
Hilary Ave
Court Ln
Deerhurst Cres
Wonsfeton Rd
Elkstone Rd
Allaway Ave
Ludlow Rd
Washbrook Rd
Wymering Ln
Portsdown Rd
Porteview Ave
East St
Southampton Rd
A3
Medina Rd
Castle St
Myrtle Ave
Bayly Ave
PORT SOLENT
King George Playing Field
Western Rd
Hawthorn Cres
Highbury Grove
Portchester Castle
M275
12
A27
Military Rd
Hilsea Cres
HILSEA
Northern Parade
Alexandra Park
Anchorage Rd
Amberley Rd
Torrington Rd
A2047
Mountbatten Centre
Ophir Rd
Battenburg Ave
Gladys Ave
Randolph Rd
Kirby Rd
Kensington Rd
A288
Aylen Rd
Quartremaine Rd
Dundas Ln
Ports

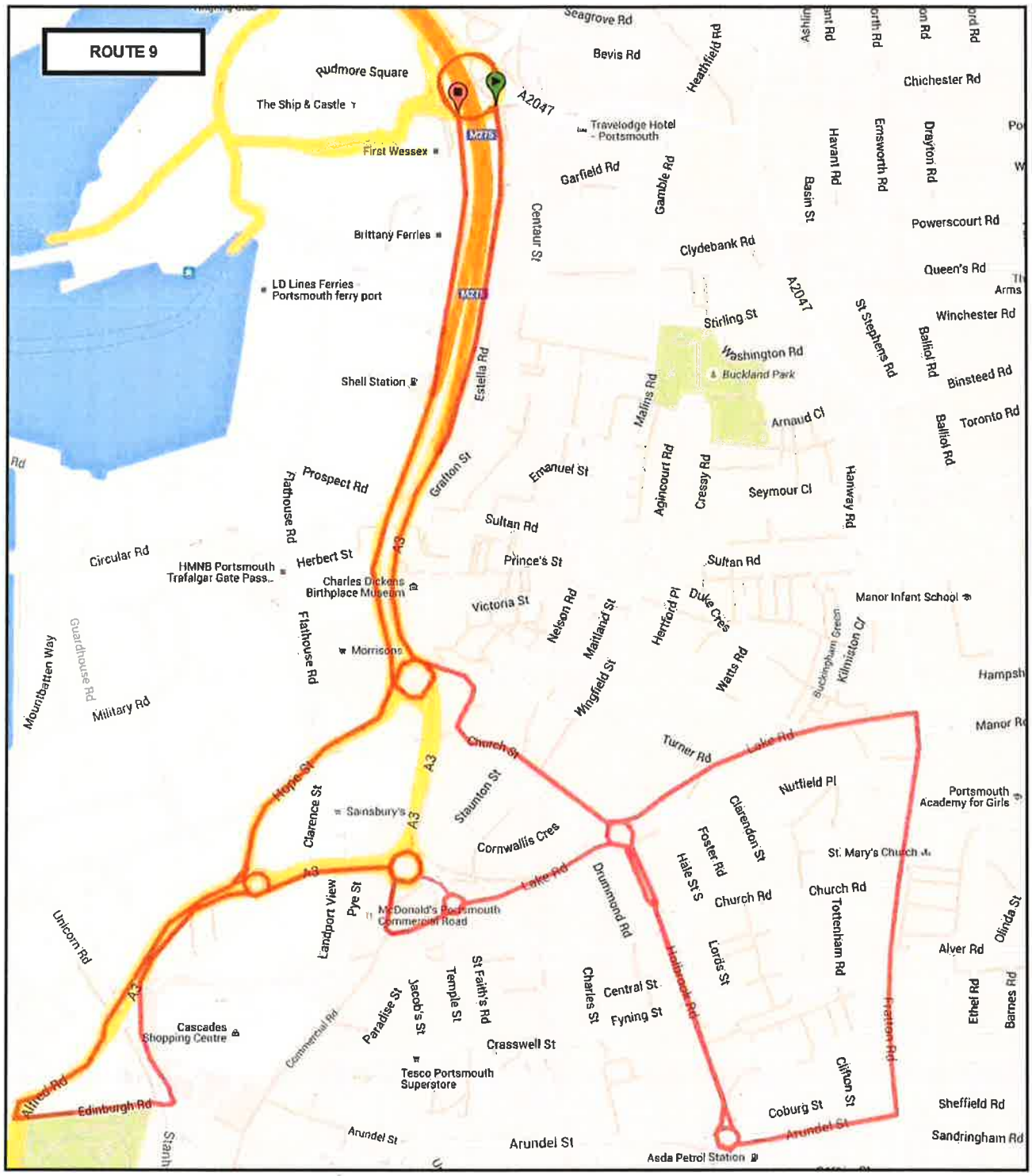

ROUTE 4
South Rd
James Callaghan Dr
Aerial Rd
James Callaghan Dr
B2177
James Callaghan Dr
Hillsley Rd
Hillsley Rd
M27
Lime Grove
Mill Ln
Fort Widley
B21
Browning Ave
Keats Ave
Coleridge Rd
Wordsworth Ave
Chedworth Cres
Leominster Rd
Blakemere Cres
Meadowsweet Way
Harleston Rd
Mablethorpe Rd
B2177
Wirehcombe Rd
Cleobury Rd
Mortimer Rd
Bredenbury Cres
Lowestoft Rd
Peterborough Rd
Falmouth Rd
Beverston Rd
Woofferton Rd
Collington Cres
Ludlow Rd
Newbolt Rd
Raymond Rd
Mousehole Rd
Birdlip Rd
Walford Rd
Abbeydore Rd
Credenhill Rd
Washbrook Rd
Wymering Ln
Braintree Rd
Sudbury Rd
Hythe Rd
Sewerby Rd
Pasteur Rd
Jubilee Ave
Portsdown Rd
Alla way Ave
M27
Alla way Ave
Alla way Ave
Clacton Rd
Rochford Rd
Whitstable Rd
Sullivan Cl
Cheltenham Rd
Compass Rd
Halstead Rd
A3
Southampton Rd
Southampton Rd
Premier Inn
Portsmouth Port Solent
Bell Rd
WYMERING
Ashurst Rd
Portsmouth Marriott
Medina Rd
Medina Rd
First Ave
Binnacle Way
Port Way
12
Tesco Phone Shop
Western Rd
Cow Ln
Freshwater Rd
Totland Rd
Sandown Rd
Coniwall Rd
Lock View
Newlyn Way
Port Way
Paulsgrove Lake
Lock Approach
PORT SOLENT
Marina
Shore Park
Marina Keep
Odeon Cinema
Port Solent
Port Way
12
M27
Lakeside North Harbour
King George
Playing Field
Northern Rd
Cosham
Cosham Park
Western Rd
Portsmouth Rd
McDonald's
Portsmouth Road
M27

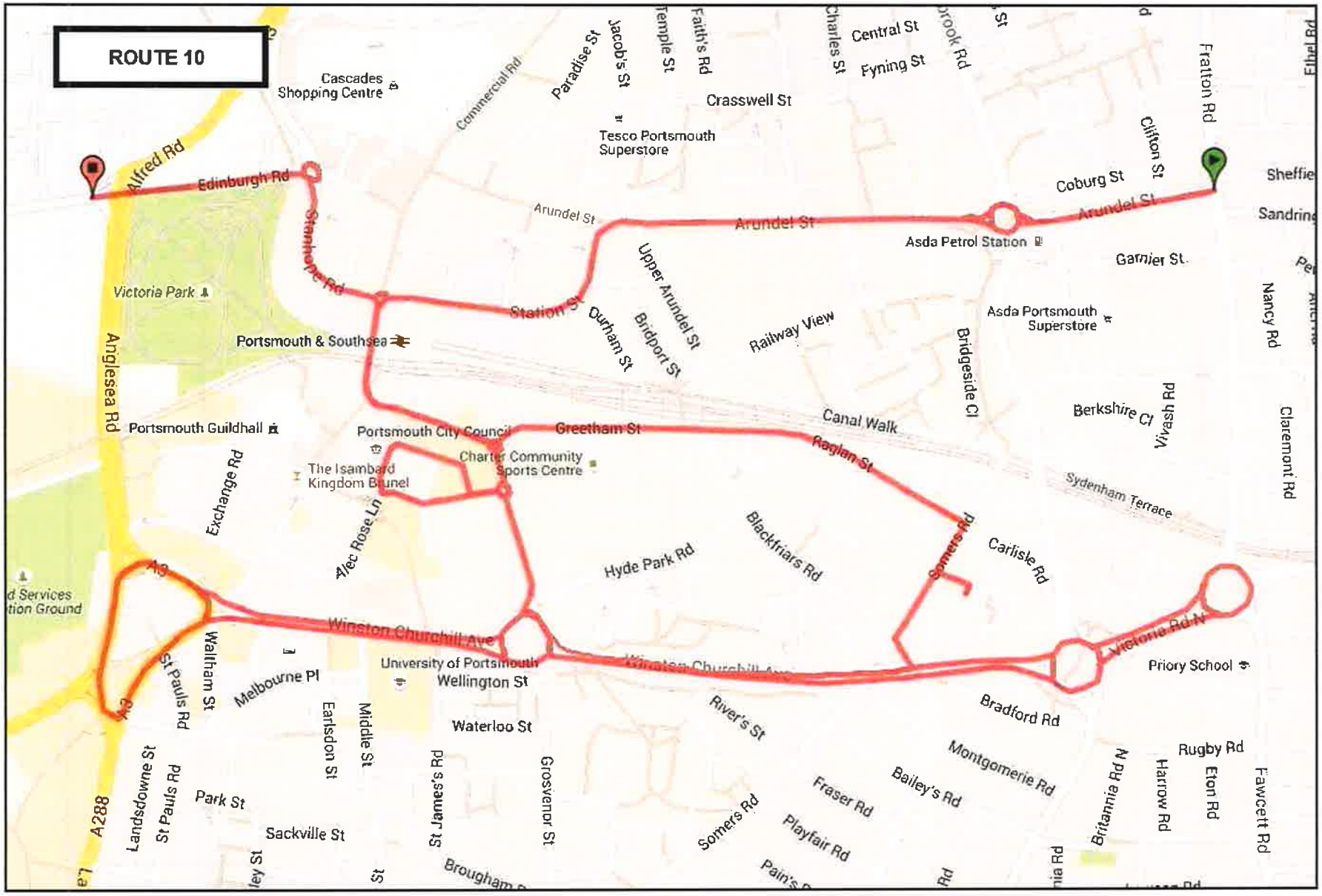

ROUTE 5
Scott Rd
Peronne Rd
Northwood Rd
Oakwood Rd
Limbertine Rd
Norway Rd
Airport Service Rd
Hilsea
Holcot Ln
Sywell Cres
Eastern Rd
Anchorage Rd
Morrisons
Williams Rd
The Range
Roko Health Club Portsmouth
Westwood Rd
Conan Rd
Doyle Ave
The Ridings
Kipling Rd
Meredith Rd
A2047
Ainberley Rd
Merrivale Rd
Torrington Rd
Madeira Rd
Compton Rd
Battenburg Ave
Wesley Grove
Lovett Rd
Green Ln
Gatcombe Ave
Devon Rd
Portfield Rd
Robinson Way
Keel Ct
Airport Service Rd
Limbertine Rd
Dundas Ln
Bilton Way
A2030
Alicot Rd
Locarno Rd
Aylen Rd
Hewett Rd
Inhurst Rd
Randolph Rd
Mayfield Rd
Kensington Rd
A288
Thurbern Rd
Kirby Rd
Winton Rd
Dundas Spur
Kiln Rd
Dartmouth Rd
Vernon Rd
Glenthorne Rd
Balfour Rd
Fearon Rd
Crofton Rd
Kenyon Rd
Stubbington Ave
Toys R Us - Portsmouth
Carphone Warehouse
Burrfields Rd
Wykeham Rd
Laburnum Grove
COPNOR
Kensington Rd
Belgravia Rd
Beresford Rd
Chichester Rd
Great Salterns Course at Portsmouth Golf Centre


ROUTE 6
Cosham Park
Chatsworth Ave
Hawthorn Cres
Drayton Par
Western Rd
Portsmouth Rd
McDonald's Portsmouth Road
The Old Rd
Jasmond Rd
Pitreavie Rd
Highbury Grove
Chatsworth Ave
Highbury College
Tudor Cres
M27
M275
A27
Military Rd
Scott Rd
Peronne Rd
Hilsea Cres
Horsea Rd
Northwood Rd
Horsea Ln
Howard Rd
Malapon Rd
Oakwood Rd
Limberline Rd
Norway Rd
Airport Service Rd
Hilsea
Normandy Rd
Westwood Rd
Conan Rd
Northern Parade
Doyle Ave
Alexandra Park
The Ridings
Roko Health Club Portsmouth
The Range
Williams Rd
Kipling Rd
Meredith Rd
Amberley Rd
Merrivale Rd
Torrington Rd
Madeira Rd
Compton Rd
Wesley Grove
Lovett Rd
Green Ln
Devon Rd
Portfield Rd
Quartremaine Rd
Magdalen Rd
Hartley Rd
Ophir Rd
Shadwell Rd
Battenburg Ave
Gatcombe Ave
Allcot Rd
Locarno Rd
Aylen Rd
Mountbatten Centre
Oriel Rd
Wadham Rd
North End Ave
London Ave
Hewett Rd
Randolph Rd
Inhurst Rd
Mayfield Rd
Thurbern Rd
Kirby Rd
Kensington Rd
Winton Rd
Dundas Spu
Tipner Rd
Walden Rd
Jervis Rd
Strode Rd
Grunelsen Rd
Wilson Rd
Whitby Rd
N End Grove
Nelson Ave
Gladys Ave
Ivybridge Ave
Monmouth Rd
Cardiff Rd
A3
Meyrick Rd
Knox Rd
Balfour Rd
Featon Rd
Crofton Rd
Kenyon Rd
Stubbington Ave
Darmouth Rd
Vernon Rd
Glenthorne Rd
Kiln Rd
Toys R Us - Portsmouth
Portsmouth
Wykeham Rd
Laburnum Grove
Derby Rd
Stanley Rd
Pitcroft Rd
Seagrove Rd
Bevis Rd
Ashling Ln
Emsworth Rd
Drayton Rd
Bereisford Rd
Balfour Rd
Chichester Rd
Portchester Rd
Wymering Rd
Powerscourt Rd
Queen's Rd
Havant Rd
Garfield Rd
Gamble Rd
Belgravia Rd
Wallace Rd
Preston Rd
Kensington Rd
Funtington Rd
Bosham Rd
COPNOR
Martin Rd
Poignton Ave
Salcombe Ave
Seaton Ave
Burrfields Rd
ittany Ferries


ROUTE 7
Stubbington Ave
Wykeham Rd
Laburnum Grove
Chichester Rd
Portchester Rd
Wymering Rd
Powerscourt Rd
Queen's Rd
Winchester Rd
Binsteed Rd
Toronto Rd
Malta Rd
New Rd
Derby Rd
Pitcroft Rd
Seagrove Rd
Bevis Rd
Garfield Rd
Gamble Rd
Stirling St
Estella Rd
Malins Rd
Emanuel St
Cressy Rd
Hanway Rd
Sultan Rd
Victoria St
Nelson Rd
Duke Cres
Midland St
Wingfield St
Church St
Turner Rd
Lake Rd
Nutfield Pl
Clarendon St
Manor Rd
Shakespeare Rd
Shearer Rd
Ernest Rd
George St
Kingston Cemetery
Fifth St
Clarkes Rd
Kingston Park
St Marys Rd
Alver Rd
Guildford Rd
Fratton Rd
Holbrook Rd
Lords St
Crasswell St
Arundel St
Coburg St
Sheffield Rd
Newcome Rd
Liverpool Rd
Penhale Rd
Canal Walk
Raglan St
Blackfriars Rd
Somers Rd
Fratton
Fratton Way
Anson Rd
Rodney Rd
Fratton Park
Speeks Ln
Alverstone Rd
Vernon Ave
Milton Rd
Velder Ave
Avocet Cl
Bonchurch Rd
Edgeware Rd
Warren Ave
Crofton Rd
Maples Rd
Meon Rd
Woodlands Walk
Nelson Dr
Siskin Rd
Moorings Way
Godwit Rd
Saltcotts Ave
Shona Ave
Milton Cemetery
Cotton Rd
MILTON
FRATTON
Burrfields Rd
Great Salterns Course at Portsmouth Golf Centre
Great Salterns Recreation Ground
Eastern Rd
Salcombe Ave
Seaton Ave
Martin Rd
Paignton Ave
Cobden Ave
Dover Rd
Folkestone Rd
Chesterfield Rd
Lynton Grove
Ripley Grove
Idsworth Rd
Westover Rd
Highgrove Rd
Stanley Ave
Algiers Rd
Tangier Rd
Portsmouth College
A2030
Station Rd
St Pirans Ave
Chilcote Rd
Baffins Pond
Hayling Ave
Jenkins Grove
Cedar Grove
Ebery Grove
Stride Ave
Kirpal Rd
Tamworth Rd
Tamworth Park
Walsall Rd
Cheslyn Rd
Langstone Rd
Ascot Rd
Lakeside Ave
Sunningdale Rd
Lichfield Rd
Kimbolton Rd
Milton Rd
Orffins Rd
Burrfields Rd
Toys R Us - Portsmouth
Carphone Warehouse
Havant Rd
Ensworth Rd
Drayton Rd
Beresford Rd
Balfour Rd
Belgravia Rd
Wallace Rd
Kensington Rd
Preston Rd
Funtington Rd
Boshurst Rd
Percival Rd
Byron Rd
Langley Rd
Lynn Rd
New Rd E
A2047
M275
A2047
Map data ©2015 Google

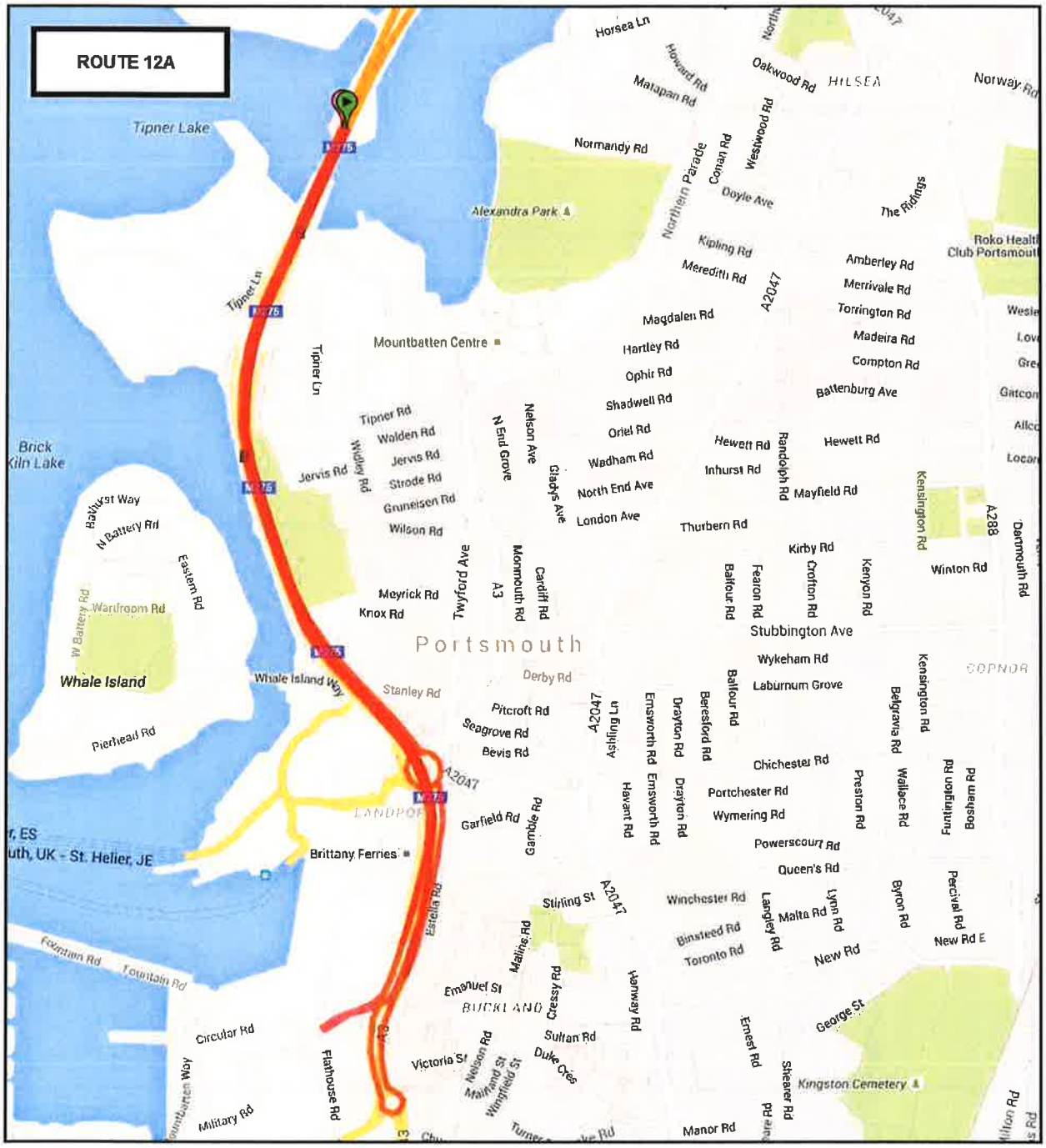

ROUTE 8
A3
Lake Rd
Cascades Shopping Centre
Crasswell St
Arundel St
Victoria Park
Station St
Portsmouth & Southsea
Portsmouth Guildhall
Anglesea Rd
A2030
University of Portsmouth
Winston Churchill Ave
Canal Walk
Raglan St
Blackfriars Rd
Hyde Park Rd
Somers Rd
Holbrook Rd
Lords St
Clarendon St
Nutfield Pl
Fratton Rd
Guildford Rd
Alver Rd
Coburg St
Sheffield Rd
Newcome Rd
Liverpool Rd
Penhale Rd
Penny Rd
Walmer Rd
Fratton
Bradford Rd
Goldsmith Avenue
A2030
St Marys Rd
Clarkes Rd
Kingston Park
FRATTON
MILTON
Cotton Rd
Milton Cemetery
Tamworth Rd
Tamworth Park
Walsall Rd
Langstone Rd
Cheslyn Rd
Stride Ave
Kirpal Rd
Salterns Ave
Shore Ave
Moorings Way
Milton Rd
Velder Ave
Avocet Cl
Warren Ave
Bonchurch Rd
Edgeware Rd
Crofton Rd
Mayles Rd
Rodney Rd
Anson Rd
Fratton Way
Fratton Park
Specks Ln
Alverstone Rd
Vernon Ave
Priory Cres
Milton Park
Milton Park Bowling Green
Meon Rd
Catisfield Rd
Hollam Rd
Crofton Rd
Shelford Rd
Solent Dr
Locksway Rd
Grayshott Rd
Liss Rd
Essex Rd
Clovelly Rd
Heyshott Rd
Frensham Rd
Heidelberg Rd
Orchard Rd
Telephone Rd
Manners Rd
Manners Ln
Talbot Rd
Percy Rd
Jessie Rd
Fawcett Rd
Bramble Rd
Stansted Rd
Somers Rd
Fraser Rd
Bailey's Rd
Pain's Rd
Hudson Rd
Margate Rd
St Andrews Rd
St Davids Rd
B2151
Green Rd
Cottage Grove
Belmont St
Norfolk St
Elgin St
Middle St
King St
Yorke St
St Pauls Rd
St Pauls Rd
B2154
A288
Flint St
Stone St
Castle Rd
Hambrook St
St Edwards Rd
Woodpath
Grove Rd S
Queens Cres
Victoria Grove
Campbell Rd
Lawrence Rd
Chelsea Rd
Goodwood Rd
Oxford Rd
Boulton Rd
The Kings Theatre
Nelson Rd
Merton Rd
Marmion Rd
Duncan Rd
Napier Rd
Gains Rd
Highland Road Cemetery
Festing Mews
St Augustine Rd
Brompton Rd
Haslemere Rd
Fawcett Rd
Eastleigh Rd
Francis Ave
Jubilee Rd
Bath Rd
Sutherland Rd
Winter Rd
Devonshire Ave
Eastfield Rd
Westfield Rd
Prince Albert Rd
Reginald Rd
Methuen Rd
Landguard Rd
Suffolk Rd
Middlesex Rd
Essex Rd
Dunbar Rd
Kingsley Rd
Glasgow Rd
Bransbury Park
Bransbury Rd
Ringwood Rd
EASTNEY
Lidiard Gardens
Gunners Row
Dunn Cl
Esplanade
Tokar St
Collins Rd
Kimberley Rd
Owen St
Ward Rd
Nightingale Rd
Shaftesbury Rd
Kent Rd
Portland Rd
Osborne Rd
Stanley St
Clarendon Rd
Gosport Rd
Welch Rd
Alver Rd

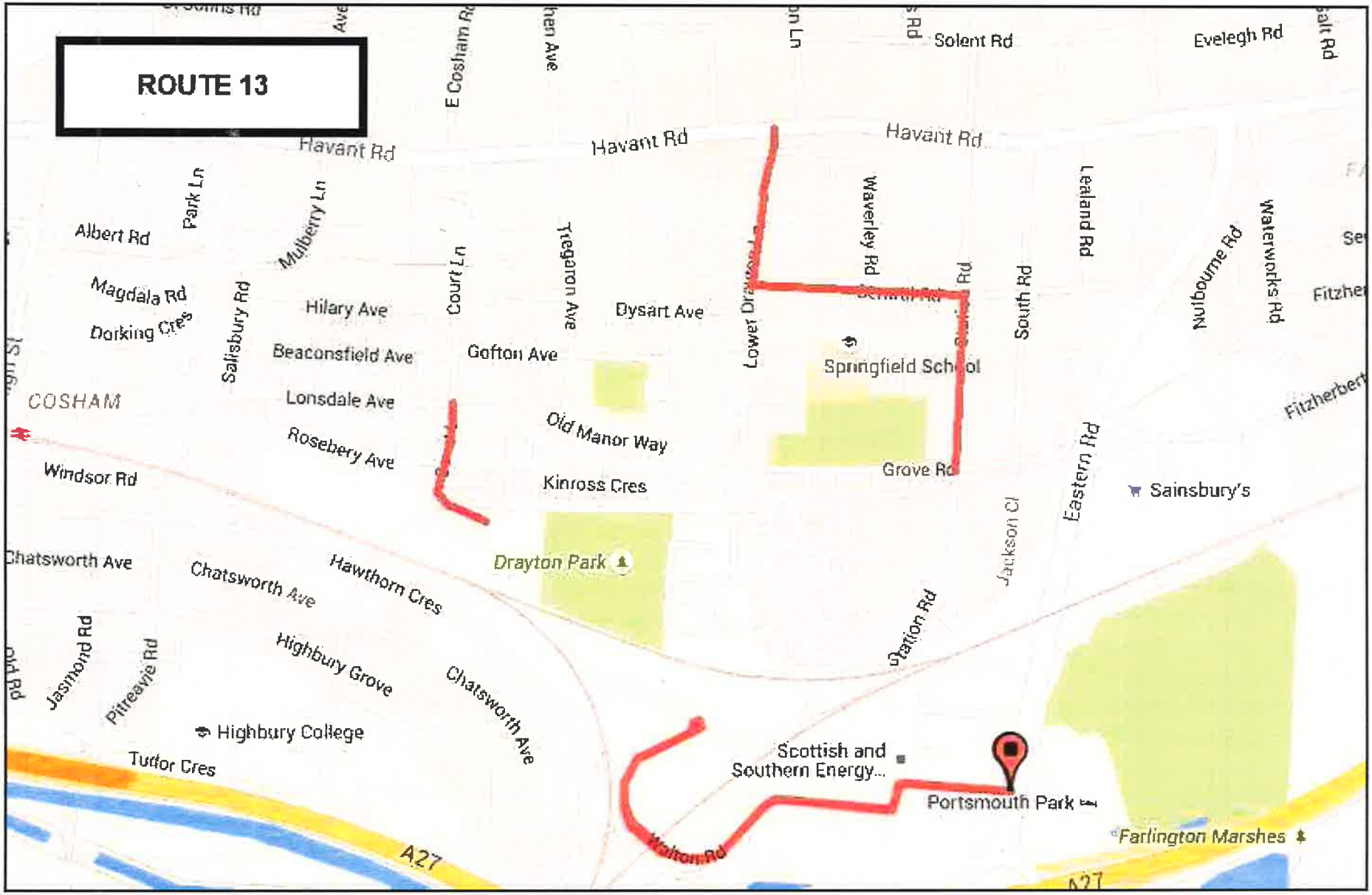

ROUTE 9
Rudmore Square
The Ship & Castle
First Wessex
Brittany Ferries
LD Lines Ferries
Portsmouth ferry port
Shell Station
Seagrove Rd
Bevis Rd
A2047
Travelodge Hotel - Portsmouth
Garfield Rd
Gamble Rd
Centaur St
Heathfield Rd
Chichester Rd
Havant Rd
Emsworth Rd
Drayton Rd
Basin St
Powerscourt Rd
Clydebank Rd
Queen's Rd
Stirling St
Washington Rd
Buckland Park
St Stephens Rd
Winchester Rd
Ballioll Rd
Binsteed Rd
Toronto Rd
Arnaud Cl
Seymour Cl
Hanway Rd
Malins Rd
Agincourt Rd
Cressy Rd
Estella Rd
Grafton St
Emanuel St
Prospect Rd
Flathouse Rd
Sultan Rd
Prince's St
Victoria St
Circular Rd
HMNB Portsmouth
Trafalgar Gate Pass...
Herbert St
Charles Dickens Birthplace Museum
Morrisons
Nelson Rd
Maitland St
Wingfield St
Hertford Pl
Duke Cres
Watts Rd
Manor Infant School
Buckingham Green
Kilmiston Cl
Hampsh
Manor Rd
Mountbatten Way
Guardhouse Rd
Military Rd
Hope St
Clarence St
Sainsbury's
Staunton St
Church St
Turner Rd
Lake Rd
Nutfield Pl
Portsmouth Academy for Girls
Clarendon St
Foster Rd
Hale St S
St. Mary's Church
Church Rd
Tottenham Rd
Olinda St
Alver Rd
Ethel Rd
Barnes Rd
Lords St
Holbrook Rd
Fratton Rd
Drummond Rd
Cornwallis Cres
Landport View
Pye St
McDonald's Portsmouth Commercial Road
Unicorn Rd
Cascades Shopping Centre
Commercial Rd
Paradise St
Jacob's St
Temple St
St Faith's Rd
Crasswell St
Tesco Portsmouth Superstore
Charles St
Central St
Fyning St
Clifton St
Coburg St
Sheffield Rd
Sandringham Rd
Arundel St
Asda Petrol Station
Allred Rd
Edinburgh Rd
A3
M275
M27

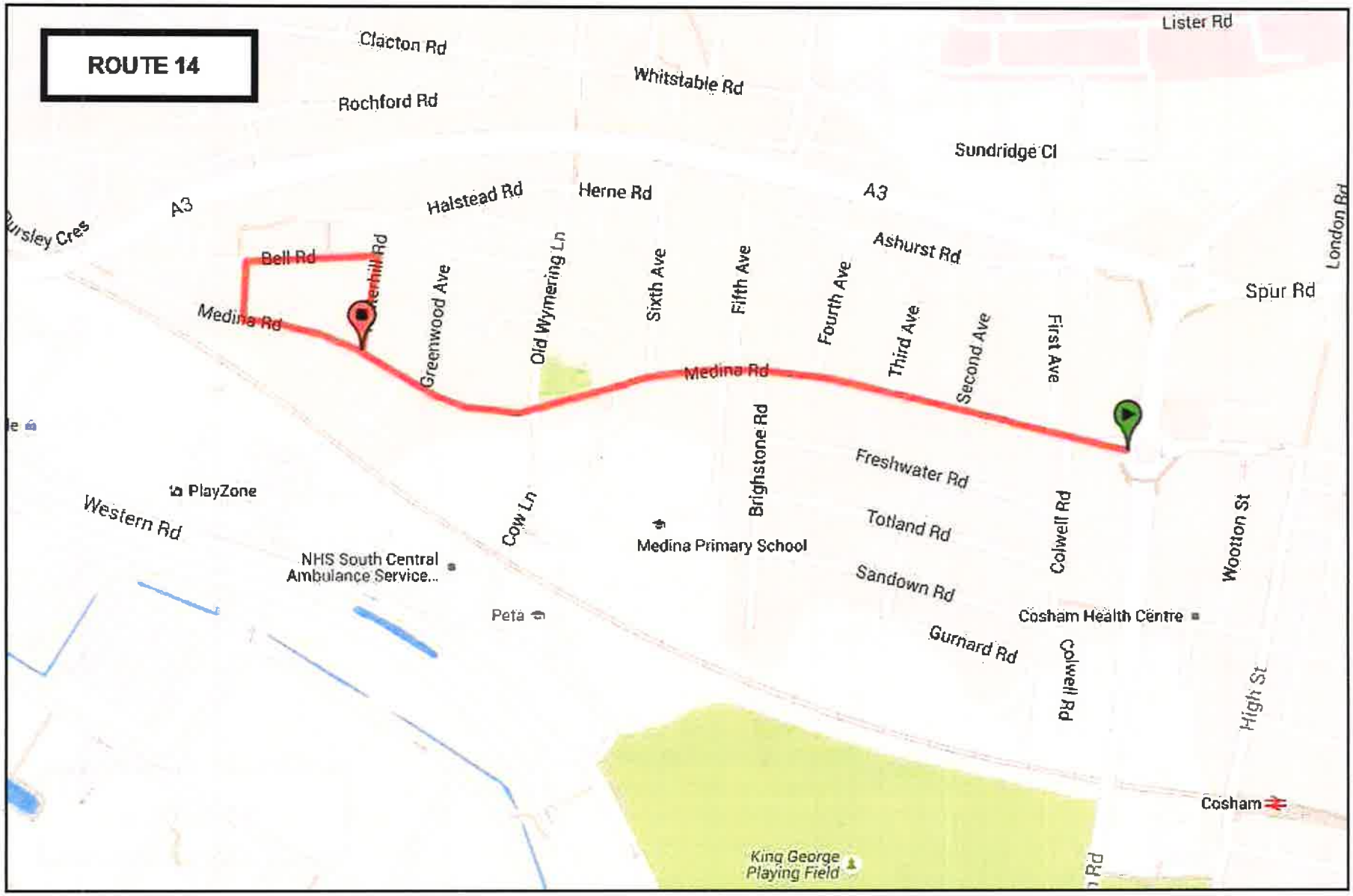

ROUTE 10
Cascades Shopping Centre
Commercial Rd
Paradise St
Jacob's St
Temple St
Faith's Rd
Crasswell St
Tesco Portsmouth Superstore
Charles St
Central St
Fyning St
Fratton Rd
Clifton St
Coburg St
Arundel St
Asda Petrol Station
Garnier St
Sheffie
Sandring
Alfred Rd
Edinburgh Rd
Stanhope Rd
Victoria Park
Station St
Ourham St
Upper Arundel St
Bridport St
Railway View
Asda Portsmouth Superstore
Nancy Rd
Anglesea Rd
Portsmouth & Southsea
Bridgeside Cl
Berkshire Cl
Wash Rd
Canal Walk
Portsmouth Guildhall
Portsmouth City Council
Greetham St
Raglan St
Charter Community Sports Centre
The Isambard Kingdom Brunel
Exchange Rd
Alec Rose Ln
Sydenham Terrace
Claremont Rd
Hyde Park Rd
Blackfriars Rd
Somers Rd
Carlisle Rd
A3
Winston Churchill Ave
Victoria Rd N
Priory School
Waltham St
St Pauls Rd
Melbourne Pl
University of Portsmouth
Wellington St
Middle St
Earlsdon St
Waterloo St
River's St
Bradford Rd
Montgomerie Rd
Rugby Rd
Eton Rd
Harrow Rd
Fawcett Rd
Britannia Rd N
Bailey's Rd
Fraser Rd
Playfair Rd
Somers Rd
Grosvenor St
St James's Rd
Park St
Sackville St
Landsdowne St
St Pauls Rd
A288

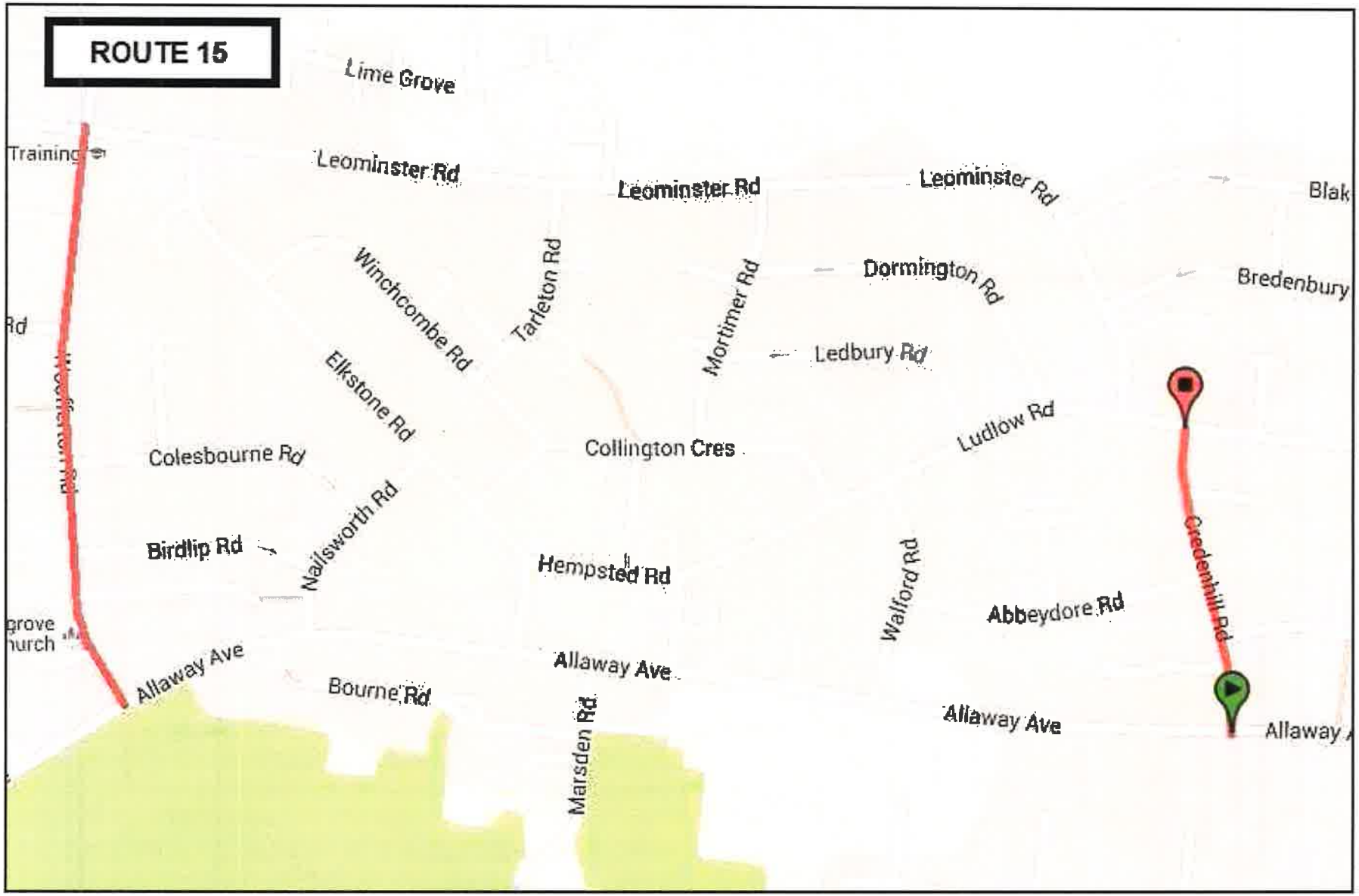

ROUTE 11
Portsmouth Guildhall
Park Rd
Burnaby Rd
University of Portsmouth
Cambridge Rd
A288
Museum Rd
Middle St
St Pauls Rd
St Pauls Rd
King St
Yorke St
Norfolk St
Eldon St
Winston Churchill Ave
Hyde Park Rd
Blackfriars Rd
Somers Rd
Raglan St
Bradford Rd
Fratton
Fratton - Goldsmith Avenue
A2030
Telephone Rd
Orchard Rd
Manners Rd
Manners Ln
Talbot Rd
Percy Rd
Jessie Rd
Heidelberg Rd
Frensham Rd
Grayshott Rd
Liss Rd
Heyshott Rd
Essex Rd
Clovelly Rd
Fratton Park
Specks Ln
Alverstone Rd
Vernon Ave
Priory Cres
Milton Park
Milton Park Bowling Green
Meon Rd
Catisfield Rd
Hollam Rd
Crofton Rd
Edgeware Rd
Bonchurch
Locksway
Somers Rd
Fraser Rd
Bailey's Rd
Pain's Rd
Hudson Rd
Margate Rd
St Andrews Rd
St Davids Rd
B2154
Stansted Rd
Bramble Rd
Fawcett Rd
Sutherland Rd
Esslemont Rd
Francis Ave
Jubilee Rd
Bath Rd
Lawrence Rd
Green Rd
Belmont St
Cottage Grove
Campbell Rd
Victoria Grove
Chelsea Rd
Goodwood Rd
Oxford Rd
Boulton Rd
Woodpath
Grove Rd S
Queens Cres
Nelson Rd
Merton Rd
Marmion Rd
Duncan Rd
Napier Rd
Worthing Rd
Gains Rd
Welch Rd
St. Romans Rd
Craneswater Ave
Parkstone Ave
Bembridge Cres
Granada Rd
Clarendon Rd
SOUTHSEA
Stanley St
Osborne Rd
Portland Rd
Kent Rd
Shaftesbury Rd
Nightingale Rd
A288
Pier Rd
Hambrook St
St Edwards Rd
Castle Rd
Stone St
Flint St
Elmont Rd
Festing Mews
St Augustine Rd
Brompton Rd
Haslemere Rd
Winter Rd
Devonshire Ave
Eastfield Rd
Westfield Rd
Suffolk Rd
Middlesex Rd
Essex Rd
Prince Albert Rd
Eastfield Rd
Westfield Rd
Landguard Rd
Reginald Rd
Reginald Rd
Methuen Rd
Eastney Rd
Ringwood Rd
Highland Road Cemetery
Kimberley Rd
Owen St
Collins Rd
Tokar St
Festing Rd
Festing Grove
Salisbury Rd
Selsey Ave
Eastern Parade
Esplanade
Esplanade
Clarence Esplanade
Auckland Rd E
Ave De Caen
Clarence Rd
Malvern Rd
Florence Rd
Clarence Esplanade
Clarence Esplanade
D-Day Museum
Pyramids Centre
Southsea Castle
A288
BEST WESTERN Royal Beach
Portsmouth, UK

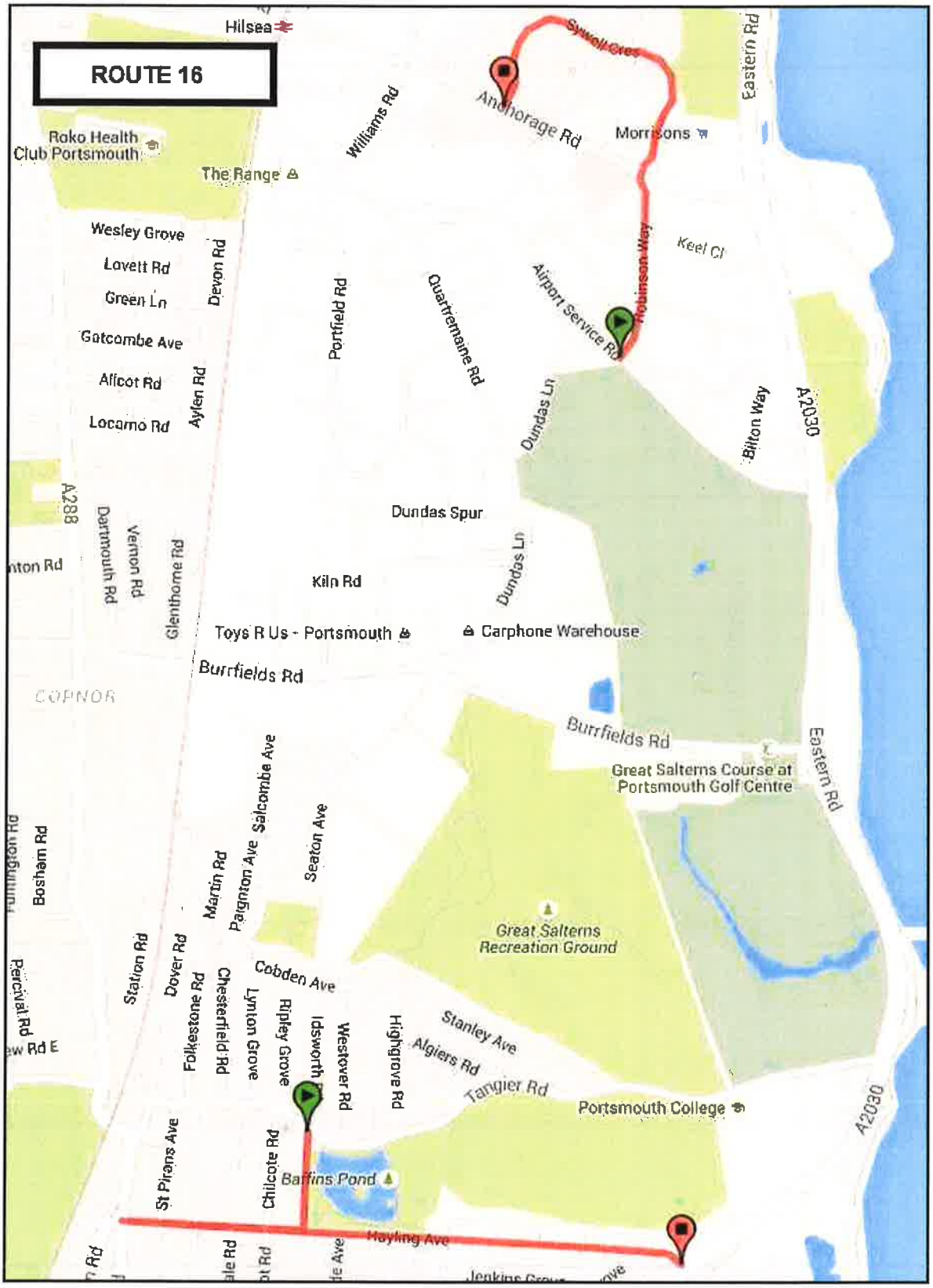

ROUTE 12
INCLUDING TEMPORARY ROUTE FOR 'THE HARD'
Fleet Way
Anchor Gate Rd
Circular Rd
A3
Main Rd
Stony Ln
Sunny Walk
Cross St
York Pl
Cascades Shopping Centre
Queen St
Portsmouth Historical Dockyard
Bishop St
Kent St
Victoria Park
Station St
Portsmouth & Southsea
Portsmouth Guildhall
Portsmouth Harbour
Park Rd
Hyde Park Rd
Spinnaker Tower
HMS Temeraire Sports Ground
GUNWHARF QUAYS
Burnaby Rd
University of Portsmouth
Winston Churc
Cambridge Rd
A288
St Pauls Rd
Middle St
Eldon St
King St
Yorke St
Norfolk St
Green Rd
Belmont St
Cottage Grove
East St
St Thomas's St
Museum Rd
Penny St
OLD PORTSMOUTH
Blount Rd
Flint St
Stone St
B2154
Castle Rd
Hambrook St
St Edwards Rd
Woodpath
Grove Rd S
Pembroke Rd
Queens Cres
Kent Rd
Merton Rd
Duisburg Way
Pier Rd
A288
Nightingale Rd
Shaftesbury Rd
Portland Rd
Marmion Rd
Clarence Pier
Osborne Rd
Stanley St
Clarendon Rd
Portsmouth, UK - Quistreham, FR
Portsmouth, UK - Santander, ES
Portsmouth, UK - Le Havre, FR
Fishbourne

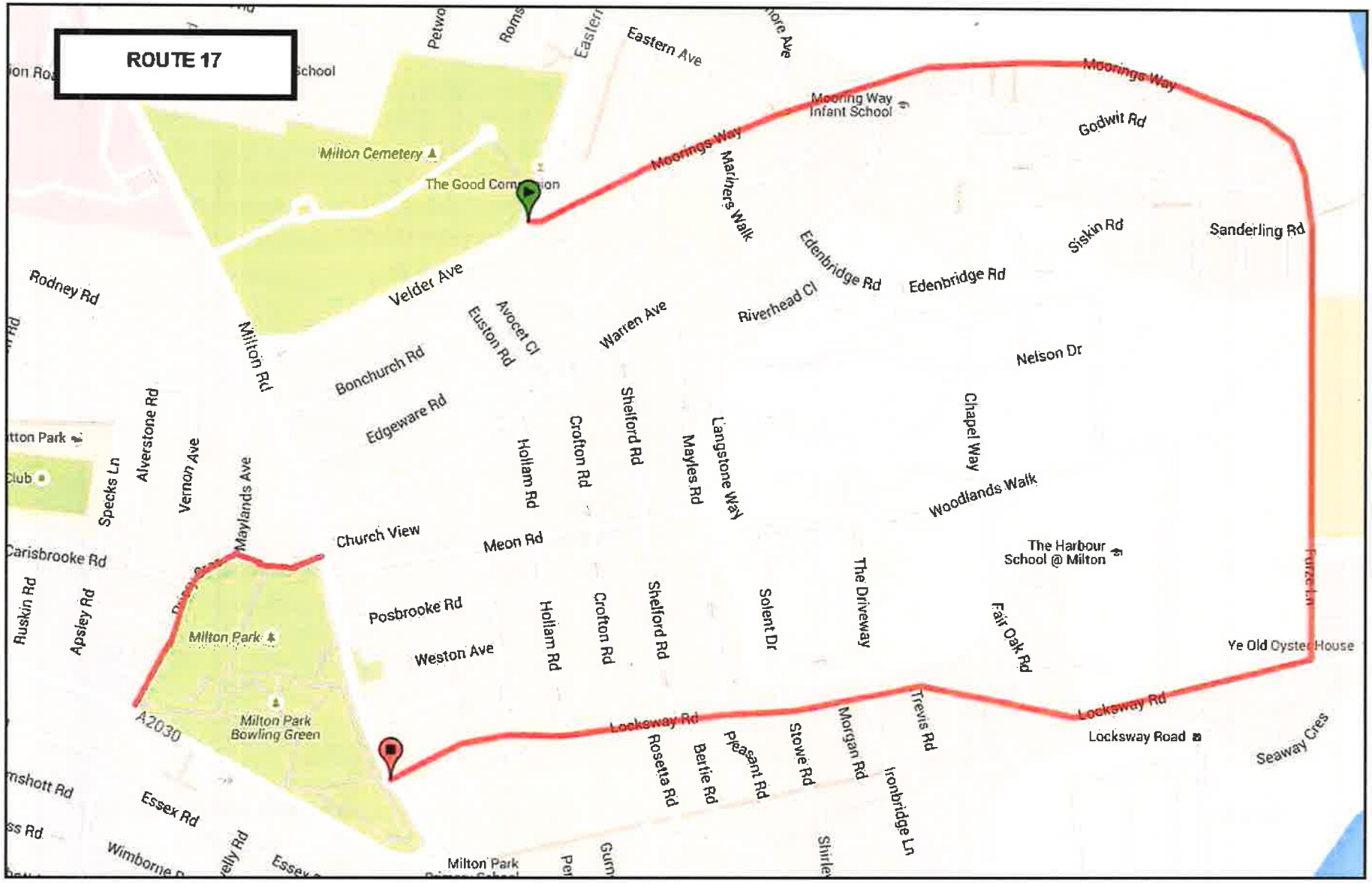

ROUTE 12A
Tipner Lake
Horsea Ln
Howard Rd
Malapan Rd
Oakwood Rd
HILSEA
Norway Rd
Normandy Rd
Northern Parade
Coman Rd
Westwood Rd
Doyle Ave
The Ridings
Alexandra Park
Kipling Rd
Meredith Rd
A2047
Amberley Rd
Merrivale Rd
Torrington Rd
Madeira Rd
Compton Rd
Battenburg Ave
Roko Health Club Portsmouth
Magdalen Rd
Hartley Rd
Ophir Rd
Shadwell Rd
Oriel Rd
Wadham Rd
North End Ave
London Ave
Thurbern Rd
Hewett Rd
Inhurst Rd
Randolph Rd
Mayfield Rd
Kirby Rd
Winton Rd
Kensington Rd
A288
Dartmouth Rd
Mountbatten Centre
Tipner Ln
Tipner Rd
Walden Rd
Jervis Rd
Strode Rd
Grunelsen Rd
Wilson Rd
Wigley Rd
Nelson Ave
N End Grove
Gladys Ave
Brick Kiln Lake
Bathurst Way
N Battery Rd
Eastern Rd
Wardroom Rd
W Battery Rd
Meyrick Rd
Knox Rd
Twyford Ave
A3
Monmouth Rd
Cardiff Rd
Balfour Rd
Fearon Rd
Crofton Rd
Kenyon Rd
Stubbington Ave
Portsmouth
Whale Island
Whale Island Way
Derby Rd
Stanley Rd
Pitcroft Rd
Seagrove Rd
Bevis Rd
Ashling Ln
A2047
Emsworth Rd
Drayton Rd
Beresford Rd
Balfour Rd
Wykeham Rd
Laburnum Grove
Chichester Rd
Portchester Rd
Wymering Rd
Havant Rd
Emsworth Rd
Drayton Rd
Preston Rd
Wallace Rd
Belgravia Rd
Kensington Rd
Funtington Rd
Bosham Rd
COPNOR
Pierhead Rd
A2047
LANDPORT
Garfield Rd
Gamble Rd
Brittany Ferries
Powerscourt Rd
Queen's Rd
Winchester Rd
Binsteed Rd
Toronto Rd
Langley Rd
Malta Rd
Lynn Rd
New Rd
Byron Rd
Percival Rd
New Rd E
Stirling St
A2047
Estella Rd
Malins Rd
Emanuel St
BUCKLAND
Cressy Rd
Hennway Rd
Fountain Rd
Circular Rd
Sultan Rd
Victoria St
Nelson Rd
Mainland St
Wingfield St
Duke Cres
Flathouse Rd
Military Rd
Ernest Rd
George St
Shearer Rd
Kingston Cemetery
Manor Rd
Turner Rd
Milton Rd

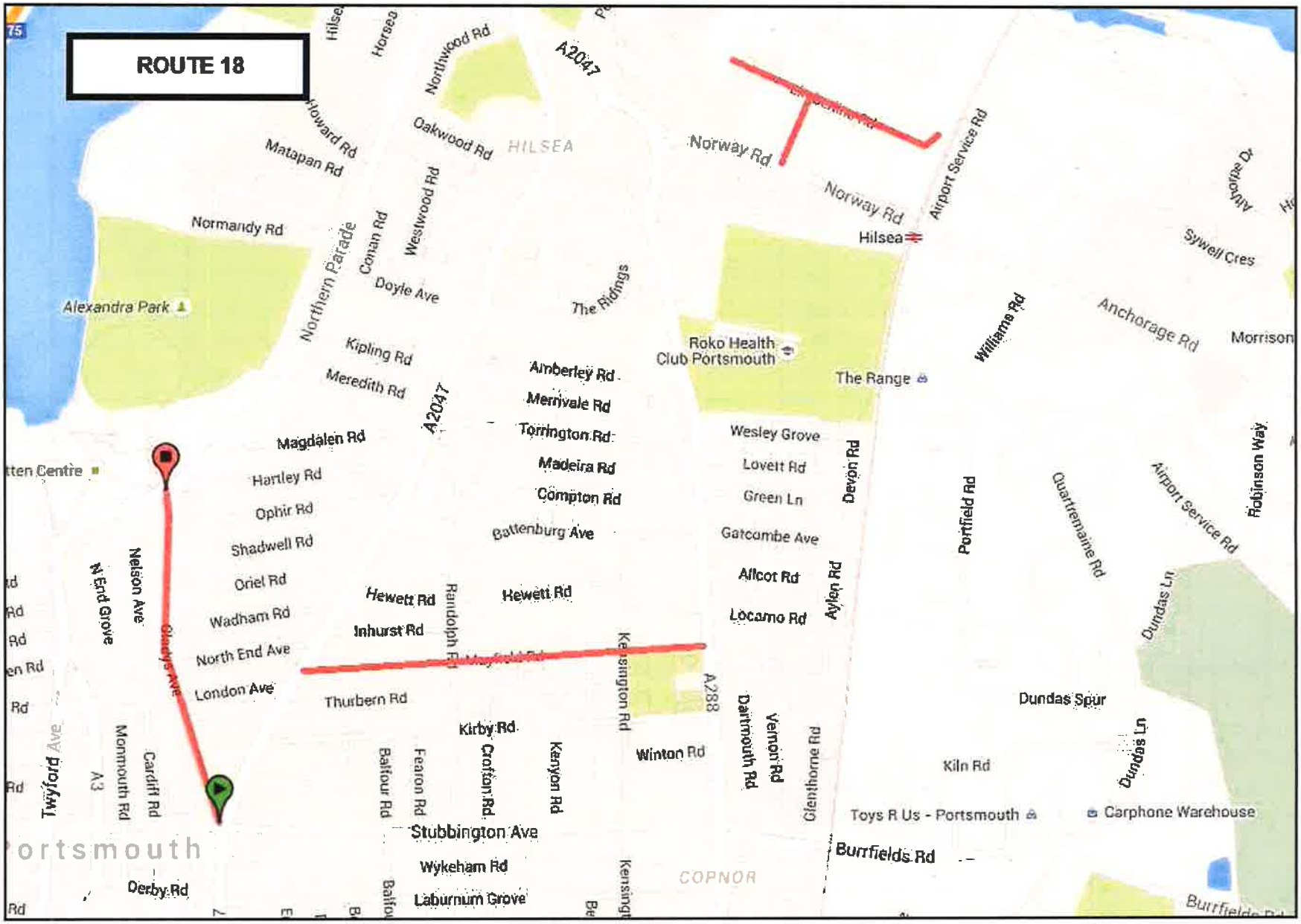

ROUTE 13
Havant Rd
Havant Rd
Havant Rd
Solent Rd
Evelegh Rd
E Cosham Rd
Park Ln
Mulberry Ln
Albert Rd
Magdala Rd
Dorking Cres
Salisbury Rd
Hilary Ave
Beaconsfield Ave
Lonsdale Ave
Rosebery Ave
Court Ln
Tregaron Ave
Gofton Ave
Dysart Ave
Waverley Rd
Lower Drayton
Springfield School
South Rd
Lealand Rd
Nutbourne Rd
Waterworks Rd
Fitzherbert
COSHAM
Windsor Rd
Old Manor Way
Kinross Cres
Grove Rd
Eastern Rd
Sainsbury's
Chatsworth Ave
Chatsworth Ave
Hawthorn Cres
Drayton Park
Jackson Cl
Station Rd
Jasmond Rd
Pitreavie Rd
Highbury Grove
Chatsworth Ave
Highbury College
Tudor Cres
Scottish and Southern Energy...
Portsmouth Park
Farlington Marshes
Walton Rd
A27
A27

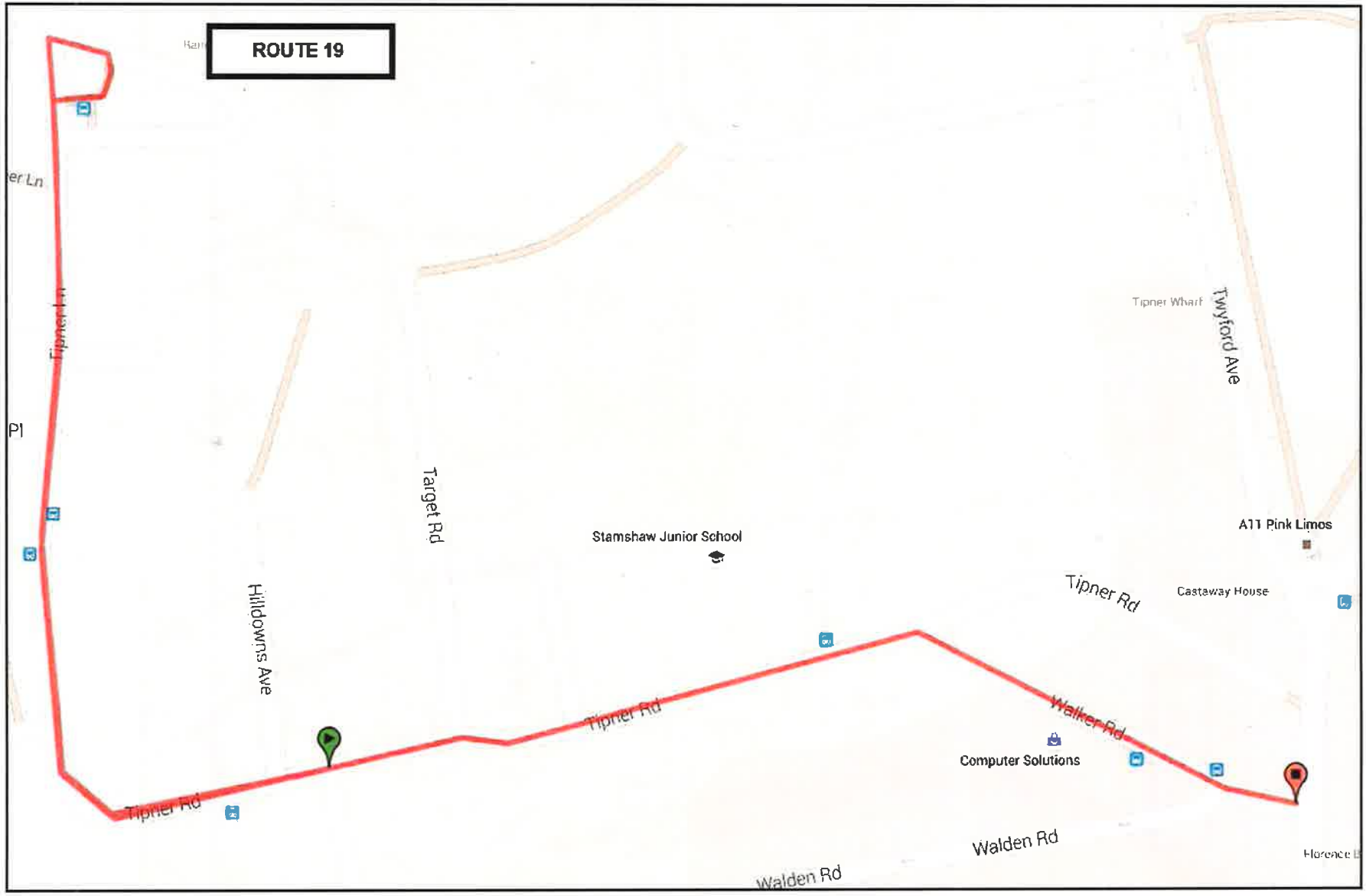

ROUTE 14
Clacton Rd
Rochford Rd
Whitstable Rd
Lister Rd
Sundridge Cl
A3
Halstead Rd
Herne Rd
A3
London Rd
Bell Rd
Medina Rd
Greenwood Ave
Old Wymering Ln
Sixth Ave
Fifth Ave
Fourth Ave
Ashurst Rd
Third Ave
Second Ave
First Ave
Spur Rd
Medina Rd
Brighstone Rd
Freshwater Rd
Totland Rd
Sandown Rd
Gurnard Rd
Colwell Rd
Wootton St
High St
Cosham
Cosham Health Centre
PlayZone
Western Rd
Cow Ln
NHS South Central Ambulance Service...
Medina Primary School
Peta
King George Playing Field

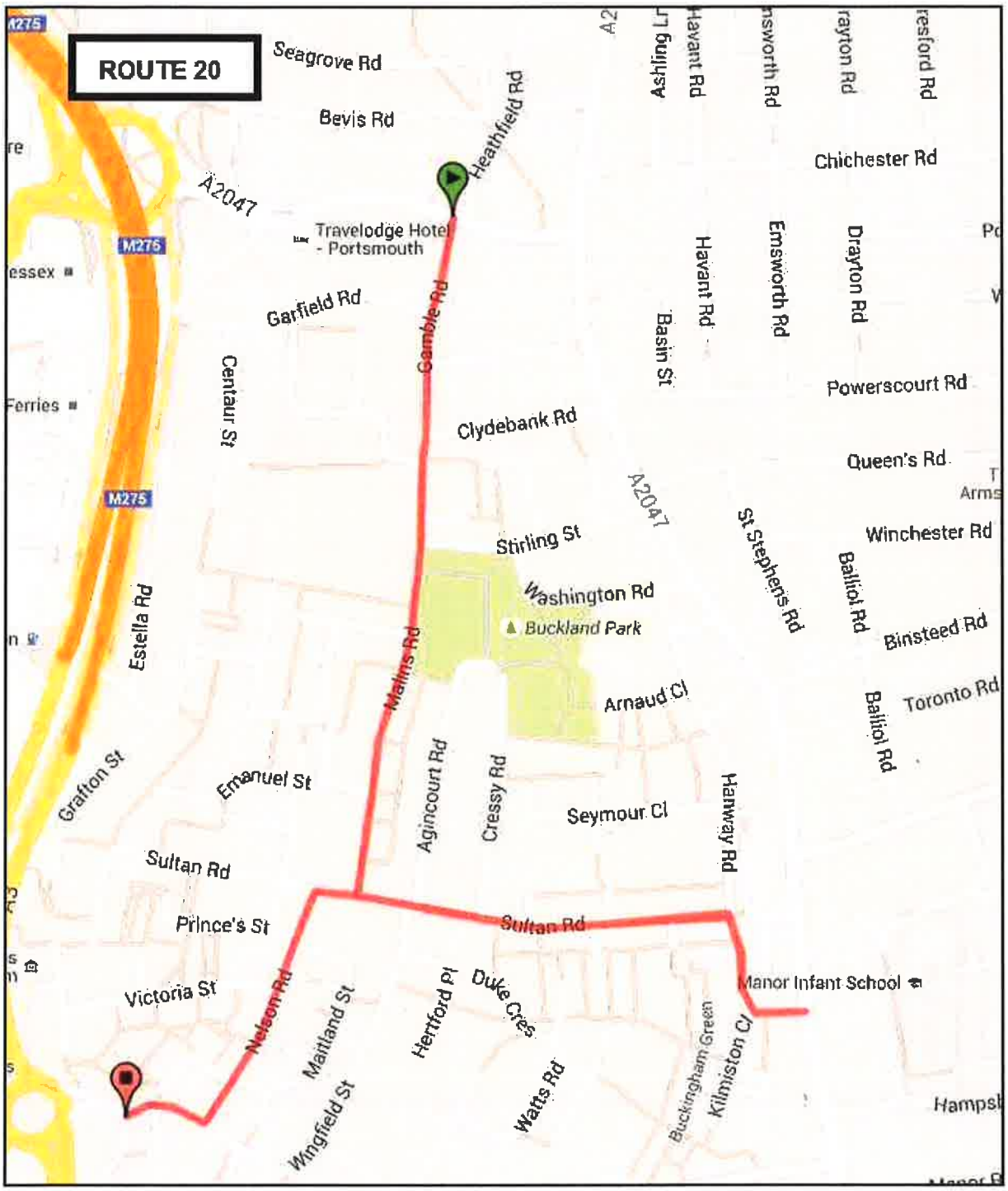

ROUTE 15
Lime Grove
Leominster Rd
Leominster Rd
Leominster Rd
Blak
Winchcombe Rd
Tarleton Rd
Mortimer Rd
Dormington Rd
Bredenbury
Ledbury Rd
Elkstone Rd
Ludlow Rd
Colesbourne Rd
Collington Cres
Birdlip Rd
Nailsworth Rd
Hempsted Rd
Wallford Rd
Abbeydore Rd
Credenhill Rd
Allaway Ave
Bourne Rd
Allaway Ave
Marsden Rd
Allaway Ave
Allaway

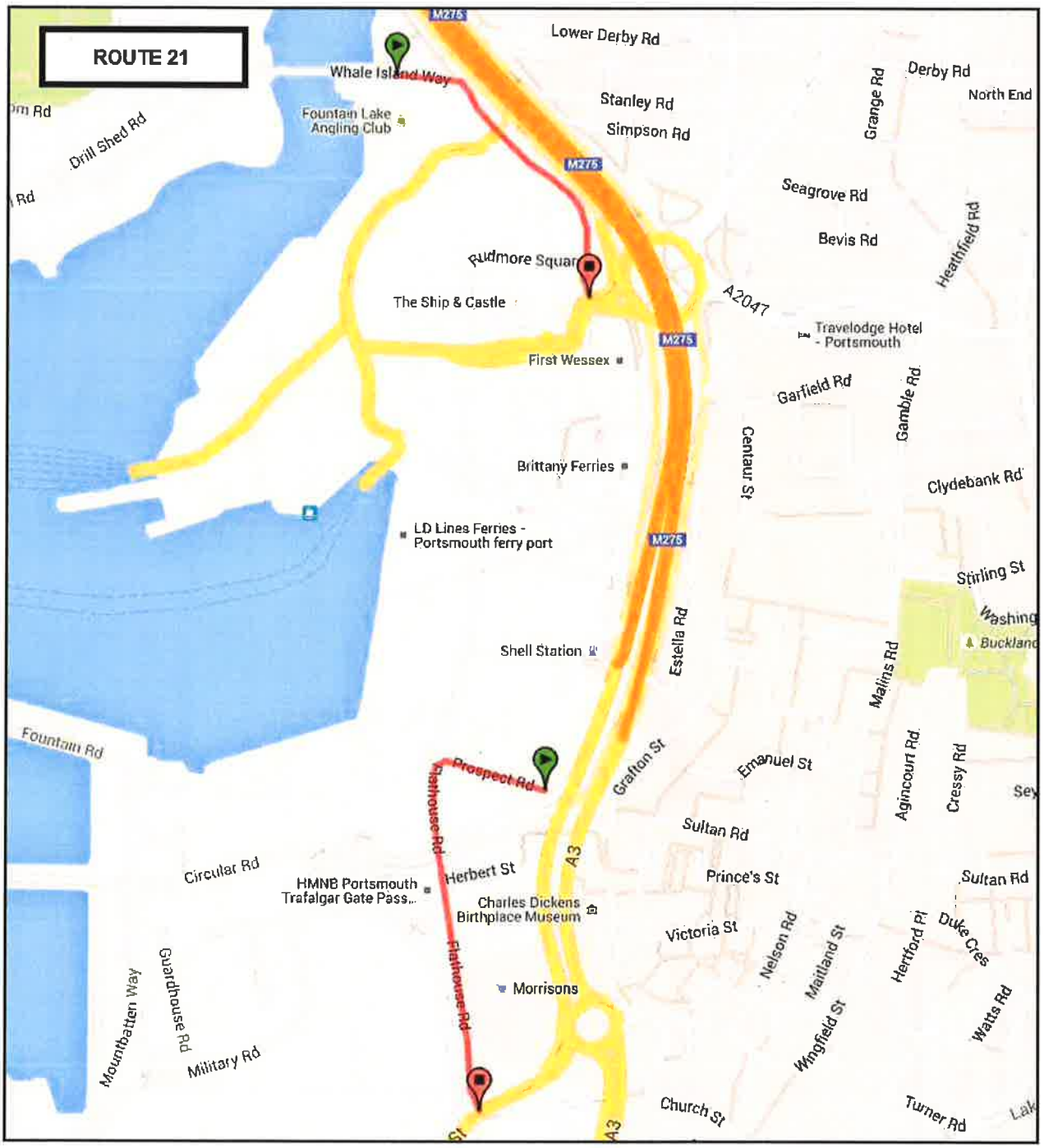

ROUTE 16
Hilsea
Anchorage Rd
Morrisons
Eastern Rd
Williams Rd
Roko Health Club Portsmouth
The Range
Wesley Grove
Lovett Rd
Green Ln
Devon Rd
Gatcombe Ave
Alfcot Rd
Locarno Rd
Aylen Rd
Portfield Rd
Quartremaine Rd
Airport Service Rd
Robinson Way
Keel Cl
Dundas Ln
Bilton Way
A2030
A288
Dundas Spur
Kiln Rd
Vernon Rd
Glenthorne Rd
Toys R Us - Portsmouth
Carphone Warehouse
Burrfields Rd
COPNOR
Great Salterns Course at Portsmouth Golf Centre
Great Salterns Recreation Ground
Salcombe Ave
Seaton Ave
Martin Rd
Paignton Ave
Bosham Rd
Station Rd
Dover Rd
Folkestone Rd
Chesterfield Rd
Lynton Grove
Ripley Grove
Cobden Ave
Idsworth Rd
Westover Rd
Highgrove Rd
Stanley Ave
Algiers Rd
Tangier Rd
Portsmouth College
St Pirans Ave
Chilcote Rd
Baffins Pond
Hayling Ave


ROUTE 17
Eastern Ave
Moorings Way
Mooring Way Infant School
Godwit Rd
Milton Cemetery
Marhers Walk
Edenbridge Rd
Siskin Rd
Sanderling Rd
Rodney Rd
Velder Ave
Riverhead Cl
Nelson Dr
Milton Rd
Bonchurch Rd
Euston Rd
Avocet Cl
Warren Ave
Edgeware Rd
Shelford Rd
Crofton Rd
Hollam Rd
Mayles Rd
Langstone Walk
Chapel Way
Woodlands Walk
Alverstone Rd
Specks Ln
Vernon Ave
Maylands Ave
Church View
Meon Rd
Carisbrooke Rd
The Harbour School @ Milton
The Driveway
Fair Oak Rd
Furze Ln
Ruskin Rd
Apsley Rd
Posbrooke Rd
Weston Ave
Milton Park
Solent Dr
Ye Old Oyster House
A2030
Milton Park Bowling Green
Locksway Rd
Locksway Road
Trevis Rd
Morgan Rd
Stowe Rd
Pleasant Rd
Bertie Rd
Rosetta Rd
Ironbridge Ln
Seaway Cres
Essex Rd
Wimborne
Milton Park


ROUTE 18
Northwood Rd
A2047
Howard Rd
Matapan Rd
Oakwood Rd
HILSEA
Norway Rd
Airport Service Rd
Normandy Rd
Westwood Rd
Conan Rd
Northern Parade
Doyle Ave
The Ridings
Hilsea
Sywell Cres
Alexandra Park
Kipling Rd
Meredith Rd
Roko Health Club Portsmouth
The Range
Williams Rd
Anchorage Rd
Morrison
Amberley Rd
Merrivale Rd
Torrington Rd
Madeira Rd
Compton Rd
Battenburg Ave
Wesley Grove
Lovett Rd
Green Ln
Gatcombe Ave
Devon Rd
Portfield Rd
Quartermaine Rd
Airport Service Rd
Robinson Way
Magdalen Rd
Hartley Rd
Ophir Rd
Shadwell Rd
Oriel Rd
Wadham Rd
North End Ave
London Ave
Hewett Rd
Inhurst Rd
Randolph Rd
Aylen Rd
Alicot Rd
Locarno Rd
Dundas Ln
Dundas Spur
Nelson Ave
N End Grove
Clarke's Ave
Twyford Ave
Monmouth Rd
A3
Cardiff Rd
Thurbern Rd
Kirby Rd
Balfour Rd
Fearon Rd
Crofton Rd
Kenyon Rd
Kensington Rd
A288
Winton Rd
Dartmouth Rd
Vernon Rd
Glenthorne Rd
Kiln Rd
Toys R Us - Portsmouth
Carphone Warehouse
Burrfields Rd
Stubbington Ave
Wykeham Rd
Laburnum Grove
Derby Rd
COPNOR
Portsmouth

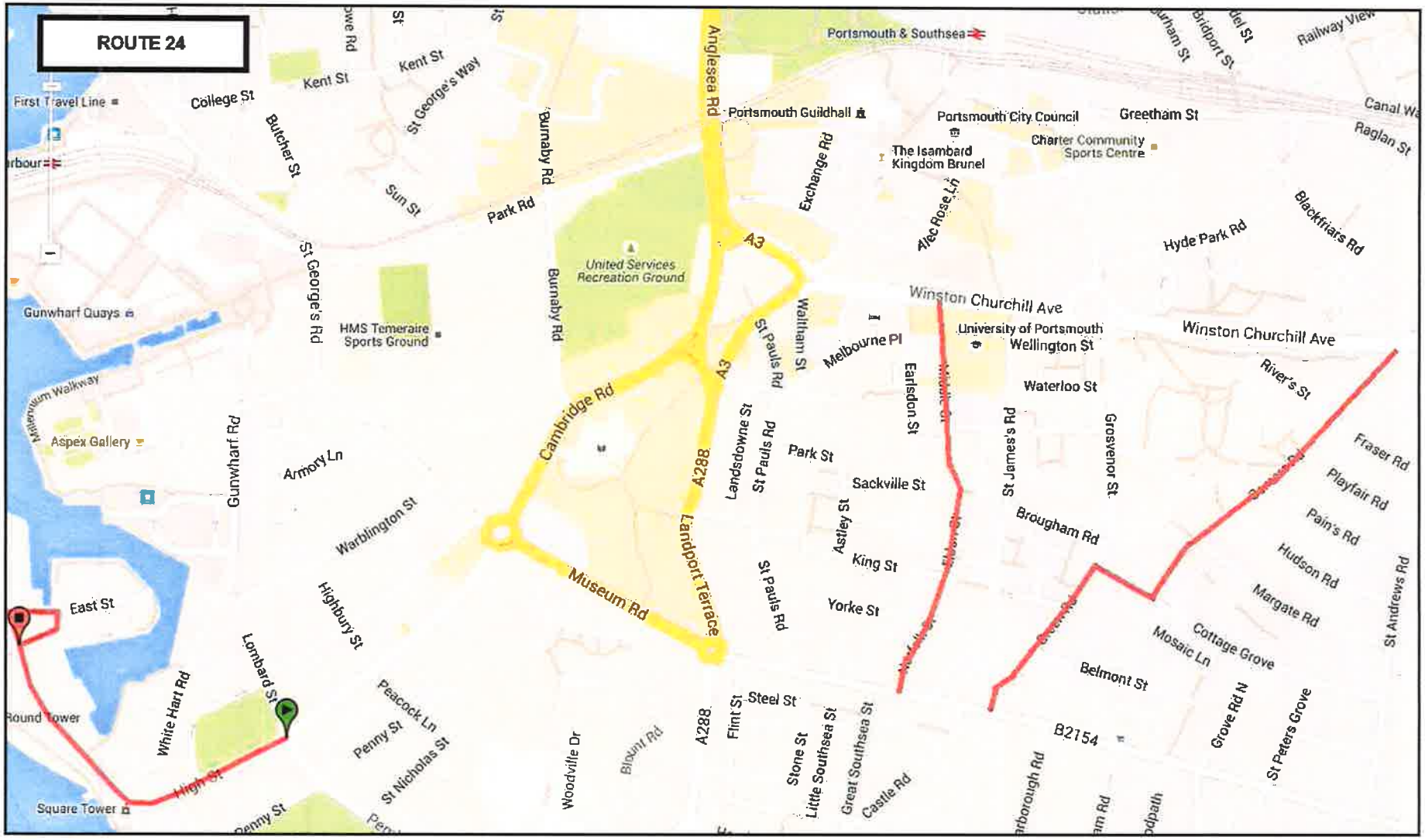

ROUTE 19
Tipner Ln
Target Rd
Hilldowns Ave
Stamshaw Junior School
Tipner Rd
Tipner Wharf
Twyford Ave
A11 Pink Limos
Castaway House
Tipner Rd
Walker Rd
Computer Solutions
Tipner Rd
Walden Rd
Walden Rd

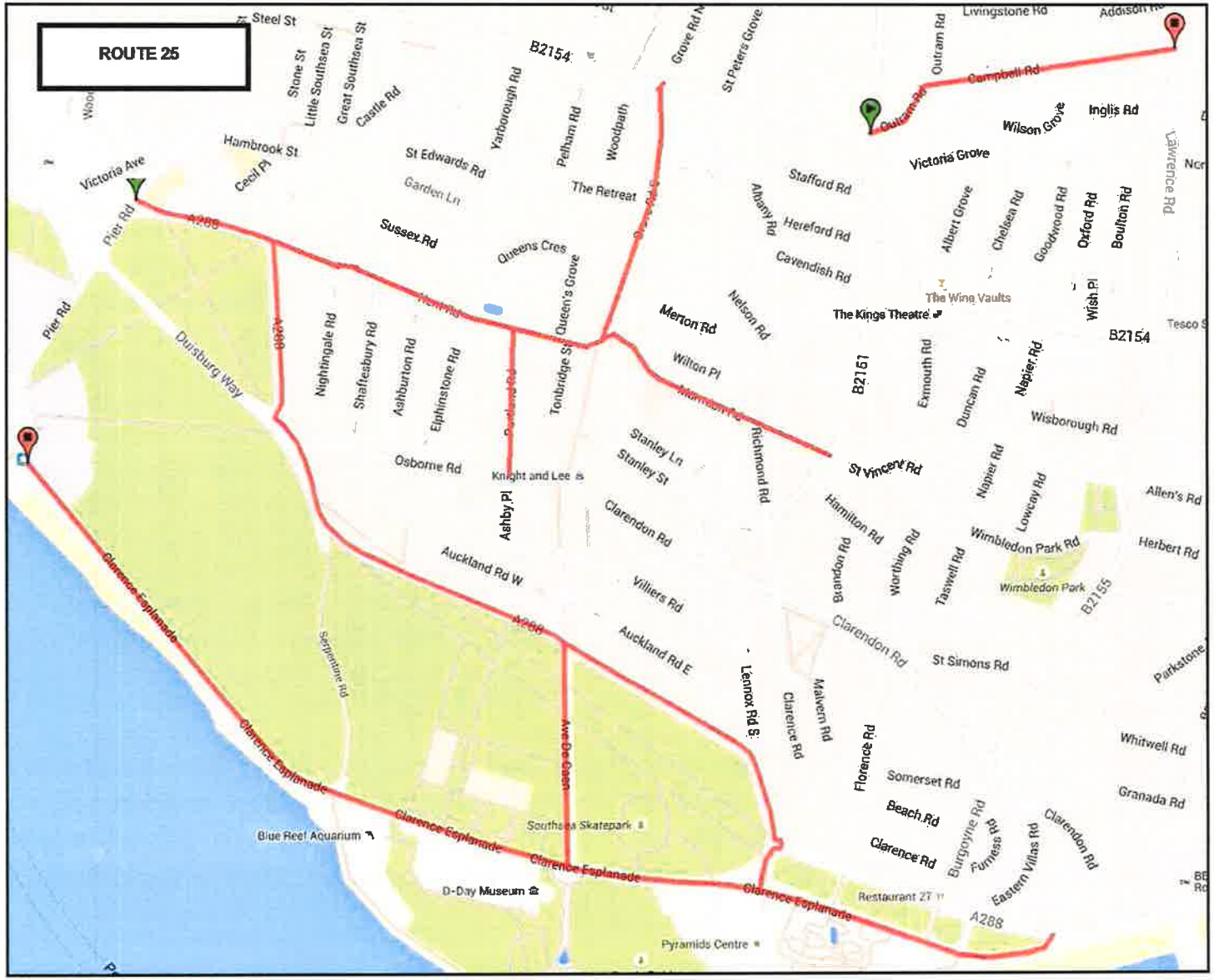

ROUTE 20
Seagrove Rd
Bevis Rd
Heathfield Rd
A2047
Travelodge Hotel - Portsmouth
M275
Garfield Rd
Gamble Rd
Centaur St
Clydebank Rd
Basin St
Havant Rd
Emsworth Rd
Drayton Rd
Chichester Rd
Powerscourt Rd
Queen's Rd
Winchester Rd
Stirling St
Washington Rd
Buckland Park
St Stephens Rd
Ballioi Rd
Binsteed Rd
Toronto Rd
Arnaud Cl
Estella Rd
Mallins Rd
Agincourt Rd
Cressy Rd
Seymour Cl
Hanway Rd
Grafton St
Emanuel St
Sultan Rd
Prince's St
Victoria St
Nelson Rd
Maitland St
Hertford Pl
Duke Cres
Watts Rd
Wingfield St
Buckingham Green
Kilmiston Cl
Manor Infant School
Ferries
essex


ROUTE 21
M275
Lower Derby Rd
Whale Island Way
Fountain Lake Angling Club
Drill Shed Rd
Stanley Rd
Simpson Rd
Grange Rd
Derby Rd
North End
Seagrove Rd
Bevis Rd
Heathfield Rd
Rudmore Square
The Ship & Castle
A2047
Travelodge Hotel - Portsmouth
First Wessex
Garfield Rd
Gamble Rd
Centaur St
Brittany Ferries
Clydebank Rd
LD Lines Ferries - Portsmouth ferry port
Stirling St
Shell Station
Estella Rd
Malins Rd
Fountain Rd
Prospect Rd
Grafton St
Emanuel St
Agincourt Rd
Cressy Rd
Sultan Rd
Circular Rd
Herbert St
A3
Prince's St
HMNB Portsmouth Trafalgar Gate Pass...
Charles Dickens Birthplace Museum
Victoria St
Nelson Rd
Maitland St
Hertford Pl
Duke Cres
Watts Rd
Mountbatten Way
Guardhouse Rd
Morrisons
Wingfield St
Military Rd
Church St
Turner Rd


ROUTE 22
Fratton - Goldsmith Avenue
A2030
Telephone Rd
Orchard Rd
Bradford Rd
Manners Rd
Manners Ln
Percy Rd
Jessie Rd
Fawcett Rd
Talbot Rd
Sutherland Rd
Essiemont Rd
Francis Ave
Jubilee Rd
Bath Rd
Heidelberg Rd
Frensham Rd
Liss Rd
Grayshott Rd
Heyshott Rd
Stansted Rd
Bramble Rd
Campbell Rd
Fawcett Rd
Lawrence Rd
Victoria Grove
Chelsea Rd
Goodwood Rd
Oxford Rd
Boulton Rd
B2151
St Davids Rd
Bailey's Rd
B2154
Duncan Rd
Napier Rd
Worthing Rd
Gains Rd
Welch Rd
St. Ronans Rd
Parkstone Ave
Bembridge Cres
Crameswater Ave
B2155
Salisbury Rd
Festing Mews
St Augustine Rd
Brompton Rd
Haslemere Rd
Festing Grove
Highland Road Cemetery
Kimberley Rd
Collins Rd
Owen St
Ward Rd
Tokar St
Selsey Ave
Eastern Parade
Esplanade
A288
Gunners Row
Lidiard Gardens
Dunn Cl
Ringwood Rd
Henderson Rd
EASTNEY
Bransbury Park
Bransbury Rd
Eastney Rd
Prince Albert Rd
Devonshire Ave
Eastfield Rd
Westfield Rd
Landguard Rd
Reginald Rd
Methuen Rd
Middlesex Rd
Suffolk Rd
Glasgow Rd
Kingsley Rd
Dunbar Rd
Essex Rd
Clovelly Rd
Milton Park
Milton Park Bowling Green
Priory Cres
Locksway Rd
Meon Rd
Catisfield Rd
Hollam Rd
Crofton Rd
Shelford Rd
Solent Dr
The Driveway
Ironbridge Ln
Woodlands Wa
Fair Oak Rd
Maples Rd
Edgeware Rd
Bonchurch
Vernon Ave
Alverstone Rd
Specks Ln
Fratton Park
Walmer Rd


ROUTE 23
Fratton - Goldsmith Avenue
A2030
Fratton Park
Fratton Way
Anson Rd
Bonchurch Rd
Edgeware Rd
Warren Ave
Crofton Rd
Maylez Rd
Nelson Dr
Woodlands Walk
Specks Ln
Alverstone Rd
Vernon Ave
Priory Cres
Milton Park
Milton Park Bowling Green
Meon Rd
Cotsfield Rd
Hollam Rd
Crofton Rd
Shelford Rd
Solent Dr
The Driveway
Fair Oak Rd
Furze Ln
Longshore Way
Locksway Rd
Telephone Rd
Orchard Rd
Manners Rd
Manners Ln
Fawcett Rd
Talbot Rd
Percy Rd
Jessie Rd
Sutherland Rd
Bramble Rd
Hedsor Rd
Frensham Rd
Grayshott Rd
Liss Rd
Essex Rd
Clovelly Rd
Heyshott Rd
Essex Rd
Middlesex Rd
Suffolk Rd
Dunbar Rd
Kingsley Rd
Glasgow Rd
Bransbury Park
Bransbury Rd
Ironbridge Ln
Lock Lake
Southsea Marina - Premier Marinas
Ferry Rd
Fort Cumberland
Fort Cumberland Rd
Henderson Rd
Esplanade
Southsea Leisure Park
Lidiard Gardens
Dunn Ct
Gunners Row
EASTNEY
Ringwood Rd
Prince Albert Rd
Eastfield Rd
Westfield Rd
Landguard Rd
Reginald Rd
Methven Rd
Devonshire Ave
Winter Rd
Haslemere Rd
Jubilee Rd
Bath Rd
Esslemont Rd
Francis Ave
Festing Mews
St Augustine Rd
Brompton Rd
Lawrence Rd
Oxford Rd
Boulton Rd
B2154
Highland Road Cemetery
Kimberley Rd
Ward Rd
Owen St
Collins Rd
Tokar St
Festing Grove
Salisbury Rd
Festing Rd
A288
Selsey Ave
Eastern Parade
Granada Rd
Gains Rd
Welch Rd
St. Ronans Rd
Craneswater Ave
Parkstone Ave
Bembridge Cres
B2155
BEST WESTERN Royal Beach


ROUTE 24
First Travel Line
College St
Kent St
St George's Way
Butcher St
Sun St
Park Rd
Burnaby Rd
St George's Rd
HMS Temeraire Sports Ground
United Services Recreation Ground
Anglesea Rd
Portsmouth & Southsea
Portsmouth Guildhall
Portsmouth City Council
Greetham St
Charter Community Sports Centre
The Isambard Kingdom Brunel
Exchange Rd
Alec Rose Ln
A3
Hyde Park Rd
Blackfriars Rd
Winston Churchill Ave
University of Portsmouth
Wellington St
Melbourne Pl
Waltham St
St Pauls Rd
Cambridge Rd
A288
Landport Terrace
Museum Rd
Earlsdon St
Waterloo St
St James's Rd
Grosvenor St
Park St
Sackville St
Brougham Rd
Astley St
King St
Yorke St
River's St
Fraser Rd
Playfair Rd
Pain's Rd
Hudson Rd
Margate Rd
St Andrews Rd
Cottage Grove
Mosaic Ln
Belmont St
B2154
Grove Rd N
St Peters Grove
Gunwharf Quays
Millennium Walkway
Aspex Gallery
Gunwharf Rd
Armory Ln
Warblington St
Highbury St
East St
Round Tower
White Hart Rd
Lombard St
High St
Square Tower
Penny St
Peacock Ln
St Nicholas St
Woodville Dr
Blount Rd
Flint St
Steel St
Stone St
Little Southsea St
Great Southsea St
Castle Rd


ROUTE 25
Steel St
Stone St
Little Southsea St
Great Southsea St
Castle Rd
Hambrook St
Cecil Pl
Victoria Ave
Pier Rd
A288
Sussex Rd
Garden Ln
St Edwards Rd
Yarborough Rd
B2154
Pelham Rd
Woodpath
The Retreat
Grove Rd N
St Peters Grove
Outram Rd
Livingstone Rd
Campbell Rd
Inglis Rd
Wilson Grove
Victoria Grove
Stafford Rd
Albany Rd
Hereford Rd
Cavendish Rd
Albert Grove
Chelsea Rd
Goodwood Rd
Oxford Rd
Boulton Rd
Lawrence Rd
Queens Cres
Queen's Grove
Merton Rd
Nelson Rd
The Kings Theatre
The Wine Vaults
Wish Pl
B2154
Tesco
Wilton Pl
Exmouth Rd
Duncan Rd
Napier Rd
B2151
Wisborough Rd
Duisburg Way
Nightingale Rd
Shaftesbury Rd
Ashburton Rd
Elphinstone Rd
Osborne Rd
Knight and Lee
Ashby Pl
Toinbridge St
Stanley Ln
Stanley St
Richmond Rd
St Vincent Rd
Napier Rd
Lowcay Rd
Allen's Rd
Herbert Rd
Hamilton Rd
Brandon Rd
Worthing Rd
Taswell Rd
Wimbledon Park Rd
Wimbledon Park
B2155
Clarendon Rd
Auckland Rd W
Auckland Rd E
Villiers Rd
Serpentine Rd
Clarence Esplanade
Blue Reef Aquarium
Southsea Skatepark
Ave De Caen
D-Day Museum
Pyramids Centre
Restaurant ZT
Lennox Rd S
Clarence Rd
Malvern Rd
St Simons Rd
Florence Rd
Somerset Rd
Beach Rd
Clarence Rd
Burgoyne Rd
Furness Rd
Eastern Villas Rd
Clarendon Rd
Whitwell Rd
Granada Rd
Parkstone
A288

Appendix D4
Salt/Grit Bin Locations

Bin No	Location
1	Coleridge Road junction Wordsworth Avenue
2	Fort Southwick junction James Callaghan Drive
3	Tintern Close junction Winterbourne Road
4	Lime Grove opposite No 3
5	Allaway Avenue adjacent lamp column 33
6	Racecourse Lane opposite Community Centre
7	Racecourse Lane adjacent lamp column 4
8	Southampton Road adjacent lamp column 72
9	Ludlow Road junction Blakemere Crescent
9A	Meadowsweet Way junction Wymering Lane
10	Wymering Lane junction Hythe Road
11	Sundridge Close adjacent lamp column 3
12	Southwick Hill Road junction QA Hospital Emergency Access
12A	Southwick Hill Road junction QA Hospital Main Entrance
13	London Road junction Southwick Hill Road
14	London Road junction Chalkridge Road
15	Widley Path near Widley Road
16	East Cosham Road junction Courtmount Grove
17	London Road near lamp column 48
18	Dell Close adjacent garages opposite No 2
19	Oakhurst Gardens junction A3
20	Christchurch Road junction A3
21	Hilltop Crescent junction Portsdown Hill Road
22	Penrhyn Avenue junction Penarth Avenue
23	Uplands Road junction Seaview Road
24	Farlington Avenue junction Blake Road
25	Gillman Road junction Woodfield Avenue
26	Beverley Grove junction Portsdown Hill Road
27	Second Avenue side of No 144
28	Havant Road junction Waterworks Road
29	Central Road junction Station Road
30	Havant Road outside 174
31	Hilary Avenue opposite 34
32	Medina Road junction Northern Road
33	Northern Road outside Royal Mail (South of Bus Shelters)
34	Northern Road Bus Terminal access
35	Portsmouth Road Bus Terminal access
36	Northern Road northbound approach Portsbridge RAB
37	Northern Road southbound approach Portsbridge RAB
38	Western Road junction Portsbridge RAB
39	Tudor Crescent opposite No 35
40	London Road (the old water bridge)
41	Walton Road (on bridge)
42	Walton Road adjacent lamp column 31
43	Walton Road junction access road to Colas Depot
44	London Road opposite Hilsea Lido adjacent lamp column 126
45	London Road south of footbridge Hilsea Lido
46	London Road junction metal footbridge (Grit Only)
47	Military Road junction London Road (Grit Only)
48	Norway Road approach bridge East
48A	Norway Road approach bridge West
49	Tipner Lane junction Tipner Road
50	Moneyfields Avenue side of 199 Dover Road adjacent lamp column 2

Bin No	Location
51	Copnor Bridge junction Tangiers Road
52	New Road opposite No 313
53	Sultan Road adjacent underpass
54	St Marys Road adjacent bridge East
54A	St Marys Road adjacent bridge West
55	Stanhope Road junction Commercial Road
56	Greetham Street adjacent Jacobs Ladder
57	Northumberland Road on island adjacent to Nameplate
58	Fratton Road southbound near Selbourne Terrace
59	Goldsmith Avenue junction Francis Avenue
60	Goldsmith Avenue junction Milton Road
61	Bransbury Road adjacent lamp column 12
62	Ferry Road west of lamp column 55
63	Southsea Esplanade junction St Helens Parade
64	Richmond Place side of Waitrose
65	Clarence Esplanade outside Hovertravel
66	Cambridge Road junction St Michaels Road
67	The Hard entrance to Interchange
68	The Hard exit to Interchange
69	Kingsley Road outside Flat 188-194
70	Broom Square junction with Broom Close
71	Burrill Avenue outside No 39
72	London Road junction of Portsdown Hill Road
73	Galt Road junction of Grant Road
74	Portsdown Avenue junction of Moortown Avenue
75	Alec Rose Lane junction Mary Rose Street
76	Drayton Lane junction Down End Road

- Total 80 No (including 9A, 12A, 48A and 54A)

Appendix D5 – Salt/Grit Bin Check Sheet

	Location	Condition G = good F = fair P = poor	Contents F = full H = half full E = empty	Comments	Inspection date
1	Coleridge Road junction Wordsworth Avenue				
2	Fort Southwick junction James Callaghan Drive				
3	Tintern Close junction Winterbourne Road				
4	Lime Grove opposite No 3				
5	Allaway Avenue adjacent lamp column 33				
6	Racecourse Lane opposite Community Centre				
7	Racecourse Lane adjacent lamp column 4				
8	Southampton Road adjacent lamp column 72				
9	Ludlow Road junction Blakemere Crescent				
9A	Meadowsweet Way junction Wymering Lane				
10	Wymering Lane junction Hythe Road				
11	Sundridge Close adjacent lamp column 3				
12	Southwick Hill Road junction QA Hospital Emergency Access				
12A	Southwick Hill Road junction QA Hospital Main Entrance				
13	London Road junction Southwick Hill Road				
14	London Road junction Chalkridge Road				
15	Widley Path near Widley Road				
16	East Cosham Road junction Courtmount Grove				
17	London Road near lamp column 48				
18	Dell Close adjacent garages opposite No 2				
19	Oakhurst Gardens junction A3				
20	Christchurch Road junction A3				
21	Hilltop Crescent junction Portsdown Hill Road				
22	Penrhyn Avenue junction Penarth Avenue				
23	Uplands Road junction Seaview Road				
24	Farlington Avenue junction Blake Road				
25	Gillman Road junction Woodfield Avenue				
26	Beverley Grove junction Portsdown Hill Road				
27	Second Avenue side of No 144				
28	Havant Road junction Waterworks Road				
29	Central Road junction Station Road				
30	Havant Road outside 174				
31	Hilary Avenue opposite 34				
32	Medina Road junction Northern Road				
33	Northern Road outside Royal Mail (South of Bus Shelters)				
34	Northern Road Bus Terminal access				
35	Portsmouth Road Bus Terminal access				
36	Northern Road northbound approach Portsbridge RAB				
37	Northern Road southbound approach Portsbridge RAB				
38	Western Road junction Portsbridge RAB				
39	Tudor Crescent opposite No 35				

	Location	Condition G = good F = fair P = poor	Contents F = full H = half full E = empty	Comments	Inspection date
40	London Road (the old water bridge)				
41	Walton Road (on bridge)				
42	Walton Road adjacent lamp column 31				
43	Walton Road junction access road to Colas Depot				
44	London Road opposite Hilsea Lido adjacent lamp column 126				
45	London Road south of footbridge Hilsea Lido				
46	London Road junction metal footbridge (Grit Only)				
47	Military Road junction London Road (Grit Only)				
48	Norway Road approach bridge East				
48A	Norway Road approach bridge West				
49	Tipner Lane junction Tipner Road				
50	Moneyfields Avenue side of 199 Dover Road adjacent lamp col 2				
51	Copnor Bridge junction Tangiers Road				
52	New Road opposite No 313				
53	Sultan Road adjacent underpass				
54	St Marys Road adjacent bridge East				
54A	St Marys Raod adjacent bridge West				
55	Stanhope Road junction Commercial Road				
56	Greetham Street adjacent Jacobs Ladder				
57	Northumberland Road on island adjacent to Nameplate				
58	Fratton Road southbound near Selbourne Terrace				
59	Goldsmith Avenue junction Francis Avenue				
60	Goldsmith Avenue junction Milton Road				
61	Bransbury Road adjacent lamp column 12				
62	Ferry Road west of lamp column 55				
63	Southsea Esplanade junction St Helens Parade				
64	Richmond Place side of Waitrose				
65	Clarence Esplanade outside Hovertravel				
66	Cambridge Road junction St Michaels Road				
67	The Hard entrance to Interchange				
68	The Hard exit to Interchange				
69	Kingsley Road outside flats 188-194				
70	Broom Square junction Broom Close				
71	Burrill Avenue outside 39				
72	London Road junction Portsdown Hill Road (on island)				
73	Grant Road junction Galt Road				
74	Portsdown Avenue junction Moortown Avenue				
75	Alec Rose Lane junction Mary Rose Street				
76	Drayton Lane junction Down End Road				

Print Name:	Signature:	Date:

Appendix E – Detailed identification of FW leading to schools

Please note that for each school identified below Colas hold electronically a detailed map describing location of the FW to be treated and recommended snow pile locations.

Name	Address / Location	Street	District	Postcode	Use	Closest CW treated		Distance from main road to gate (lm)	Total area (sqm) to treat	Snow storage location	Description of path to clear						Comments
											From junction between			From junction between			
						Road	Category				Road	Road	Side	Road	Road	Side	
Solent Junior School	42	Solent Road	Farlington / Drayton	PO6 1HJ	Junior School	Solent Road	1	68	136	Junction Dene Hollow / Solent Road	n/a	n/a	North	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Solent Infant School	Opposite of 4-18	Evelegh Road	Farlington / Drayton	PO6 1DH	Infant School	Evelegh Road	1	67	134		n/a	n/a	South	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Portsdown Primary School		Sundridge Close	Cosham	PO6 3JL	Primary School	Southampton Road	1	152m	304		n/a	n/a	West	n/a	n/a	n/a	
The Harbour School		Sundridge Close	Cosham	PO6 3JL	Primary School	Southampton Road	1	102	204		n/a	n/a	West	n/a	n/a	n/a	
Highbury Primary School		Dovercourt Road	Cosham	PO6 2RZ	Primary School	Chatsworth Avenue	1	241	362		Dovercrout Road	Chatsworth Avenue	West	Chartswort h Avenue	Bus Access		
Highbury College		Dovercourt Road	Cosham	PO6 2SA	College	Chatsworth Avenue	1	264	396		Dovercrout Road	Chatsworth Avenue	West	Chartswort h Avenue	Bus Access		Near Highbury Primary School
Redwood Park School		Wembley Grove	Cosham	PO6 2RY	Primary School	Chatsworth Avenue	1	213	320		Wembley Grove	Chatsworth Avenue	East	Chartswort h Avenue	Bus Access		
Court Lane Junior School		Hilary Avenue	Cosham	PO6 2PP	Junior School	Lonsdale Avenue	1	355	710		Hilary Avenue	Lonsdale Avenue	East	Lonsdale Avenue	Bus Access		
Court Lane Infant School		Hilary Avenue	Cosham	PO6 2PP	Infant School	Lonsdale Avenue	1	275	550		Hilary Avenue	Lonsdale Avenue	East	Lonsdale Avenue	Bus Access		Near Court Lane Junior School/ same footway
Springfield School		Central Road	Cosham	PO6 1QY	Secondary School	Grove Road	1	80	160		n/a	n/a	North	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Medina Primary School	106	Medina Road	Cosham	PO6 3NH	Primary School	Medina Road	2	145	290	Junction Medina Road/Brighstone Road	School	Bus access	South (35m)	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)

Beacon View Academy (former Paulsgrove Primary School)	Opposite of 1-12 Dowtow n House	Allaway Avenue	Paulsgrove	PO6 3PS	Primary School	Allayway Avenue	1	107	177	Green space near school	School	Bus access	North (37m)	School	Bus Access	South (70 m)	Direct access from school to the main road (clearance needed just in front of the school)
St Paul RC Primary School	253	Bourne Road	Paulsgrove	PO6 4JD	Primary School	Allayway Avenue	1	174	522		Bourne Road	Allaway Avenue	South	Junction Bourne Road/Allaw ay Avenue	Bus Access	South	
King Richard School	342	Allayway Avenue	Paulsgrove	PO6 4QP	Primary School	Allayway Avenue	1	165	330	Greenspace near school	School	Bus access	South (70m)	School	Bus access	North (80m)	Direct access from school to the main road (clearance needed just in front of the school)
Trafalgar Academy (former City of Portsmouth Boys School)		London Road	Hilsea	PO2 9RJ		London Road	1	15	93	Near School	n/a	n/a	n/a	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Northern Parade Academy		Doyle Avenue	Hilsea	PO2 9NE	Junior School	Northern Parade	1	100	200	Large Footway	School	Junction	North (40 m)	Junction	Bus access	East (60 m)	
Northern Parade Academy		Kipling Road	Hilsea	PO2 9NJ	Infant School	Northern Parade	1	65	130		Doyle Avenue	Junction with Northern Parade	South	n/a	n/a	n/a	
Stamshaw Junior School	57	Tipner Road	Nelson	PO2 8QH	Junior School	Stamshaw Road	2	55	110		n/a	n/a	North	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Stamshaw Infant School	126	North End Avenue	Hilsea	PO2 8NW	Infant School	Stamshaw Road	1	45	135	Large Footway	Northe End Avenue	Stamshaw Road	South (45m)	n/a	n/a	n/a	
Mayfield School		Mayfield Road	Copnor	PO2 0RH		Mayfield Road	2	6	15		n/a	n/a	South	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Cliffdale Primary School	107	Battenburg Avenue	Copnor	PO2 0SN	Primary School	Copnor Road	1	185	370		n/a	n/a	South	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Galcombe Park Primary School		St Barbara Way	Hilsea	PO2 0UR	Primary School	Copnor Road	1	212	636	Green space	School	Copnor Road	West (70m)	Copnor Road	Bus access	South (142m)	
Admiral Lord Nelson Secondary School		Dundas Lane	Hilsea	PO3 5XT	Secondary School	Dundas Lane	1	212	636	Green space	School	Dundas Lane	West (70m)	Dundas Lane	Bus access	South (142m)	
Harbour School		Tipner Lane	Nelson	PO2 8RA		Tipner Road	2	656	1312		Tipner Lane	Tipner Road	South	n/a	n/a	n/a	
Flying Bull Academy		Flying Bull Lane	Nelson	PO2 7BJ	Primary School	Malins Road	2	115	575	Large Footway	School	Junction	South	n/a	n/a	n/a	
Manor Infant School		Inverness Road	Fratton	PO1 5QR	Infant School	Kingston Road	1	82	164		School	Junction	South	n/a	n/a	n/a	

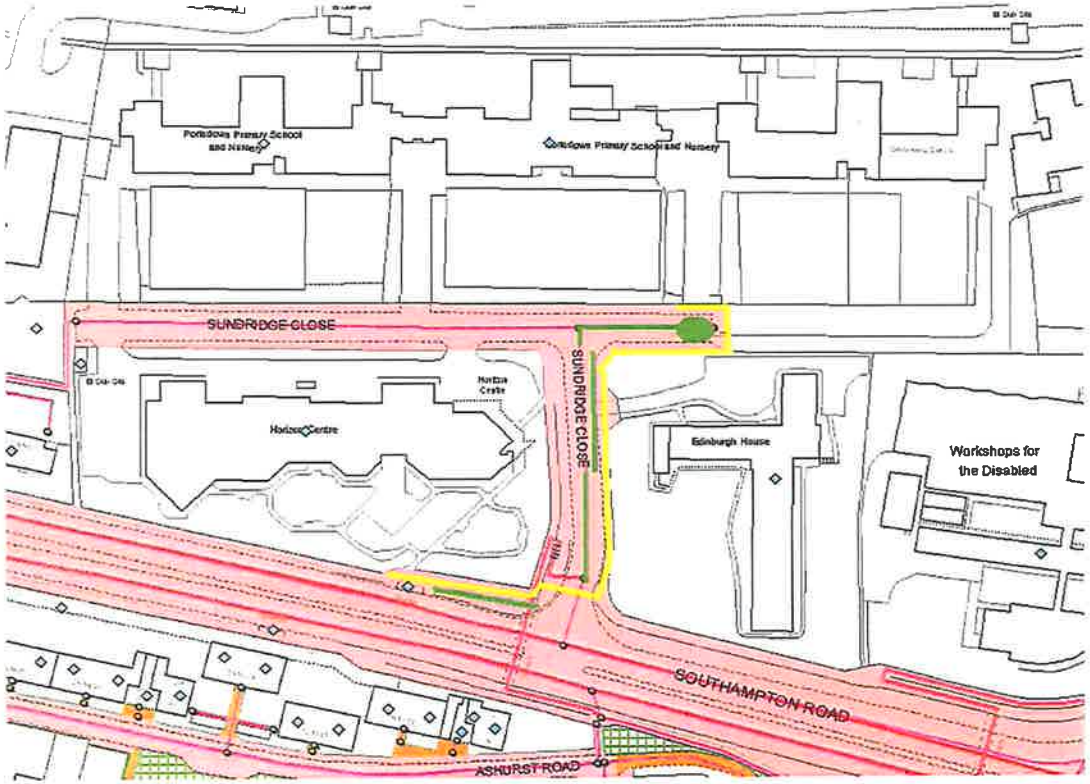
Portsmouth Academy for Girls	Front of Cathedral	St Marys Road	Fratton	PO1 5PF		St Marys Road	1	12	72		n/a	n/a	North	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Ark Dickens Academy (former Charles Dickens Infant & Junior School)	25	Turner Road	Charles Dickens	PO1 4PN	Infant and Junior School	Lake Road	1	150	300		School	Junction Turner Road / Lake Road	West (112 m)	Junction Turner Road / Lake Road	Bus access	North (48m)	
Westover Primary School		Westover Road	Baffins	PO3 6NS	Primary School	Tangier Road	1	167	334		School	Tangier Road	East	n/a	n/a	n/a	
Copnor Infant & Junior School		Copnor Road	Copnor	PO3 5BZ	Infant and Junior School	Copnor Road	1	160	320		n/a	n/a	East	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Langstone Junior School		Lakeside Avenue	Baffins	PO3 6EZ	Junior School	Hayling Avenue	2	50	100		School	Junction	East	n/a	n/a	n/a	
Langstone Infant School		Ascot Road	Baffins	PO3 6EY	Infant School	Hayling Avenue	2	160	320		School	Junction	West	n/a	n/a	n/a	
Newbridge Junior School	213	New Road	Fratton	PO2 7RW	Junior School	New Road	1	55	110		n/a	n/a	South	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Meredith Infant School	33	Porchester Road	Copnor	PO2 7JB	Infant School	Chichester Road	1	170	340		School	Junction Porchester Road / Drayton Road	South	Junction Porchester Road / Drayton Road	Junction Drayton Road / Chichester Road	East	
Isambard Brunel Junior School	17	Portchester Road	Copnor	PO2 7HZ	Junior School	Chichester Road	1	130	260		School	Junction Porchester Road / Drayton Road	South	Junction Porchester Road / Drayton Road	Junction Drayton Road / Chichester Road	East	Near Meredith Infant School / same footway
Lyndhurst Junior School	94	Crofton Road	Copnor	PO2 0NT	Junior School	Stubbington Road	1	76	152		School	Junction Lyndhurst Road / Stubbington Road	West	n/a	n/a	n/a	
College Park Infant School	116	Lyndhurst Road	Copnor	PO2 0LB	Infant School	Stubbington Road	1	136	274		School	Junction Crofton Road / Stubbington Road	West	n/a	n/a	n/a	
Cumberland Infant School	163	Methuen Road	Eastney	PO4 9HJ	Infant School	Highland Road	1	193	328.1	End of Pedam Close	n/a	n/a	n/a	n/a	n/a	n/a	Clearance needed in front of the school to the main road

Craneswater Junior School	210	St Ronan's Road	Southsea	PO4 0PX	Junior School	Albert Road	1	29	63.8	In the school park	n/a	n/a	n/a	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
St Swithuns Catholic |Primary School		Taswell Road	Southsea	PO5 2RG	Junior School	Clarandon Road	1	100	150	Behind St Simons church	n/a	n/a	n/a	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Southsea Infant School	56	Napier Road	Southsea	PO5 2SR	Infant School	Albert Road	1	118	236	End of Collingwood Road	n/a	n/a	n/a	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Cottage Grove First School	30 Cottage Grove (Behind)	Chivers Close	Southsea	PO5 1HG	Junior School	Somers Road	2	138	369	End of Chivers Close	n/a	n/a	n/a	n/a	n/a	n/a	Clearance needed in front of the school to the main road
St Jude's C of E Primary School	15	St Nicholas Street	Southsea	PO1 2NZ	Junior School	High Street	1	137	319	End of Nicholas Street	n/a	n/a	n/a	n/a	n/a	n/a	Clearance needed in front of the school to the main road
The Brambles Nursery	27	Bramble road	Southsea	PO4 ODT	nursery	Fawcett Road	1	92	184	End of Ventnor road	Bramble Road	n/a	South	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Goldsmith Infant School	33	Bramble road	Southsea	PO4 ODT	Infant School	Fawcett Road	1	19	38	End of Ventnor road	Bramble Road	n/a	South	n/a	n/a	n/a	Clearance needed in front of the school to The brambles nursery
Devonshire Infant & Junior School	197	Francis avenue	Southsea	PO4 0AG	Junior School	Francis Avenue	2	45	99	Large footway in front of the school	Francis Avenue	n/a	East	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Fernhurst Junior School	197	Francis avenue	Southsea	PO4 0AG	Junior School	Francis Avenue	2	74	162.8	Large footway in front of the school	Francis Avenue	n/a	East	n/a	n/a	n/a	Clearance needed in front of the school to Devonshire junior school
Wimborne Infant School		Wimbourne Road	Southsea	PO4 8DE	Infant School	Winter Road	2	54	129.6	Large footway in front of the school	Evans Road	n/a	North	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Wimborne Junior School		Wimbourne Road	Southsea	PO4 8DE	Junior School	Winter Road	2	74	177.6	Large footway in front of the school	Evans Road	n/a	North	n/a	n/a	n/a	Clearance needed in front of the school to Wimborne infant school
Milton Park Academy	2	Dunbar Road	Southsea	PO4 8ET	infant & Junior School	Eastney Road	1	40	80	Junction Essex Road/Eastney Road	Dunbar Road	n/a	North	n/a	n/a	n/a	Clearance needed in front of the school to the main road

Meon Junior School	54	Meon Road	Southsea	PO4 8NT	Junior School	Locksway Road	2	20	40	In the alley in front of the number 2	Shelford Road	n/a	West	n/a	n/a	n/a	Clearance needed in front of the school to the Meon Infant School
Meon Infant School	46	Shelford Road	Southsea	PO4 8NT	Infant School	Locksway Road	2	143	286	In the alley in front of the number 2	Shelford Road	n/a	West	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Waterside School		Tipner Lane	Tipner	PO2 8RA		Locksway Road					n/a	n/a	n/a	n/a	n/a	n/a	No Waterside School
Moorings Way School	102	Moorings Way	Milton	PO4 8YJ	Infant School	Goldsmith Avenue	2	92	184	In front of the school in the grass	Goldsmith Avenue	Junction Moorings Way/Goldsmith avenue	South	n/a	n/a	n/a	Direct access from school to the main road (clearance needed just in front of the school)
Milton Cross Academy	3	James Road	Milton	PO3 6RB	Secondary School	Milton Road	1	75	150	In the school parking	James Road	Junction James Road/Milton Road	South east	n/a	n/a	n/a	Clearance needed in front of the school to the main road
Penhale infant school	51	Penhale road	Fratton	PO1 5BG	Infant School	Fratton Road	1	191	373	In front of the school on the parking spaces	Penhale Road	Junction Penhale road/Fratton road	South				Clearance needed in front of the school to the main road
St John's Cathedral Catholic Primary School	2	Cottage View	Landport	PO1 1PX	Junior School	Arundel Street	1	22.2	64.38	Grass of car park	Arundel Road	Junction Cottage View/Arundel Street	East				Clearance needed in front of the school to the main road
Ark Ayrton Academy	15	Somers Road	Southsea	PO5 4LS	Infant School	Isambard Brunel Road	1	91.3	200.86	At the end of Hyde Park road	Isambard Brunel Road	Junction Somers Road/Isambard Brunel Road	North west				Clearance needed in front of the school to the main road
Priory School	21	Fawcett Road	Southsea	PO4 0DL	Infant School	Fawcett Road	1	136	544	On the large footway in front of the school	Fawcett Road	Junction Fawcett Road/Fawcett road	West				Direct access from school to the main road (clearance needed just in front of the school)
Charter Academy		Hyde Park Road	Southsea	PO5 4HL								Junction Hyde Park Road/					n/a

St Edmunds School		Upper Arundel Street	Landport	PO1 1RX	Secondary	Arundel Street	1	126	390.6	In the school parking	Arundel Street	Junction Upper Arundel Street/Arundel Street	South				Direct access from school to the main road (clearance needed just in front of the school)
Arundel Court Infant School	199	Northam Street	Landport	PO1 1JE	Infant School	Arundel Street	1	51.2	281.6	In the school parking	Arundel Road	Junction Northam street/Arundel Street	East				Clearance needed in front of the school to the main road
Arundel Court Junior School	199	Northam Street	Landport	PO1 1JE	Junior School	Arundel Street	1	51.2	281.6	In the school parking	Arundel Road	Junction Northam street/Arundel Street	East				same place like Arundel Court Infant School
St George's Beneficial Church of England (Voluntary Controlled) Primary School	2	Hanover Street	Southsea	PO1 3BN	Infant School	Queen Street	1	100.5	311.55	In front of the school there is a big footway area	Hanover Street	Junction Hanover street/Queen Street	East				Clearance needed in front of the school to the main road
Corpus Christi Catholic Primary School		Gladys Avenue	North End	PO2 9AX	Primary School												
Harbour School		Penhale Road	Fratton	PO1 5EF													
Harbour School	151	Milton Road	Milton	PO4 8LD													
Mary Rose School		Gisors Road	Southsea	PO4 8GT													
Victory Academy		Jubilee Avenue	Paulsgrove	PO6 4QP	Primary School												
Willows Centre for Children		Battenburg Avenue	North End	PO2 0SN													
Harbour School		Ranelagh Road		PO2 8HA													

Portsdown Primary School



Footway to be cleared

Location of snow pile

Appendix E1

School Crossing Patrol Sites

School	Site
Admiral Lord Nelson	Anchorage Road
Arundel Court Infant & Junior	Holbrook Road / Fyning Street
Charles Dickens Infant	Sultan Road / Malins Road
Charles Dickens Infant	Turner Road / Wingfield Street
Charles Dickens Infant	Turner Road / Watts Road
City Boys	London Road Hilsea
City Boys	London Road Hilsea
City Girls	St Mary's Road
City Girls	St Mary's Road / Moorland Road
City Girls	St Mary's Road / Shearer Road
College Park Infant & Junior	Lyndhurst Road / Stubbington Avenue
College Park Infant & Junior	Lyndhurst Road / Kirby Road
College Park Infant & Junior	Lyndhurst Road / Kirby Road
College Park Infant & Junior	Mayfield Road / Randolph Road
College Park Infant & Junior	Crofton Road
Copnor Infant & Junior	Copnor Road / Wallington Road
Copnor Infant & Junior	Copnor Road / Burrfields Road
Corpus Christi	Gladys Avenue / Connaught Road
Corpus Christi	North End Junction
Cottage Grove Primary	Green Road / Cottage Grove
Cottage Grove Primary	Cottage Grove / Somers Road
Cottage Grove Primary	Eldon Street
Court Lane Infant & Junior	Court Lane / Lonsdale Avenue
Court Lane Infant & Junior	Central Road / Lower Drayton Lane
Court Lane Infant & Junior	Tregaron Avenue / Dysart Avenue
Court Lane Infant & Junior	Salisbury Road / Magdala Road
Court Lane Infant & Junior	Court Lane / Hilary Avenue
Court Lane Infant & Junior	Court Lane / Hilary Avenue
Craneswater Junior	St Ronans Road
Craneswater Junior	Albert Road / St Ronans Road
Craneswater Junior	Festing Road / Highland Road
Craneswater Junior	Festing Road / Highland Road
Craneswater Junior	Highland Road / Winter Road
Devonshire Infant & Fernhurst Junior	Francis Avenue / Jessie Road
Devonshire Infant & Fernhurst Junior	Francis Avenue / Jessie Road
Devonshire Infant & Fernhurst Junior	Heidleburg Road / Devonshire Square
Devonshire Infant & Fernhurst Junior	Jubilee Road / Devonshire Square
Flying Bull Primary	Malins Road
Gatcombe Park Primary	Copnor Road / Old London Road
Gatcombe Park Primary	St Barbara Way / Copnor Road
Goldsmith Infant School	Bramble Road / Fawcett Road
Goldsmith Infant School	Jessie Road / Fawcett Road
Goldsmith Infant School	Jessie Road / Talbot Road

School	Site
Highbury Primary	Highbury Grove / Dovercourt Road
Highbury Primary	Chatsworth Avenue / Dovercourt Road
King Richard	Allaway Avenue
Langstone Infant	Milton Road / St Mary's Road
Langstone Infant	Milton Road / St Mary's Road
Langstone Infant	Milton Road / Baffins Road
Langstone Infant	Baffins Road / Hayling Avenue
Langstone Junior	Lakeside Avenue / Hayling Avenue
Manor Infant	George Street / Ernest Road
Manor Infant	Inverness Road / New Road
Medina Primary	Medina Road / Sixth Avenue
Meon Infant	Hollam Road / Meon Road
Meon Infant	Shelford Road / Meon Road
Meon Infant	Locksway Road / Shelford Road
Meon Junior	Crofton Road / Meon Road
Meon Junior	Euston Road / Warren Avenue
Meredith Infant	Drayton Road / Chichester Road
Meredith Infant	Drayton Road / Powerscourt Road
Meredith Infant	Chichester Road / Farlington Road
Milton Cross	Velder Avenue
Milton Park Primary	Dunbar Road
Moorings Way Infant	Moorings Way / Warren Avenue
Newbridge Junior	New Road / Aylesbury Road
Newbridge Junior	George Street
Newbridge Junior	George Street / Shearer Road
Newbridge Junior	Shearer Road / Hampshire Street
Northern Parade Junior	Kipling Road / London Road
Northern Parade Junior	Kipling Road / London Road
Northern Parade Infant & Junior	Doyle Avenue
Paulsgrove Primary	Allaway Avenue / Walford Road
Paulsgrove Primary	Allaway Avenue / Marsden Road
Penhale Infant	Penhale Road / Guildford Road
Portsdown Primary	Southampton Road
Portsdown Primary	Southampton Road
Portsdown Primary	Sevenoaks Road / Hythe Road
Priory	Fawcett Road
Victory Primary	Allaway Avenue / Bodmin Road
Victory Primary	Allaway Avenue / Falmouth Road
Solent Infant & Junior	Solent Road / Farlington Avenue
Solent Infant & Junior	Havant Road / Galt Road
Solent Infant & Junior	Havant Road / Station Road
Somers Park Primary	Somers Road / Blackfriars Road
Southsea Infants	Albert Road Traffic Lights
Southsea Infants	Albert Road Traffic Lights
Southsea Infants	Albert Road / Napier road
St George's Primary	Queen Street / Cross Street
St John's Primary	Arundel Street / St Johns Road
St Jude's Primary	Pembroke Road

School	Site
St Jude's Primary	St Georges Road / High Street
St Jude's Primary	High Street
St Paul's Primary	Allaway Avenue / Bourne Road
St Swithin's	Clarendon Road / St Simon's Road
Stamshaw Infant	London Avenue / Stamshaw Road
Stamshaw Infant	Stamshaw Road / Wilson Road
Stamshaw Infant	Gladys Avenue / North End Avenue
Stamshaw Junior	Walden Road / Walker Road
Stamshaw Junior	Tipner Road /
Westover Infant	Westover Road / Tangier Road
Westover Infant	Westover Road / Tangier Road
Westover Infant	Neville Road / Tangier road
Westover Infant	Westover Road
Westover Infant	Westover Road / Cobden Avenue
Wimborne Infant & Junior	Goldsmith Avenue / Winter Road
Wimborne Infant & Junior	Wimborne Road / Winter Road
Wimborne Infant & Junior	Devonshire Avenue / Winter Road
Wimborne Infant & Junior	Devonshire Avenue / Prince Albert Road

Appendix E2

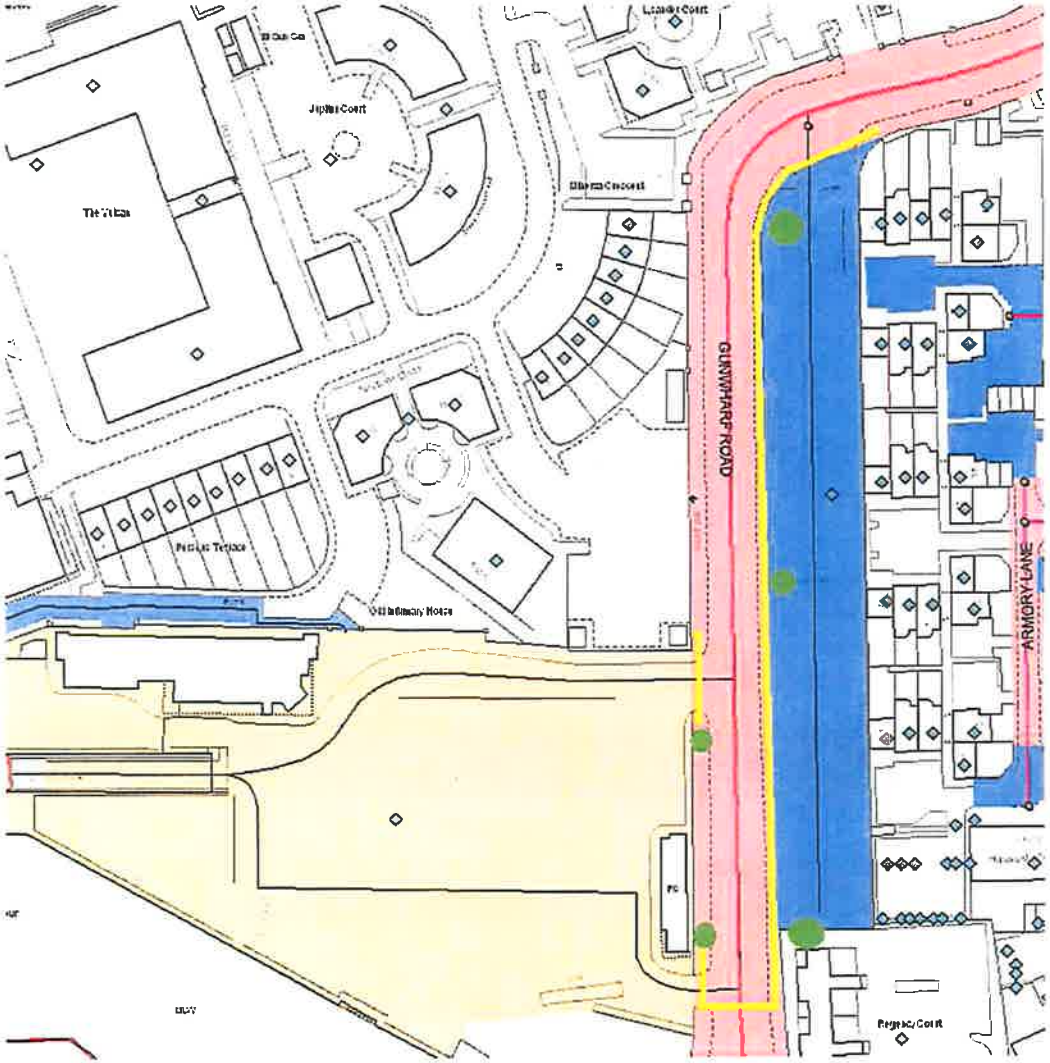
Detailed identification of FW leading to Transport Hubs

Please note that for each Transport hub identified below, Colas hold electronically a detailed map describing location of the FW to be treated and recommended snow pile locations.

Category	Name	Address / Location	Street	District	Postcode	Use	Closest CW treated		Distance from main road to gate (m)	Total area (sqm) to treat	Snow storage location	Description of path to clear						Comments
							Road	Category				From junction between			From junction between			
												Road	Road	Side	Road	Road	Side	
Ferry terminal	Hayling Island		Ferry Road	Eastney and Crasswat er	PO9 4LT	Ferry Port	Ferry Road	2	173	519	Greenspace							No footway
	Hovercraft Terminal		Clarence Esplanade	Southsea	PO5 3AD	Ferry Port	Clarence Esplanade	1	276	828								
	Gunwharf Ferry Port		Gunwharf Road	St Thomas		Ferry Port	Gunwharf Road	1	240	480	Space on the car park		Entrance and Exit of ferry port	West (30m)		Footway in front of car park	East (210 m)	
	Continental ferry port footway	around the peninsular house	Wharf road	Newport		Footway	Mile end road	1	198	653.4	on the footway behind the house	Wharf road		N/A				clearence needed only on ther footway
	Continental ferry port footway	font of lok'nStore	Wharf road	Newport		Footway	Wharf road	1	136.1	272.2	in the grass in front of the lok'nStore	Wharf road		west				clearence needed only on ther footway
	Continental ferry port footway	front of the car park	Wharf road	Newport		Footway	Wharf road	1	165.4	297.72	next to the welcoming sign & yellow barrier	Wharf road		south				clearence needed only on ther footway
	Continental ferry port footway	small footway on the road	Wharf road	Newport		Footway	Wharf road	1	39	39	next to the welcoming sign & yellow barrier	Wharf road		west				clearence needed only on ther footway
Bus Terminal	Gunwharf Bus Station		The Hard	Charles Dickens	PO1 3PA	Bus Terminal	The Hard	1	650	975	Espace near the entrance of train station / End of bus platform		Bus Station	250 m		Taxi area	320 m	
	Cosham bus park	1	walton road	cosham	po6 3	Bus parking	walton road	2	160.8	297.48	on the car park	walton road		south	walton road		east	clearence needed in front of the bus parking
	Cosham bus station 1	1	northen road	cosham		bus station	northen road	1	52.5	157.5	on the footway	northen road		east				clearence needed in front of the bus station to zebra crossing
	Cosham bus station 2	1	northen road	cosham		bus station	northen road	1	39.9	159.6	on the footway	northen road		west				clearence needed in front of the bus station to zebra crossing
	London road bus station footway	in front of westerly services	London road	cosham		bus station	london road	1	193.1	849.64	behind the bus station, in the grass	London road		west				clearence needed in front of the bus station
	London road bus station gully	front of westerly services	London road	cosham		bus station	london road	1	92.3	387.66	behind the bus station, in the grass	London road		east				clearence needed in front of the bus station
Train Station	The Hard interchange		The Hard	Charles Dickens	PO1 3PA	Train Station	The Hard	1	180	285	Espace near the entrance of train station							same area than Gunwharf Bus Station
	Southsea Train Station		Station Street	Charles Dickens	PO1 1EQ	Train Station	Station Street	1	506	1448	Greenspace / jonction with Station Street and Commercial Road							
	Fratton Train Station		Selbourne Terrace	Fratton	PO1 1EF	Train Station	Goldsmith Avenue	1	42	126								Bridge / jonction possible with Fratton Road (166 m * 1.5)
	Cosham Train Station		High Street	Cosham	PO6 3BD	Train Station	High Street	1	110	165	Greenspace / a lot of place in front of the pavement							
	hillsea station		airport service road	hillsea		platform length	airport service road	1	164	360.8	end of platform length			west				clearence needed on all the lengths
	hillsea station		airport service road	hillsea		platform length	airport service road	1	164	360.8	end of platform length			east				clearence needed on all the lengths
	hillsea station		airport service road	hillsea		footway bridge	airport service road	1	23.7	40.29	Corner of the bridge			n/a				clearence needed all of the bridge
	hillsea station		airport service road	hillsea		access area	airport service road	1	13.2	172.92	On the grass			n/a				clearence of all of the area
	hillsea station		airport service road	hillsea		footway to carpark	airport service road	1	66.9	113.73	on the grass			west				clearence needed from station to carpark footpath

*** See example of map detail attached**

Gunwharf Ferry Terminal



Footway to be cleared

Location of snow pile

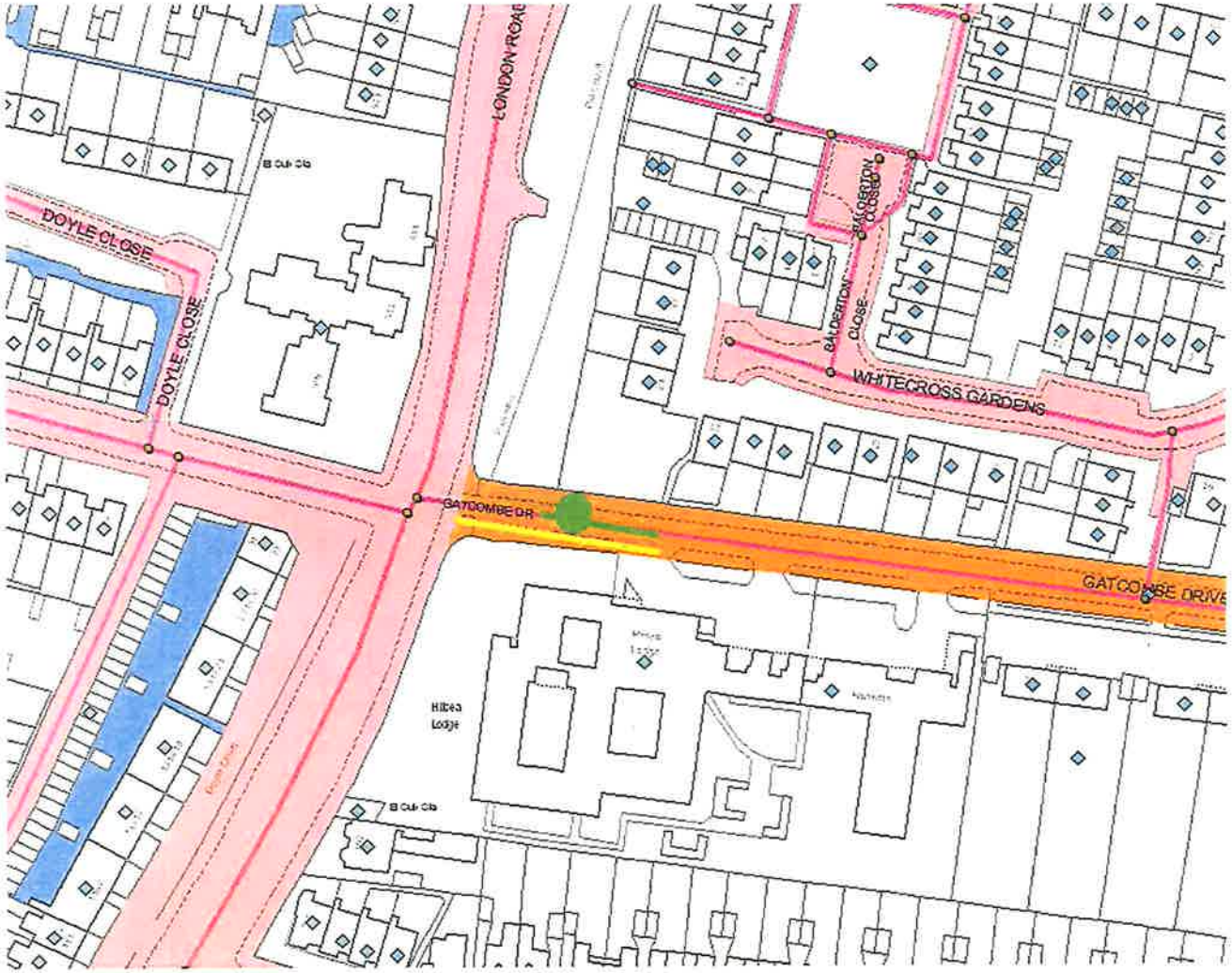
Appendix E3

Detailed identification of FW leading to PCC managed Residential Homes

Please note that for each Residential Home identified below, Colas hold electronically a detailed map describing location of the FW to be treated and recommended snow pile locations.

Name	Address / Location	Street	District	Postcode	Closest CW treated		Distance from main road to gate (lm)	Total area (sqm) to treat	Snow storage location	Description of path to clear						Comments
										From junction between			From junction between			
					Road	Category				Road	Road	Side	Road	Road	Side	
Edinburgh House		Sundridge Close	Cosham	PO6 3JL	Southampton Road	1	102	204								
Longdean Lodge And Day Centre	Junction Hillsey Road/ Beverston Road	Hillsley Road	Paulsgrove	PO6 4NH	Hillsley Road	1	60	120	Junction Hillsey Road/ Beverston Road	Longdean Lodge And Day Centre	Bus access	North (30m)	Longdean Lodge And Day Centre	Bus access	South (30m)	
Hilsea Lodge		Gatcombe Drive	Hilsea	PO2 0TX	London Road	1	45	135	Greenspace	London Road	Gatcombe	East				
Brunel Court		Nutfield Place	Charles Dickens	PO1 4JB	Lake Road	1	103	206		Nutfield Place	Clarendon Street	North (27m)	Clarendon Street	Lake Road	East (76m)	
Corben Lodge	(next door Shearwater)	Moorings Way	Millon	PO4 8QW	Moorings Way	2	150	68	Greenspace	Eastern Road						
Shearwater new building Crane Court & Osprey Court	opp Goodcomparion Pub	Moorings Way	Millon	PO4 8QW	Moorings Way	2	227	227	Greenspace/ layby	Eastern Road						
Russels		Gatcombe Drive	Hilsea	PO2 0TX	London Road	1	78	82	Greenspace							
Brent Court		Warren Avenue	Southsea	PO4 9QQ	Milton Road	1	278	152	Layby	Avocet Close	Plover Reach	Northside (73m)	Crolton Road	Shellord Road	South (79m)	
Caroline Square	Blossom Square	King William Street	Portsea	PO1 3JG	Queen Street	1	161	232	Parking Bay	Blossom Square 1-17	Footpath	West (63m)	Blossom Square 2-18	Footpath	East (63)	
Harry Solnick House		Cranleigh Avenue	Buckland	PO1 5LU	St Marys Road	1	119	165	Parking Bay	Fourth Street	St Marys Road	South (119m)	Cranleigh Road		North (46)	
Maritime House	Victory Unit ConanRd/Doyle Ave entrance	Wylie Road	Hilsea	PO2 9DT	Northern Parade	1	2	300	Parking Bay	Conan Road	Doyle Ave	East (109m)	Conan Road	Northern Parade	North (40m)	

Hilsea Lodge Residential Home



Appendix F

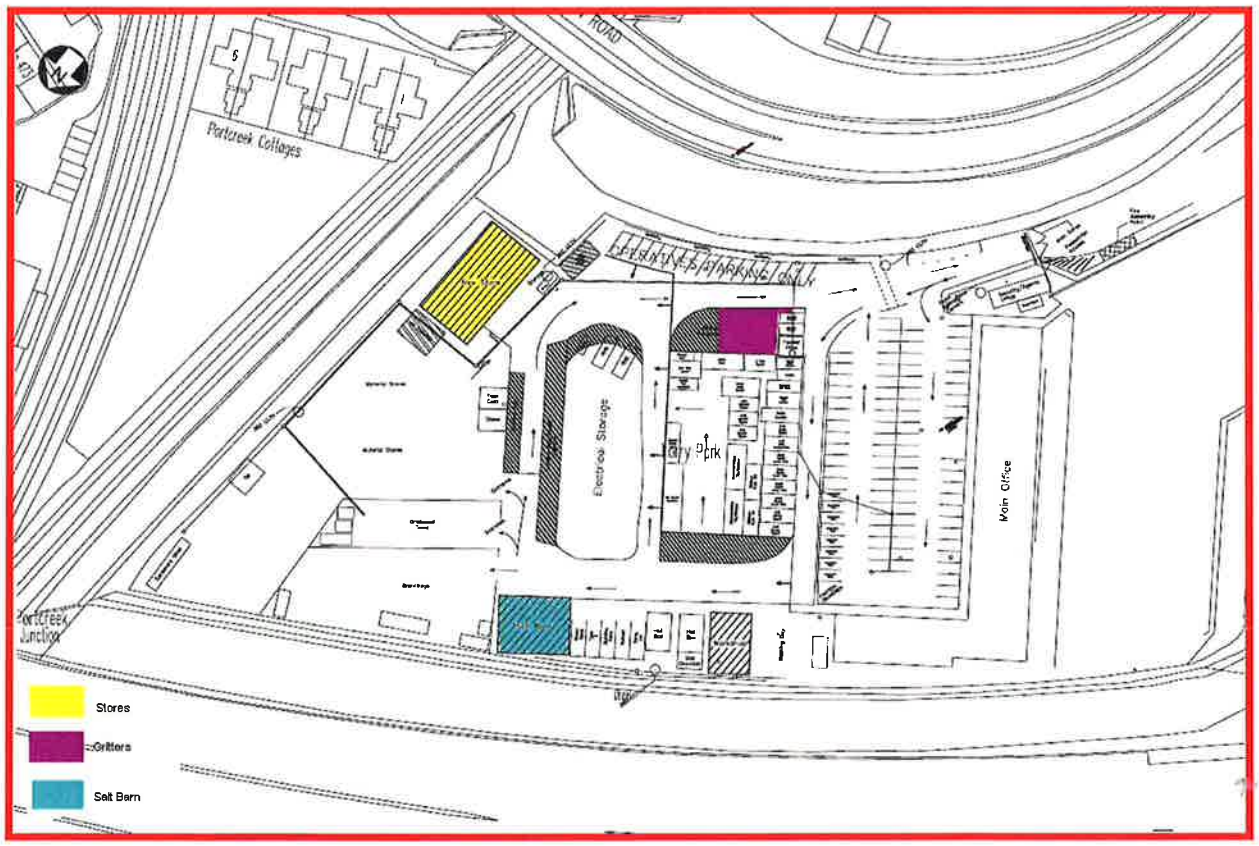
Equipment, store and salt barn location

All winter operations are directed and carried out from Colas depot located at Walton Road, Farlington, Portsmouth, PO61TA.

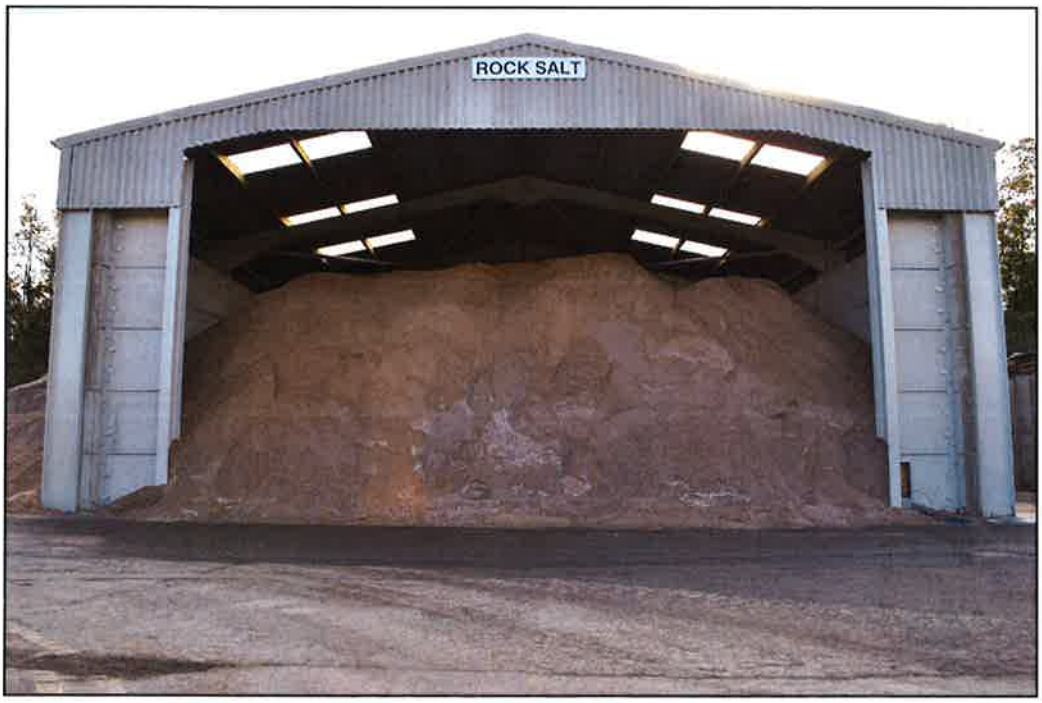
The rock salt is stored in a purpose built salt barn. The salt barn has a capacity of 850t that is to say 200t over the stock level recommended by the UK Road Liaison Group (July 2009) (stock necessary to treat the equivalent of 6 runs during 6 days on the priority network).

An additional storage capacity of 120t, in a non-covered storage bay, is available next to the salt barn to store an emergency reserve stock of salt or grit.

The following map identify the location where the gritters are stationed, the salt barn and reserve storage bay, as well as the storage building where the winter maintenance minimum resilience stock of shovels and brooms is kept.



Salt barn
Storage capacity 850t



Storing bay (emergency use only)
Storage capacity 120t

Appendix G

Winter Maintenance Preparation Plan

TO BE COMPLETED BY	TASK	ACTION BY
April	Start Wash-Up meetings (if necessary)	Colas / PCC Contracts Managers
June	Renewal of Weather Forecast contract if appropriate	Colas Commercial
July	Start revision of Winter Maintenance Operational Plan	Colas / PCC Contracts Managers
Early September	Issue revised Winter Maintenance Operational Plan	Contract Manager
Late September	Winter Maintenance Exercise/Communications Trial	Colas Winter staff
Early October	Winter Maintenance Briefing	Colas personnel involved in Winter Duties

Appendix H

Reference documents

1 Code of Practice for Maintenance Management

2 ICE Design and Practice Guide for Highway Winter Maintenance

3 Emergency Services Plans

4 Trunk Road Maintenance Manual

5 PCC Flood response Plan

6 The Resilience of England's Transport Systems in Winter (independent review interim report Dec 2010)

7 Colas Incident Management Plan

8 PCC Traffic Management Plan

Appendix I

Vehicles and Plant Schedules

The length of the routes covering the category 1 and 2 networks requires 3 vehicles to enable a response within a 2 hours period.

Colas fleet of gritters is composed of 4 vehicles (which includes a vehicle on standby as contingency to mitigate the risk of mechanical breakdown). All are Econ Engineering Bodies. Copies of the current vehicle calibration certificates are available on request.

4 of these vehicles are multipurpose vehicles which are dedicated to gritting during the winter season. All 4 vehicles are fitted with GPS MASTERNAULT tracking units which are connected to the ECON download units. This records the following information when vehicle are used as gritters:

- Vehicle Location and time
- Spreading on/off
- Salt Flow on/off
- Spread Rate
- Width of spread

The 4 vehicles are as follows:

1 x Dedicated Gritter Lorry: Reg 1RX55 UTO UNI-BODY

1 x Multi Purpose Vehicle: Reg RX55 UTM DEMOUNT (Converts to a tipper)

2 x Multi Purpose Vehicles: Reg KE06 AYC and Reg KE06 AYD UNIBODIES (converts into Traffic Management Vehicle)

Gritter Bodies and Equipment

3 X Gritting bodies

4 X Snow Ploughs

Footway Gritting and Snow Clearance:

Cruiser Turbocast 300 Grit Spreader:

Cruiser Turbocast 300 Grit Spreader broadcast spreads dry or wet grit/salt mixture to a width of between 3 and 7m. It is user friendly with front and back rests which make it easy to manoeuvre up and down kerbs. The front rest allows the unit to be emptied wheelbarrow fashion after use and the chassis has a special Armortec coating for corrosion-resistance. A range of settings allows accurate controlled dosing ensuring economic spreading. The gritter can be disengaged for transportation between sites without losing any material.

Pedestrian 2 Wheel Tractor Unit:

Appendix J

Winter Maintenance Exercise Checklist
(to be updated with completed version once exercise complete)

Winter Maintenance Exercise **Date:** .....

Lorry No.	Routes	Lorry & Driver Available	Spreading Insert Operational	Plough Fitted & Operational	Plans & Schedules Available	Comments
1	8,9,10,11,12,17,20,22,23,25.					
2	2,3,4,13,14,15,16					
3	1,5,6,7,18,19,21,24.					

1. Supervision present in depot. YES/NO
2. Loading facility available in depot YES/NO
3. Client Officer present YES/NO

Checks completed by:

Colas: ..... (Signature)

..... (Print Name)

Client: ..... (Signature)

..... (Print Name)

Appendix K

Standard form and daily reports

This appendix includes the following standard forms:

- Notification of Proposed Treatment
- Daily Operational Report
- Route monitoring Sheet Priority 1&2

The forms should preferably be submitted by email. Where transmission is by email the originator and distribution details do not need to given as shown on the following pages as they will be included within the email.

Colas Winter Maintenance – Notification of Proposed Treatment

Name:	Date:	Time:

DECISION BASED ON:-	Date	Time
24 Hours Met Office Report:		
Findlay Irvine Weather Station Check:		
Inspection:		
HCC:		
Area 3:		
Other:		

ACTION TO BE TAKEN:	YES	☐	NO	☐

Code	Description	Start Time	Spread Rate (g/m2)	Comments
WM 01	Priority 1 Routes			
WM 02	Priority 2 Routes			
WM 03	Priority 1/2/3/4 Only			
WM 04	Frost Spots			
WM 05	Snow Plough			
WM M275	M275			
STANDBY				

FURTHER INSPECTION REQUIRED:	YES	☐	NO	☐

Recommendation for Escalation at the time of notification:-						
Level	1	☐	2	☐	3	☐
Stage	1	☐	2	☐	3	☐
Accepted by PCC:	Yes	☐	No	☐		