



Date approved and version of the Policy:

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Version: 1.3

Policy reference and title:

(391) Resurfacing & Road Works Policy

Policy background:

The Parish of St Helier (PoSH or the Parish) comprises approximately 9,638,230.76 square meters (3.72 square miles) consisting of approximately 271 public and private roads, of which 191 are Parish by-roads which, in terms of area, are as follows:

- 45,705.97 linear metres (28.4 miles) = Parish-administered roads
- 284,416.42 square metres (0.11 square miles), broken down approximately as follows:
 - ❖ Over 76 miles of road in St Helier
 - ❖ 28 miles of Parish by-roads and pavements maintained by PoSH
 - ❖ 77,186.53 square metres (0.030 square miles) = pavements
 - ❖ 207,229.89 square metres (0.08 square miles) = carriageway

The roads have a replacement value of circa **£ 48 million**, making them arguably the single most valuable asset owned by the Parish.

Given the value and importance of the network to commuters and the broader economy, correct choices regarding maintenance techniques are essential to ensure the safety of road users, minimisation of disruption, and value for money.

In the prevailing economic climate, correct choices are essential. Maintenance options must be considered against the need for affordability and avoidance of ongoing maintenance liabilities.

Roads in Jersey are primarily finished with asphalt, which is a generic term for all types of coated material including macadams, hot rolled asphalt, stone mastic asphalt, and proprietary surfacing. These are manufactured using temperature-sensitive bitumen as the binding agent.

The materials used in asphalt have evolved in a variety of ways over many years, but the pace of product development over recent years has been rapid, with the industry continually driving towards the production and use of more sustainable and environmentally-friendly asphalts through increased use of recycled materials, and targeting reductions in energy use by lowering mixture temperatures.

Service life of surface courses

Circa 20 years

Service life is defined as the period of time for which asphalt materials, after first installation, are fit for purpose, and as such can be used for asset management purposes. The 'life' of a pavement is the time at which significant maintenance becomes necessary. On any given road, the materials may have a greater or lesser life depending upon circumstances, for example:

- **Weather:** rainwater can take off the top layer of road surface, permeate the tarmac and make its way into further layers. As the temperature changes, this moisture will expand and shrink, causing holes in the road to get bigger.
- **Weight of cars and other vehicles:** repeated light traffic and heavy lorries can cause indents, which eventually turn into potholes.
- **Poor repairs:** filling a small hole with gravel will not solve the problem, and this will often progress into a pothole.



Scope of Policy:

This Policy will be applied for resurfacing of Parish by-roads and working on Parish by-roads, to provide contractors and developers with guidance of PoSH requirements and specifications for road and pavement resurfacing.

In the UK the Specification for Highway Works forms Volume 1 of the Manual of Contract Documents for Highway Works (MCHW), and is complimented by Volume 2, which gives advice and guidance in the implementation of the specifications given in Volume 1.

Government of Jersey guidance publications:

- The Government of Jersey's Infrastructure, Housing & Environment Department (IHE) will be publishing a Utility Reinstatement Specification, which will include Class 1, 2, 3 carriageways, footways of various material types, pedestrian streets, Class 1, 2, 3 cycle paths, and vehicle crossovers which the Parish Roads Committee will consider and, if deemed acceptable, adopt for Parish by-roads.
- IHE will be developing a Public Realm Manual/ Style Guide which the Parish's Roads Committee will consider and, if deemed acceptable, adopt for Parish by-roads.

Tarmacadam resurfacing specification:

Specification for road resurfacing is to be in accordance with IHE's Specification for the Reinstatement of Openings in Main Roads and the New [Roads and Streetworks Act 1991 Code of Practice](#) Specification for the Reinstatement of Openings in Highways.

Specification of road build-up is based on the "class" of road. Parish by-roads are primarily class 3 - "Local Circulation Route" - although some roads are also class 2 - "Arterial Route" - i.e. Tower Road.

The class of a road is indicated on the interactive Government of Jersey map by following this link: [Road information map \(gov.je\)](#).

Stone Mastic Asphalt:

Carriageway resurfacing works:

- a) Milling 40mm
- b) Resetting of all ironwork
- c) Bond coat: C40 B40 or C40 BF4. Spread rate 0.4 litres per m² (pavement)
- d) Supply and lay close graded asphalt concrete 40/60 PEN with 10mm aggregate surface course 40mm thick (carriageway)
- e) Over banding all joints with HAPPAS or other approved material

Strengthening works:

- a) Milling 60mm
- b) Supply and lay dense graded asphalt concrete 40/60 PEN with 20mm aggregate binder course 60mm thick carriageway and hard strip.

Edge restraints (kerbs):

Continuous restraint where footway and cycleway construction abuts an adjoining carriageway shall be provided by the installation of kerbs:

- a) The kerbs shall be placed on 150 mm concrete bedding over 100 mm subbase.
- b) Elsewhere, unless the footway or cycleway abuts an existing building, wall or kerb, continuous restraint shall be provided by the installation of edgings.
- c) The edgings shall be placed on 100 mm concrete bedding over 100 mm sub-base.

Coloured tarmacadam surfacing:

Current arrangements are that pavements within the ring road area are generally finished with red asphalt; it seems that historically this arrangement has been passed down from one engineer to another (for the last 15 to 20 years). Whilst this has been what the Parish and IHE have worked to, it doesn't appear that any formal policy was ever written, and IHE is developing a "style guide" as part of the public realm work.



Coloured surfaces, although more aesthetically pleasing compared to black tarmac, carry the main disadvantages of high cost, availability and durability. It should also be noted that coloured tarmac tends to fade quicker than traditional black.

Many councils in the UK are minimising the use of coloured tarmac, due to:

- a) Coloured surfaces not considered as being signs or road markings, and therefore having no legal status.
- b) Applied coloured surfacing is less durable and is more expensive to maintain and install than a tarmac road surface.

Red asphalt has 50-60% less lifespan than black asphalt, especially in heavily-trafficked areas. PoSH only lays red asphalt on footways or non-trafficked areas: we are aware of asphalt companies no longer laying red asphalt in private driveways due to there being so many issues with it.

Jersey local supplier advises (Ronez):

Red asphalt is a proprietary product and has been designed for footpath and crossover sections.

As such Ronez would not recommend the use of red asphalt on any areas that are to be heavily trafficked, where constant turning, and parking take place.

The pigment was a red iron oxide, and this is no longer available for the type of batching plant we have.

The new product is a considerable cost increase to the old red oxide powder.

The pigment is now delivered in wax pellets, and this changes the chemistry of the material so no specific time frame can be suggested for product integrity.

It is important to note that there is no warranty on the product.

- c) Prices for red asphalt have significantly increased over the last year - the biggest cost increase is on coloured asphalt when compared to standard black asphalt.

Asphalt prices are currently volatile due to current global financial issues, and the demand and cost of the raw materials that are used to produce asphalt.

Jersey supplier: Cost comparison:

Due to a large price increase on bitumen (over £42 a ton more in 3 weeks brings the total cost for one ton of red asphalt to just under £300 per ton). Note: 1 Ton of asphalt does 12.5 sq. m.

- Black asphalt current rate: **£ 185.66 per ton**
- Red asphalt current rate: **£ 291.12 per ton**

Red asphalt is 56.8% more expensive compared to black asphalt.

It should be noted that a minimum order of 1 ton is required, hence why there are some red footpaths with black tarmac patches when the minimum order isn't met. This then requires the black asphalt patch to be removed and replaced with red asphalt when the contractor has sufficient red available - basically duplicating work and increasing carbon footprint.



IHE’s current policy is to continue using red/brown asphalt even though there are issues with the product as above. To address red asphalt’s durability issue, IHE proposes to use black asphalt at vehicle entrances, such as the recent work undertaken on Midvale Road:



The Parish Roads Committee does not support the approach as illustrated in the photo above, as this gives the wrong message that motorists have priority across the footpath due to the red asphalt being stopped at either side of the vehicle entrance.

Roads Committee decision: On Wednesday 13 July 2022, the Parish Roads Committee agreed to adopt officer recommendation that red asphalt on pavements will no longer be used. The Parish will resurface with black asphalt, but wherever possible granite stone paving is to be used.

High Friction Surfacing (anti-skid)

High Friction Surfacing (HFS) or Anti-Skid Surfacing is a resin-based road surfacing material designed to provide high skid resistance. The resin is combined with calcined bauxite aggregates to create a high friction surface.

Although there is no legal requirement to introduce HFS, its application is now considered best practice as a standard road safety measure. In Jersey we tend to use “Buff” HFS at locations where the skid resistance is not met or there has been a high number of wet road skidding collisions, i.e. on a bend or the approach to a junction, because HFS increases skid resistance and reduces braking distance, thereby reducing the potential for accidents.

Speed limit	Colour	Length
30mph or less	Buff	30m
40 mph	Buff	50m

There is no local contractor able to apply HFS, therefore a specialist supplier/installer visits Jersey from the UK. The Parish and IHE liaise regularly on this to arrange for any Parish by-roads to be installed with HFS.

HFS treatments should not be laid upon newly-constructed or -surfaced carriageway because of the problems of adhesion materials. Where possible newly-laid surfacing should be used by traffic prior to the application of HFS (6-8 weeks).

The correct carriageway markings should also always be in place prior to the application of HFS. Only in exceptional circumstances should it be acceptable to apply HFS and then install road markings on top of it. All road markings should be ‘masked off’ by contractors before application of HFS and the road



markings re-applied to a sufficient depth to bring them (and any applied reflective material) above the surface of the HFS. However, there is a tendency for white lining to 'blend into' lightly coloured surface treatments, and therefore lightly coloured surfacing should not be used where a driver/cyclists etc is expected to rely on white lining.

The British Board of Agrément (BBA) undertook a comprehensive study of 220 high friction road surface sites and found the average service life for cold applied systems to be 12 years and for hot applied systems to be 8 years.

The drawback is that the surface does not last long and can look aesthetically awful when patch repairs are required. The cost of applying this surface is very expensive, **approx. £285 per sq. m.**

Locations where HFS is **unlikely** to be suitable:

1. For cycle lanes in rural locations because colour would be obtrusive.
2. For deterrence (hatched areas, road edges) in rural areas where colour would be obtrusive.
3. Where its use may give a false indication of priority for particular road users.

Policy particulars:

1. **Asphalt:** Due to the large cost increases and its durability issues. the Parish of St Helier Roads Committee has adopted the policy of using black asphalt in all areas, as being the most cost-effective option with the longest life span.
2. **Granite:** Where a footpath is granite paved, the granite paving is to be re-used or replaced with similar granite paving unless it has been agreed by the Roads Committee to use an alternative material as part of a Roads Project.
3. **Pavements:** Wherever feasible, granite stone paving is to be used instead of asphalt pavements as the preferred resurfacing material.
4. **Brick:** The Parish has several areas with herringbone brick surfaces; this finish may be aesthetically pleasing but it creates significant maintenance issues in terms of cleaning. Traffic over these areas also creates significant settlement issues, resulting in pot holes creating road safety issues, and on footpaths creating tripping hazards.

Brick herringbone finishes are to be replaced with asphalt where bricks have been used on a road (i.e. speed humps), whilst on footpaths, if the brick surface is damaged, it is to be changed to granite paving or concrete pavers.

5. **Road safety audits:** Depending on the situation, Road Safety Audits levels 1, 2 and 3 are to be undertaken where there are significant changes to the road carriageway design and layout that alter the carriageway.
6. **Dished kerbs:** These are to be fitted with concrete tactical for pedestrians with visual impairment.
7. **Continuous footpaths:** Footpaths across driveways, garages, and any vehicular openings are to be reinforced as per the guidance in this Policy.
8. **Crossfalls:** The provision of crossfalls on footways is necessary to provide good drainage. A 2.5% (1 in 40) crossfall is the recommended maximum acceptable standard, but crossfalls in the range of 1 to 2% are preferred. Slopes: 5% (1 in 20) is preferred. The absolute maximum gradient is 8% (1 in 12).
9. **Rainwater channels:** Rainwater piles (RWP) are to be plumbed into road gullies wherever possible by installing a pavement gully against a building with the RWP going into the pavement gully and the pavement gully connected into a road gully wherever possible under the pavement. If this is not possible, then granite paving channels are to be used. The use of metal pavement channels will be phased out where possible, although there are situations where they must be used due to available depth and falls.



10. **Site notices:** It is essential to engage with local service providers (such as the bus company) and businesses affected by road closures. Unfamiliar changes of traffic flow increase the risk to the public and therefore the Parish will ensure, via notice given through general publicity (advertising, social media, Parish publications, roadside notices, letter drops, etc.) and site signage so that the public understands the changes.
11. **Traffic management (TM):** Responsibility for administration of public roads is divided between Government and the parish highway authorities. Government is responsible for the strategic road network and each parish for its local roads and lanes. Under Article 9 of the Road Works and Events (Jersey) Law 2016 (hereafter referred to as the Law), highway authorities have a duty to manage road works to secure the movement of traffic, having particular regard to:
- safety
 - minimising inconvenience to road users, particularly people with a disability

Under Article 25 of the Law, a person carrying out road works (including a highway authority) must ensure that their works are adequately guarded, lit and appropriately signed, giving specific consideration to the needs of people with a disability as well as other vulnerable road users.

The Parish expects the following to form part of the TM:

- a) Set up advanced warning signs a minimum of 1 week before commencement
- b) Design: the traffic management plan's final design to be agreed with the Parish via Trafficworx
- c) Letter drop to all affected residents and businesses in the road
- d) Supply and placement of TM signage - the requirements are to be aligned generally with the "National Highway" Manual of Contract Documents for Highway Works (MCHW), Road Works and Events (Jersey) Law 2016 and Working Safely on Jersey Roads (Jersey Red book) approved code of practice

The Parish may require a traffic management plan which should detail the following:

- Roads to be closed
- Diversion routes
- Pedestrian and vulnerable user access
- Residential access
- Temporary and suspended parking
- Bus stop and taxi rank restriction or relocation
- Temporary signage
- Refuse collection schedule

12. **Road inspections:** The Parish's Technical Manager and Streets Inspector will regularly review the condition of Parish by-roads and keep a record of the current condition to produce the annual list of roads that require resurfacing.

Highway condition is based on regular visual inspection by the PoSH Infrastructure team, and the condition of a road is assessed by the rate of deterioration and the amount of localised patching.

Road selection: Roads deemed to require resurfacing are assessed by considering:

- Rate of deterioration and the amount of localised patching
- Planned utility works on the roads being considered. (Occasionally major utility projects will affect when the resurfacing of a road can go ahead)
- Planned utility or other work, or traffic management, on available diversion routes
- Planned developments on or adjacent to the roads being considered
- Location of the roads being considered on the transport network, eg roads adjacent to schools or on major school access routes may be restricted for traffic management purposes on school holiday periods only



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Guidance is provided below on how PoSH assesses the surface condition of roads and footpaths to establish if visibly distressed, in accordance with: [Roads and Streetworks Act 1991 Code of Practice](#).

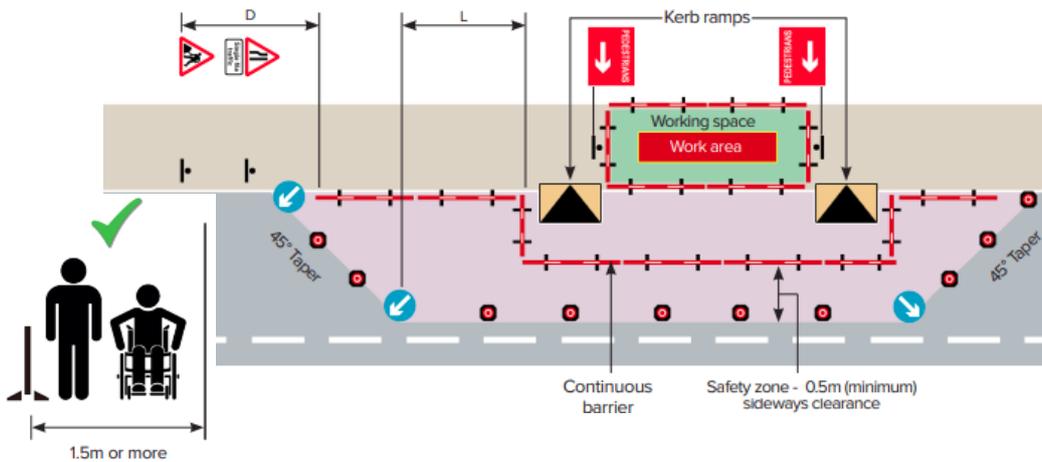
Flexible footway		
Good condition	Moderate condition	Poor condition
		
Rigid footway		Poor condition
		
Modular surface		
Good condition	Moderate condition	Poor condition
		
Carriageway		
Good condition	Moderate condition	Poor condition
		



- 13. **Line markings:** Road markings are to be renewed once carriageways are resurfaced.
- 14. **Working on pavements:** When footways, crossings and pedestrianised areas are affected by works, it is important to ensure that passing pedestrians, especially those with a disability and other vulnerable road users, are safe. This means protecting them from both the works and any passing traffic.

The Parish will work in accordance with "Working Safely on Jersey Roads" whenever a pavement has to be closed to pedestrians. As long as sufficient width is available, a temporary pavement for pedestrians will be formed on the carriageway to enable walking around the closure, and the use of temporary traffic lights may be required.

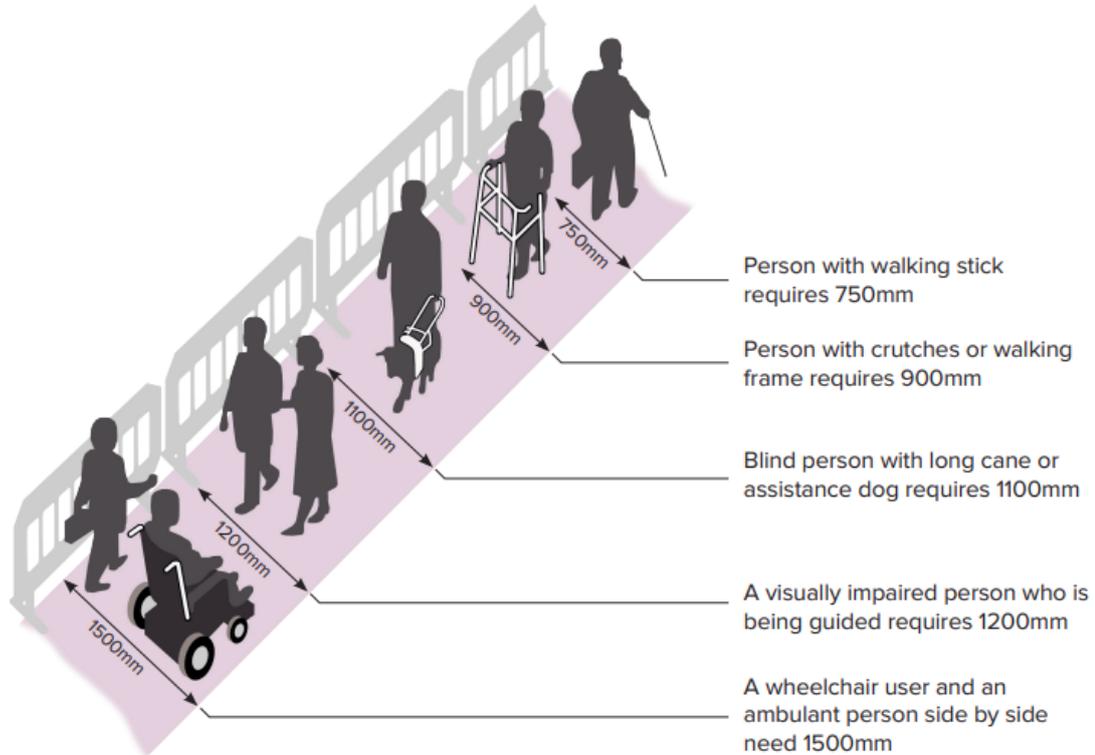
Below is an extract from Section 7 of the "Working Safely on Jersey Roads" showing typical acceptable site set-up where a footpath is blocked by work:



Kerb Ramp:



Below is an extract from "Working Safely on Jersey Roads" pedestrian route width requirements:



Direct pedestrians to existing or suitable crossing points

Contactors may consider directing pedestrians to existing or suitable crossing points if the works are nearby and:



- there are suitable crossing points in both directions
- there are dropped kerbs on all sides
- there is good visibility of oncoming traffic
- there is good street lighting
- the road is not so wide as to cause difficulty in crossing between gaps in traffic (if the road is wide enough then a 1.2m wide temporary refuge can be considered)
- the footway is closed at the point of crossing with clear directional signage

This option will not work in areas of high footfall unless the works are ideally located near existing crossings.

15. **Utility companies:** All utility companies are required to employ contractors that are approved to undertake construction works on public highways. Contractors who undertake repairs to the public highway are also required to be approved.

Approval is subject to the individual contractors having suitably qualified supervisors and operatives who have completed a City & Guilds (or equivalent) qualification for Signing, Lighting and Guarding (for non-excavation activities) and Streetworks Supervisor and Streetworks Operative (for excavation activities).

Utility companies and their appointed contractors are required to undertake their excavation and ancillary activities in accordance with the Road Works and Events Law (2016).

The Government of Jersey's IHE will be publishing an updated Utility Reinstatement Specification, which will include Class 1, 2, and 3 carriageways, footways of various material types, pedestrian streets, Class 1, 2, and 3 cycle paths, and vehicle crossovers which the Parish Roads Committee will consider and, if deemed acceptable, adopt for Parish by-roads.

Currently, utility companies have to comply with IHE's Specification for the Reinstatement of Openings in Main Roads and the New Roads and Streetworks Act 1991 Code of Practice Specification for the Reinstatement of Openings in Highways.

Utility companies and their appointed contractors are responsible for ensuring that these standards are met, and are required to guarantee any works in the public highway for 3 years after their completion; if remedial work is required to the trench (in the case of the trench not passing certain "intervention limits", or the integrity of the surface material is failing), this will be carried out by the relevant undertaker's appointed contractor.

16. **Embargo periods:** Road embargos in reference to opening up of roads following resurfacing are governed under Road Works (Embargo Periods and Protected Roads) (Jersey) Regulations 2017, which is part of Road Works and Events (Jersey) Law 2016 in which the following periods are stated:

The length of time referred to in the definition "embargo period" in Article 28(1) of the Law commencing on the date substantial highway authority works are completed is –

- (a) 5 years where the substantial highway authority works comprised construction (including enhanced surfacing) or reconstruction of a carriageway
- (b) 3 years where the substantial highway authority works comprised resurfacing of a carriageway
- (c) 5 years where the substantial highway authority works comprised enhanced surfacing of a paved road other than a carriageway
- (d) 1 year where the substantial highway authority works comprised any of the following –
 - (i) construction (excluding enhanced surfacing)
 - (ii) reconstruction
 - (iii) resurfacing

of a paved road other than a carriageway.



Departures from Policy:

1. Not permitted without prior approval of the Parish Roads Committee.

Relevant legislation and guidance (*in no particular order*):

1. Road Works and Events (Jersey) Law 2016
2. Road Traffic (Pedestrian Crossings) (Jersey) Order 1982
3. Road Works (Embargo Periods and Protected Roads) (Jersey) Regulations 2017
4. Road Traffic (St Helier) (Jersey) Order 1996
5. Traffic Signs (Jersey) Order 1968
6. Loi (1914) sur le Voirie
7. Highways (Road Humps) (Jersey) Regulations 2002
8. Working Safely on Jersey Roads – approved code of practice
9. Government of Jersey Infrastructure Housing and Environment Specification for the Reinstatement of Openings in Main Roads
10. New Roads and Streetworks Act 1991 Code of Practice Specification for the Reinstatement of Openings in Highways

Review date:

This Policy will be reviewed regularly, especially with the future release of Government of Jersey's IHE Department's "Style Guide".

Policy implementation date:

13 July 2022
