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## **St. Helier Southern Cycle Route**

### **Off-Road Cycle Facilities at English and French Harbours**

on behalf of States of Jersey  
Transport and Technical Services

### **Site Safety Assessment**

**TMS Project No: 1504**  
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## St. Helier Southern Cycle Route

### Off-Road Cycle Facilities at English and French Harbours

#### Site Safety Assessment

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#### 1 Introduction

- 1.1 This report refers to a Site Safety Assessment of proposed shared pedestrian / cyclist facilities along two sections of the existing Southern Cycle Route at St. Helier on the Island of Jersey, commissioned by States of Jersey Transport and Technical Services (TTS). The sections in question are Section 7: French Harbour and Section 9: English Harbour, which are situated on the east side of the main waterfront area (see Section 2.0 of Planning Application document).
- 1.2 TMS Consultancy was established in 1990 to provide specialist consultancy, research and training services in traffic management and road safety Engineering. TMS currently provides these services to a wide client base in both the public and private sectors in the UK and internationally. TMS Consultancy has an internationally recognised reputation in this field of work and runs the industry standard RoSPA 2-week Road Safety Engineering (AIP) and 1-week Advanced Road Safety Engineering training courses.
- 1.3 TMS Consultancy has undertaken:
- A wide range of collision investigations
  - Design of numerous local safety schemes including cluster site treatments, route length improvements and area-wide traffic calming schemes including 20 mph zones
  - More than 10,000 Road Safety Audits on a wide range of schemes
  - Road Safety Plans and Strategies for Local Authorities including the Isle of Wight, East Riding of Yorkshire, London Borough of Lambeth and City of Reykjavik
  - Walking Routes to School Risk Assessments
  - Quality Audits
  - Preliminary and detailed design of cycle routes

TMS Consultancy has acted in a consultant role to Government Organisations in Canada, Iceland, Ireland and the Isle of Man in the preparation of Road Safety Audit Policies.

TMS Consultancy also wrote the RoSPA Road Safety Engineering Manual, was managing editor for the CIHT Road Safety Audit Guidelines and carried out research into the link between visibility splays and casualty occurrence for MfS2.

## 2 Methodology

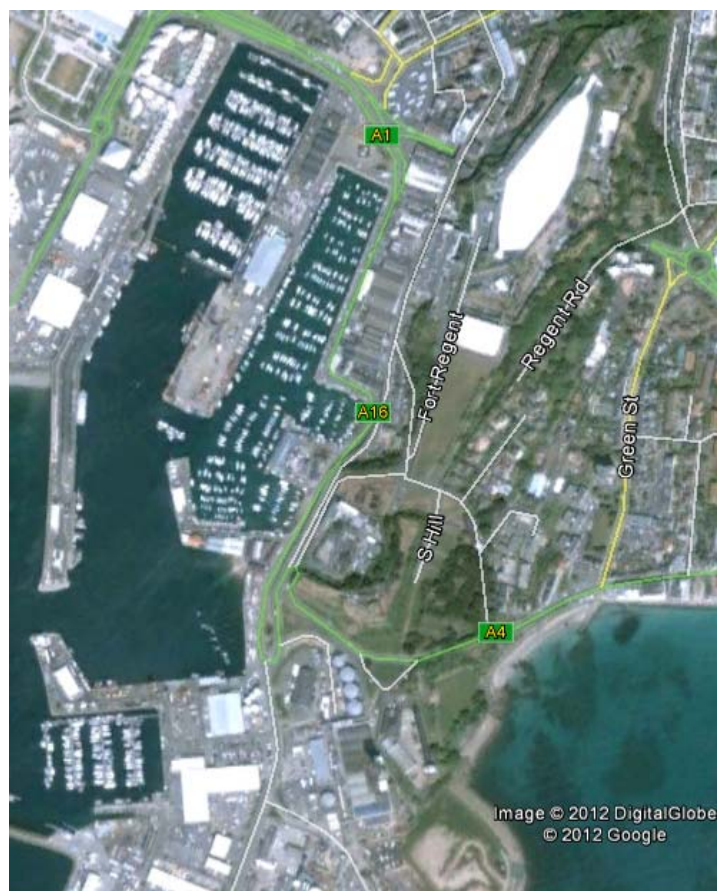
2.1 This Site Safety Assessment has been carried out by Andy Paul, BEng (Hons), MCIHT, MSoRSA, an Associate with TMS Consultancy. Andy has more than 25 years' experience in highway design, construction, and traffic and transportation work. He has carried out the design of a number of safety engineering and environmental enhancement schemes, and has extensive experience in project management, accident investigation, Local Safety Scheme designs, and operational risk assessment work.

2.2 Prior to joining TMS, Andy was responsible for the complete design and construction of highway and infrastructure projects, mainly new roads and road improvements. His role within each individual project was as project manager/designer and, during construction, Engineer's Representative. Schemes ranged from small revenue funded local improvements to capital infrastructure schemes including roads and sewers for new industrial development sites, road realignments, a large 20mph zone, and town centre environmental improvements.

At TMS, Andy has carried out over 1,350 Road Safety Audits at all stages. Types of schemes audited include major highway interchanges and By-Pass projects, traffic signal junctions and roundabouts of all sizes, new development projects, controlled and uncontrolled pedestrian crossings, cycle schemes and Quality Bus Corridors, traffic calming / local safety schemes and Light Rapid Transit projects. Andy has also carried out numerous accident investigation and prevention (AIP) studies, where his detailed analysis of collisions has led to an understanding of problems that are likely to have led to those collisions and recommendations for remedial engineering measures that could lead to a reduction in casualties.

Also at TMS, Andy has carried out the design of cycle schemes, traffic calming scheme design, safety and risk assessments such as road over rail incursion assessments and

- walking routes to schools, pedestrian crossing assessments, and road safety research projects.
- 2.2 Mr Paul visited the site between 1pm and 3pm on Monday 30<sup>th</sup> July and between 8am and 4pm on Tuesday 31<sup>st</sup> July, 2012. The weather was fine and dry on both days. Traffic, cycle and pedestrian flows were generally moderate, although traffic flows were higher during the morning peak and pedestrian activity was higher in some locations.
- 2.3 During the site visit on Monday 30<sup>th</sup> July, Mr Paul was accompanied by Robert Cabot from TTS, who explained the purpose of the scheme and gave some background information relating to the proposals. Traffic data was also provided, together with details of cycle routes across the island.
- 2.4 During the site visit on Tuesday 31<sup>st</sup> July, Mr Paul walked the full length of the Southern Cycle Route in both directions in order to identify any road safety hazards associated with the cycle route. Detailed notes and photographs were taken for record purposes. This process was repeated in both directions between the waterfront area and Havre des Pas following Mount Bingham and Pier Road, and the Fort Regent Road Tunnel was also visited.



### 3 Background

3.1 It is understood that Transport and Technical Services are currently developing an off-road shared pedestrian and cycle route between West Park in the main waterfront area and Havre des Pas in the south-east of St. Helier. The route generally follows the edge of the older parts of St. Helier Harbour, passes through an industrial area, and re-joins the seafront adjacent to La Collette Gardens. Attractions for cyclists following the route include several different harbours, the Normandy Memorial at Victoria Harbour, and the seafront at the St. Saviour part of town. The route provides a legible at grade connection between planned cycle routes to the east of St Helier with existing off road cycle routes to the west, as well as a convenient and legible connection between the hotel and tourist attractions at Havre des Pas with the tourist hub consisting of Liberation Square, the transportation centre and the tourist information centre.

The project has been divided into 15 sections, many of which have now been completed except for final way marking and regulatory signing. Two important sections remain to be completed; Section 7 known as French Harbour, and Section 9 known as English Harbour. It is understood that proposals for these sections, in continuing the off-road principle, will require significant engineering work to provide a structure to carry the cycle route at grade over the two areas that are currently slip way and harbour. The harbour area generally has significant heritage value, and a Planning Application is required for the structures.

The main purpose of this study is to assess any safety issues associated with the following possible options:

- (a) Completion of the fully off-road cycle route by construction of structures required at Sections 7 and 9.
- (b) The existing situation: That is, the omission of proposals for Sections 7 and 9. Cyclists would be diverted onto the east side footway opposite English Harbour and French Harbour
- (c) An alternative route through the Town Centre, and along Pier Road and Mount Bingham.

3.2 The study brief for this project requires the consideration of, and recommendations for, the following:

- ⇒ An assessment of the proposed shared pedestrian/cycle route which requires the structures at English and French Harbour compared to nearby diversionary alternatives such as the Tunnel, Mount Bingham / Pier Road.
- ⇒ An assessment of the traffic conditions on Commercial Buildings and the need to provide off-road facilities on a road of this nature.
- ⇒ A discussion on the benefits of the proposed cycle route in connecting the existing high quality off-road cycle route from the west of the island to the east of the island.
- ⇒ Recommendations on appropriate design standards for a shared use path in this area.
- ⇒ A discussion on the benefits of off-road cycle routes in encouraging cycle use by younger and less confident cyclists.

## 4 Safety Observations

### 4.1 Option (a) – Completion of Sections 7 and 9

4.1.1 This option consists of making full use of the off-road cycleway already in place by completing Sections 7 and 9 so that cyclists remain off-road throughout the whole route. It is acknowledged that there are cost implications to this option, as well as heritage issues. However, site observations indicate that the route is already well used, despite cyclists being required to divert onto the carriageway between the English and French Harbours.

4.1.2 Commencing opposite Liberty Wharf, adjacent to a number of new cycle stands, the route commences on a 3m wide shared footway / cycleway (bi-directional), and continues south-east past the “Steam Clock”. There is a crossing point with a pedestrian refuge at the junction with the access to the New North Quay.



**Section 12**  
**3m wide shared footway / cycleway,**  
**protected on both sides**



**Section 12**  
**Crossing point at New North Quay access**

The potential safety issue on this section would be the width of the crossing over the New North Quay access road. However, as traffic flows are low, vehicle speeds are low, intervisibility is good and a refuge has been provided, it is considered that there is sufficient mitigation of risk at this location.

4.1.3 The route continues along the east side of Old Harbour opposite Commercial Buildings and turns to follow the north side of English Harbour, along a 2.5m wide shared footway / cycleway. Again, the route is protected on both sides by a sturdy, decorative, post and rail fence.





**Section 11**  
**Route between Commercial Buildings and Old Harbour**



**Section 11**  
**Route between Commercial Buildings and Old Harbour**



**Section 10**  
**Route between south end of Commercial Buildings and English Harbour**



**Section 10**  
**Route between south end of Commercial Buildings and English Harbour**

Generally, a 2.5m width shared footway / cycleway would be considered as desirable minimum width, and would not be recommended for a length of route such as this. However, in this case, the alternative would be to direct cyclists on-carriageway along the full length of the Commercial Buildings area. Site observations indicate that this would be hazardous for cyclists due to traffic flows, commercial activity involving reversing vehicles etc., and on-street parking. It is considered that the 2.5m footway / cycleway represents a significant safety improvement on the alternative. In addition, "Cycling by Design 2010", published by Transport Scotland, recommends that off-carriageway facilities should be provided where two-way traffic flows are in excess of 10,000 vehicles per day.

4.1.4 The route is proposed to then continue along a new wall at English Harbour to provide a 2.5m wide shared footway / cycleway at road, or top of wall, level; around the rear of La Folie; and along the edge of French Harbour by provision of another new wall similar to that proposed for English Harbour.



**Section 9**  
**Length of Proposed New Wall at English Harbour**



**Section 9**  
**Length of Proposed New Wall at English Harbour**



**Section 8**  
**Area to Rear of La Folie Building**



**Section 8**  
**Area to Rear of La Folie Building**



**Section 7**  
**Length of Proposed New Wall at French Harbour**



**Section 7**  
**Length of Proposed New Wall at French Harbour**

There are no cyclist safety concerns with this proposal. The new walls at Sections 7 and 9 would provide a safe and secure route for pedestrians and cyclists, and pedestrians could continue to use the existing footway at La Folie, linking between the two harbour walls. There may be some conflict between vehicles and cyclists at the rear of La Folie, but this would be very minor. To further mitigate this potential, however, it is recommended that a marked cycle lane is considered for this section.

4.1.5 The existing route then continues to the south of French Harbour towards an industrial area and Power Station. The route follows along a shared (segregated in short sections) footway / cycleway, of generous width, initially on the west side and, at the southern end, on the east side. A formal uncontrolled crossing is provided to facilitate crossing between the east and west sides of the road. The route is then indicated as turning into / out of a side road to the south of the power station.



**Section 6  
 General Illustration**



**Section 6  
 General Illustration**



**Sections 5 & 6  
 General Illustration**



**Sections 5 & 6  
 General Illustration**



**Section 5  
 General Illustration**



**Section 5  
 General Illustration**

There are no cyclist safety concerns along these sections. However, on the eastern side footway / cycleway near the Power Station, there are two obstacles that narrow the facility locally. One is an electricity cabinet outside a sub-station, and the other is a hedge / Post Office boxes. These are shown below.



It is acknowledged that the electricity cabinet would be costly to re-locate and, for a very localised point of obstruction, removal should not be necessary. However, it is recommended that removal and relocation of the hedge and Post Office boxes should be pursued.

- 4.1.6 The final section of the route diverts from the side road south of the power station along a series of paths which connect cyclists and pedestrians to the seafront area and the south-east of the Town. These paths are relatively wide for the most part, and ideally suited to cyclists due to the lack of gradients. They also provide attractive resting areas.



**Section 4**  
**General Illustration**



**Section 4**  
**General Illustration**



**Section 3**  
**General Illustration**



**Section 3**  
**General Illustration**



**Section 2**  
**General Illustration**



**Section 2**  
**Tie-In to Havre des Pas**

There are no cyclist safety concerns along these sections.

4.1.7 In summary, this cycle route, if completed to be fully off-road, would provide a safe, desirable and convenient facility for cyclists of all ages and degrees of confidence, in both directions between the harbour area and Havre des Pas. It should also encourage more cycling by those who currently do not cycle due to risk levels or the perception of risk.

Cycling contributes to reducing road congestion and emissions, improving physical and mental health, increasing tourism, and so it is important to create cycling facilities that encourage as many cyclists as possible. A fully off-road cycle facility contributes towards these aims and benefits more comprehensively than any alternative could achieve.

It is considered that, in the case of the Southern Cycle Route being assessed here, that the complete facility should cater for all novice cyclists aged 12 years and above, a competent 12 year old cycling unaccompanied, and family groups with younger, supervised children. These cyclists prefer traffic free cycling facilities or roads with very low traffic volumes and vehicle speeds. Therefore, off-carriageway routes or quiet streets are the most effective in encouraging more cycling. In addition, those using specialised equipment such as child seats, trailers, tandems, tricycles and those with physical disabilities using hand-cranked machines all benefit substantially from the provision of off-road facilities. Overall, the objective should be to remove all barriers that will achieve the greatest increase in cycle numbers (for example, by the provision of a new bridge or other structure if necessary)

In addition, despite being a shared pedestrian / cyclist facility, there are no compromises evident for the safety of pedestrians using the route.

## 4.2 Option (b) – The Existing Situation

4.2.1 This option involves making use of the cycle / pedestrian facilities already completed, and developing an alternative to the proposals for Sections 7 to 9 described in 4.1 above. This would entail cyclists being diverted to a footway along the base of the retaining wall opposite the length between English and French Harbours, and then continuing on this footway along most of Section 6. As the majority of this option is the same as option (a), this part of the assessment report only deals with safety issues relating to Sections 6 – 9.

*[It should be noted that, whilst photographs and descriptions below tend to follow the route in a southbound direction, this is only for reasons of clarity in describing the route. All safety issues identified apply equally to the northbound direction].*

4.2.2 This alternative route for Sections 6 – 9 is illustrated in the photographs below.



**Section 9**  
**Crossing Point at North Side of English Harbour**



**Section 9**  
**Crossing Point at North Side of English Harbour**



**Sections 8 & 9**  
**Footway on East Side**



**Sections 8 & 9**  
**Footway on East Side**



**Section 8**  
**Footway on East Side**



**Section 6**  
**Crossing Point over Pier Road**

- 4.2.3 There are several safety issues associated with this alternative. Firstly, the requirement for cyclists and pedestrians to cross the road at the north side of English Harbour is considered to be problematic. An informal “gap count” conducted during the site visit showed that, as a result of traffic flows and vehicle speeds, acceptable gaps for many cyclists and pedestrians were few. This would be a particular problem for leisure cyclists such as families with children, or other cyclists in groups.
- 4.2.4 It might be that risks associated with this location could be mitigated by the provision of a controlled crossing. However, on the contrary, it is considered that this could actually increase the potential for collisions. It is acknowledged that this statement may appear counter-intuitive, as controlled crossings are expected to be “safe”, but records frequently show that a certain level of collisions do occur at controlled crossings, as pedestrians and cyclists take risks crossing during the vehicle green stage. There is no evidence to indicate that this location would be different. In addition, the crossing point is quite long, so required crossing times could result in vehicle queuing, and this could lead to shunt type collisions on approaches to the crossing point.
- 4.2.5 The second issue of concern on this section relates to the footway width generally, which varies from less than 1metre to approx 2.5m. In the absence of any barrier or “buffer” zone, this range of widths leaves pedestrians and cyclists vulnerable to passing traffic, particularly if a pedestrian steps into the carriageway to avoid an oncoming cyclist, or if a cyclist encroaches into the carriageway to “overtake” a pedestrian. Also, family groups with children may be unable to remain together due to the existence of other cyclists or pedestrians.



4.2.6 Thirdly, there is a tight corner where forward visibility is very low, and this coincides with the footway narrowing to approximately 1metre. This could lead to collisions between cyclists and pedestrians, or between cyclists and cyclists. It could also lead to pedestrians taking avoiding action by stepping into the carriageway.

4.2.7 Finally, there are hazards for pedestrians and cyclists associated with crossing the junction with Pier Road. The junction is very busy with turning vehicles, and the pedestrian / cyclist path across the bell-mouth is very long. These factors create a situation where few gaps are available to cross and this could lead to collisions arising from frustration. Again, family groups and vulnerable pedestrians are particularly at risk to quick moving turning vehicles.

It is acknowledged that there is an alternative to crossing Pier Road junction, which is to cross the main road immediately south of French Harbour. Although visibility is adequate at this point, vehicle speeds are higher, which would be hazardous for crossing cyclists of all types. Also, as this would represent a third crossing point across the main road, affecting continuity and convenience, many cyclists are likely to ignore a crossing point and continue to Pier Road. It is generally considered unsatisfactory to develop a route that requires cyclists to continually cross the same road over short distances.

4.2.8 There may be another alternative to the proposals for Sections 7 to 9 described in 4.2.1 above and discussed in detail in 4.2.2 – 4.2.7. This would involve cyclists using the carriageway in both directions along the length between English and French Harbours, and along most of Section 6. However, this would be a poor option for the safety of cyclists: There is insufficient carriageway width to allow for marked cycle lanes, so the cycle route would be shared with vehicles; the nature and frequency of traffic would create a hazardous situation for cyclists; and family groups would be unable to use the carriageway due to the hazards that would exist. Overall, referring again to “Cycling by Design 2010”, the core design principle relating to safety states that: *“Design should minimise the potential for actual and perceived risk. Perceived risk is a key barrier to cycle use and users should feel safe as well as be safe. It is important to provide consistency of design and avoid ambiguity.”* It is considered that this alternative does not comply with this design principle in any way.

4.2.9 In summary, it is considered that this alternative to option (a) includes a significant number of risks to cyclists and pedestrians, which the development of option (a) is designed to remove.

### 4.3 Option (c) – Alternative Route using Mount Bingham and Pier Road

4.3.1 This option represents a complete alternative to the route which has already been mostly completed (option (b)), and to the full completion of that route (option (a)). It consists of a fully on-carriageway cycle route between the main harbour area and Havre les Pas following various streets in the Town Centre (depending on which direction), Pier Road and Mount Bingham. Generally, on the roads that this route would use, there is insufficient carriageway width to allow for marked cycle lanes, so the route would be signed only.

4.3.2 This route, whilst capable of facilitating cyclists travelling “from A to B”, is unlikely to be attractive to leisure cyclists, those with less confidence, or family groups – the roads attract high traffic flows and, in some locations, high vehicle speeds. They also contain steep gradients and sharp bends. In addition, there are several areas of concern from a safety point of view, which are described below.

#### 4.3.3 Steep Gradients

There are several locations along this route where gradients are quite steep. This can be hazardous for less confident or less physically fit cyclists, who tend to be unable to cycle in a straight line close to the kerb and allow vehicles to pass safely. Any cyclist travelling uphill in a weaving pattern would be vulnerable to collision with passing vehicles. There is also insufficient space for cyclists to be diverted off-road.

Advice on this is given in the Irish Cycle Design Guidelines, where it is advised that the maximum length of a 5% gradient should be 50m, and the maximum length at 3% should be 500m.



Mount Bingham Westbound



Mount Bingham Westbound



**Pier Road Southbound**



**Mount Bingham Eastbound**

#### 4.3.4 Carriageway Edge Walls at Mount Bingham

At the top of the hill on Mount Bingham, both footways deviate away from the roadside due to the existence of a wall on either side of the carriageway. This could be hazardous for cyclists within this section as they may be “squeezed” against a wall by passing vehicles. The carriageway width through this section is approximately 6.5m, or 3.25m in each direction. In Manual for Streets 2, ideal minimum lane widths suggested for a car passing a cyclist are 3.8m at 20mph and 4.3m at 30mph.



#### 4.3.5 Mount Bingham / Pier Road Junction

At the junction of Pier Road and Mount Bingham, there are several hazards for cyclists. The bend is very sharp, and most vehicles encroach into the opposite carriageway to negotiate the bend. Northbound cyclists are required to turn right across this right hand bend, where they are vulnerable to on-coming turning vehicles. Also, as the road width on

the bend apex can only accommodate two vehicles passing each other, waiting cyclists could be at risk in the centre of the road.

Southbound cyclists, turning left, cut-across southbound vehicles approaching the South Hill give-way line; there is a potential for the driver of a vehicle to be unaware of the presence of the cyclist, which could lead to collisions.



**Northbound**



**Northbound**



**Northbound**



**Southbound**

Overall, this junction layout is considered unsuitable for use by cyclists, both from a hazard identification point of view, and from an intimidation by traffic point of view. Of particular concern at this junction would be less confident cyclists, especially children, and any group of cyclists arriving at the same time.

#### 4.3.6 Pier Road / Mulcaster Street

At the northern end of Pier Road, the road narrows into a steep downhill approach to Mulcaster Street, and the Mulcaster Street junction is a busy town centre crossroads with traffic approaching from three directions. Although northbound cyclists will turn left into Mulcaster Street (which minimises conflict with vehicles), they could still be vulnerable as they turn into, and proceed along, Mulcaster Street, which is narrow with substantial vehicular activity such as delivery vehicles, parking, taxis, etc.

Southbound cyclists on Pier Road, having exited the junction, have to pass close to a section of on-street parking where they could be vulnerable to car doors or, as the parking restricts road width to 4.8 - 5.0m, they could be vulnerable as vehicles approach from opposite directions. At this point, less confident cyclists are likely to use the footway, which can then cause conflict with pedestrians.



**Pier Road approach to Mulcaster Street junction**



**Mulcaster Street westbound**



**Pier Road – parking on southbound carriageway**



**Pier Road – restricted width**

#### 4.3.7 La Route De La Liberation through to Bond Street

As the cycle route begins / ends on the south side of La Route De La Liberation, cyclists will need to cross this busy dual carriageway by getting to, and using, controlled crossings that are currently in place.

It is presumed that cyclists heading towards Havre les Pas would use the crossing near Liberty Wharf, which is heavily used by pedestrians, and pass through the paved area at Liberty Wharf, which is also heavily used by pedestrians. There is a potential for conflict with pedestrians at both of these locations. As Mulcaster Street is one-way westbound, cyclists would then use Conway Street and Bond Street to arrive at Pier Road. Although Conway Street and Bond Street are busy with vehicles and pedestrians, there are no general safety concerns. However, cyclists turning right into Bond Street will do so across straight-ahead traffic heading towards the Precinct, which could lead to conflict.



**Paved Area outside Liberty Wharf**



**Right turn from Conway Street into Bond Street**

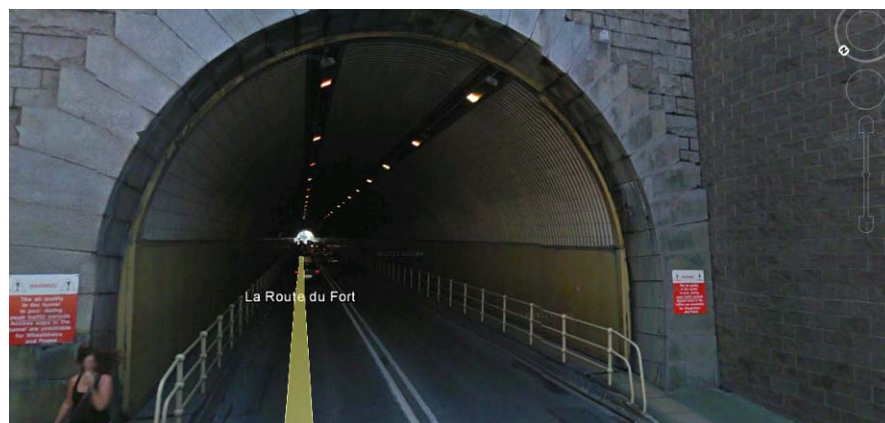
4.3.8 In summary, it is considered that this alternative to options (a) and (b) includes a substantial number of risks to cyclists and pedestrians, which the development of a cycle route segregated from vehicles is intended to remove. Whilst it may be that some mitigation measures can be developed in some locations, the most significant hazards will remain. In addition, the route as a whole, being on-carriageway, is unsuitable for most leisure activities, family groups would find it difficult to use, and all cyclists are likely to prefer cycling close to the sea where there are no gradients.

#### 4.4 Tunnel under Fort Regent

4.4.1 One other possibility exists, at least geographically, for cyclists to travel between the harbour area and Havre des Pas. This would involve using the tunnel under Fort Regent, which links the harbour with La Route du Fort and the east side of the town.



East end of Tunnel looking westbound



West end of Tunnel looking eastbound

It is considered that, for all but the most confident cyclists, using the tunnel as part of a cycle route is wholly unsuitable. Hazards include cyclists being “squeezed” against the side walls, shunt collisions between vehicles queuing behind a cyclist, potential head-on collisions and, potentially, hazards to pedestrians if cyclists use the footway.

In addition, there is a busy roundabout at the east end of the tunnel, and roundabouts can be hazardous for cyclists.

It is recommended that this possibility for an alternative is not considered further.

## 5 Summary

- 5.1 This report has assessed the safety implications of three options for the completion of a cycle route between West Park in the main waterfront area and Havre des Pas in the south-east of St. Helier. Two of the options are for a route that generally follows the edge of the older parts of St. Helier Harbour, passes through an industrial area, and re-joins the seafront adjacent to La Collette Gardens. The third option is an on-carriageway route along existing roads.
- 5.2 Of the three options, option (a) is recommended on road safety grounds and cyclist desirability. This option consists of making full use of the off-road cycleway already in place by constructing new walls at English Harbour and French Harbour, thereby enabling cyclists to remain off-road throughout the whole route. Some specific recommendations on issues of detail are included within this report.
- 5.3 Option (b) is similar to option (a), the difference being the omission of new structures, and directing cyclists to a footway opposite English and French Harbours. The report concludes that this option includes a significant number of risks to cyclists and pedestrians and, accordingly, it is not recommended.
- 5.4 Option (c) consists of a fully on-carriageway, signed, cycle route between the main harbour area and Havre les Pas following various streets in the Town Centre, Pier Road and Mount Bingham. The report concludes that this option includes a substantial number of risks to cyclists and pedestrians, and that it should not be proposed. In addition, the route as a whole, being on-carriageway, is unsuitable for most leisure activities, family groups would find it difficult to use, and all cyclists are likely to prefer cycling close to the sea where there are no gradients
- 5.5 Finally, the possibility of an alternative route using the tunnel under Fort Regent was investigated. It was concluded from site observations that use of the tunnel by cyclists should be discouraged.





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Signed .....

Date .....6th August 2012.....

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