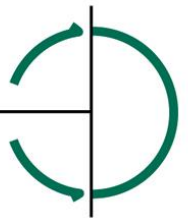


# Proposed Road Development at Shannon Foynes Port

**Client: Shannon Foynes Port Company**

**Stage 1 Road Safety Audit**





## **PROPOSED ROAD DEVELOPMENT AT SHANNON FOYNES PORT - STAGE 1 ROAD SAFETY AUDIT**

Description:

**Stage 1 Road Safety Audit**

Author:

**Ken Swaby**

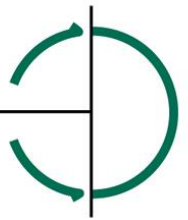
**Mark Andrews**

Audit Brief Submitted By:

**Shannon Foynes Port Company**

Distribution:

**Shannon Foynes Port Company  
RPS Consulting Engineers**



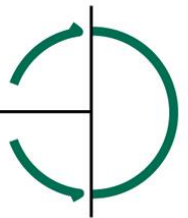
**1 AUDIT INFORMATION**

<b>1.1</b>	<b>Title</b>	<b>RSA Shannon Foynes</b>
<b>1.2</b>	<b>Audit Reference Number</b>	<b>RSA SHANNON FOYNES S1 KS 275</b>
<b>1.3</b>	<b>Project Code</b>	<b>SHANNONFOY</b>
<b>1.4</b>	<b>Date Audit Completed</b>	<b>25<sup>th</sup> April 2018</b>
<b>1.5</b>	<b>Audit Team</b>	
	<b>Team Leader</b>	<b>Ken Swaby, ILTP</b>
	<b>Team Member</b>	<b>Mark Andrews, ILTP</b>



**1.6 Information Received**

ITEM		Supplied	Comments
A	Plans	Yes	<p><u>RPS Consulting Engineers</u></p> <ol style="list-style-type: none"> <li>1. <i>Proposed Site Location Key Plan</i>, ref. M0679-RPS-00-PL-DR-C-0101</li> <li>2. <i>SFPC Port Estate &amp; Foynes Village Aerial View</i>, ref. M0679-RPS-00-PL-DR-C-0106</li> <li>3. <i>Overall Key Plan showing Proposed Development</i>, ref. M0679-RPS-00-PL-DR-C-0110</li> <li>4. <i>Proposed Site Layout Plan Sheet 8</i>, ref. M0679-RPS-00-PL-DR-C-0118</li> <li>5. <i>Proposed Site Layout Plan Sheet 9</i>, ref. M0679-RPS-00-PL-DR-C-0119</li> <li>6. <i>Proposed Site Layout Plan Sheet 10</i>, ref. M0679-RPS-00-PL-DR-C-0120</li> <li>7. <i>Proposed Site Layout Plan Sheet 11</i>, ref. M0679-RPS-00-PL-DR-C-0121</li> <li>8. <i>Proposed Site Layout Plan Sheet 12</i>, ref. M0679-RPS-00-PL-DR-C-0122</li> <li>9. <i>Proposed Site Layout Plan Sheet 13</i>, ref. M0679-RPS-00-PL-DR-C-0123</li> <li>10. <i>Proposed Site Layout Plan Sheet 14</i>, ref. M0679-RPS-00-PL-DR-C-0124</li> <li>11. <i>Proposed Site Layout Plan Sheet 15</i>, ref. M0679-RPS-00-PL-DR-C-0125</li> <li>12. <i>Proposed Site Layout Plan Sheet 16</i>, ref. M0679-RPS-00-PL-DR-C-0126</li> <li>13. <i>Proposed Site Layout Plan Sheet 17</i>, ref. M0679-RPS-00-PL-DR-C-0127</li> <li>14. <i>Durnish Lands Phase 1 Concept Plan</i>, ref. M0679-RPS-00-PL-DR-C-0140</li> <li>15. <i>Durnish Lands Phase 2 Concept Plan</i>, ref. M0679-RPS-00-PL-DR-C-0141</li> <li>16. <i>Durnish Lands Phase 3 Concept Plan</i>, ref. M0679-RPS-00-PL-DR-C-0142</li> <li>17. <i>Durnish Lands – Indicative Framework</i>, ref. M0679-RPS-00-PL-DR-C-0143</li> <li>18. <i>Proposed Lux Levels at Durnish Lands</i>, ref. M0679-RPS-00-PL-DR-C-0145</li> <li>19. <i>Proposed Highway Layout – Overall</i>, ref. H0548-RPS-XX-00-DR-HE-100-01</li> <li>20. <i>Proposed Highway Layout – Sheet 1 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-100-02</li> <li>21. <i>Proposed Highway Layout – Sheet 2 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-100-03</li> <li>22. <i>Proposed Highway Layout – Sheet 3 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-100-04</li> <li>23. <i>Proposed Highway Layout – Sheet 4 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-100-05</li> <li>24. <i>Proposed Road Markings - Overall</i>, ref. H0548-RPS-XX-00-DR-HE-110-01</li> <li>25. <i>Proposed Road Markings – Sheet 1 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-110-02</li> <li>26. <i>Proposed Road Markings – Sheet 2 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-110-03</li> <li>27. <i>Proposed Road Markings – Sheet 3 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-110-04</li> <li>28. <i>Proposed Road Markings – Sheet 4 of 4</i>, ref. H0548-RPS-XX-00-DR-HE-110-05</li> <li>29. <i>Proposed Culvert Detail at Roundabout Access</i>, ref. H0548-RPS-XX-00-DR-HE-510-01</li> <li>30. <i>Proposed Culvert Detail at Secondary Access</i>, ref. H0548-RPS-XX-00-DR-HE-510-02</li> </ol>
B	Traffic Count Data	No	
C	Speed Count Data	No	
D	Accident Data	No	
E	Design Standards	No	
F	Design Brief	No	
G	Other Data	Yes	<p><u>RPS Consulting Engineers</u></p> <p><i>Capacity Extension at Shannon Foynes Traffic and Transport Assessment</i>, ref. IBH0548/TTA, rev. D01</p>



## 2 INTRODUCTION

- 2.1.1 This is a Stage 1 Road Safety Audit (RSA) which examines the road safety implications of a proposed road development at the Shannon Foynes Port, Foynes, Co. Limerick, which is part of wider proposed Capacity Extension Works at the port.
- 2.1.2 This Stage 1 Road Safety Audit has been conducted generally in accordance with the National Roads Authority publication entitled '*Road Safety Audit Guidelines NRA HD 19/09*'.
- 2.1.3 This Stage 1 Road Safety Audit is based upon drawings provided to the Auditors. Drawing details are provided under paragraph 1.6 above.
- 2.1.4 A site visit was carried out on 18<sup>th</sup> April 2018 in daylight conditions, at approximately 12:00hrs. The weather was dry and overcast.
- 2.1.5 This Stage 1 Road Safety Audit specifically examines the road safety aspects of the proposed road development within the port. It is not an appraisal of policy or strategic issues associated with the planning of the development and it does not examine or verify the compliance of the design to any other design criteria or guidelines. The designer and all concerned stakeholders must therefore defend all actions taken on the basis that such care was taken, as was in all circumstances reasonably required, to ensure that the roadway is not unsafe for road users. It is important, therefore that where possible the recommendations in this report are acted upon.



**3 ITEMS RESULTING FROM STAGE 1 ROAD SAFETY AUDIT**

**3.1 General**

**Problem 3.1.1**

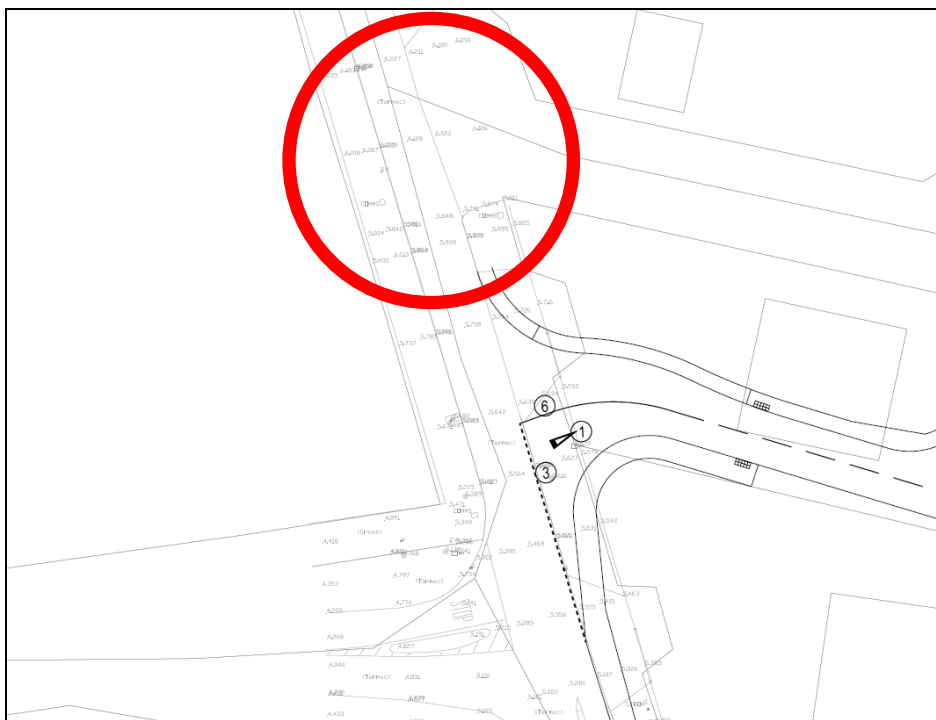
Location: Existing junction to the immediate north of proposed new priority junction on existing main port access road

Summary: Clarification on potential closely associated priority junctions

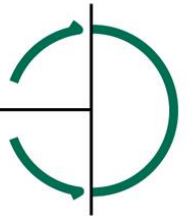
The information provided for audit does not indicate if the existing priority junction to the north of the proposed road works on the main port access road is to be retained, and do not show tie-in details for same (junction highlighted in Figure 3.1). The proposed new priority junction to the south is in the immediate proximity of this existing junction. In the event where both junctions are incorporated into the development, this presents a potential risk that traffic may emerge from either junction without appropriate knowledge of traffic at the other intersection. Such closely spaced intersections also present a potential risk of road users incorrectly interpreting the road layout in this area and / or inappropriately indicating the intended direction of travel and coming into conflict.

Recommendation

It is recommended that the design team clarifies the proposed nature and configuration of the existing junction to the north of the proposed new priority junction, and how it is to be incorporated into the wider scheme. It is further recommended that the design team considers closing this existing access to vehicular traffic.



**Figure 3.1: Existing Priority Junction in Immediate Proximity to Proposed New Priority Junction** (Source: RPS drawing *Proposed Road Markings – Sheet 1 of 4*, ref: H0548-RPS-XX-00-DR-HE-110-02)



**Problem 3.1.2**

Location: Proposed staggered junction arrangement on main port access road

Summary: HGV movements at proposed staggered junction arrangement

The drawings provided for audit show the proposed new priority junction with the main port access road to be staggered from the existing junction to the south (junctions highlighted in Figure 3.2). It is unclear how the existing junction is to be tied into the wider scheme. It is also unclear from the information provided if large vehicles such as HGVs can manoeuvre between these junctions, particularly if travelling from east to west, within the confines of the carriageway. This presents a potential risk of other road users, particularly non-motorised users, being struck by passing vehicles, including trailers of HGVs.

Recommendation

It is recommended that the design team clarifies the proposed nature and configuration of the existing junction to the south of the proposed new priority junction, and how it is to be incorporated into the wider scheme.

It is further recommended that the design team ensures appropriate swept path analyses are completed to ensure that the anticipated vehicle types and vehicle speeds can be safely accommodated by the proposed junction arrangement within the confines of the carriageway, and adjust the carriageway alignment, if required.



**Figure 3.2: Proposed Staggered Priority Junction Arrangement on Main Port Access Road** (Source: RPS drawing *Proposed Road Markings – Sheet 1 of 4*, ref: H0548-RPS-XX-00-DR-HE-110-02)

**Problem 3.1.3**

Location: At location of proposed roundabout junction

Summary: Deflection on entry to roundabout

The drawings submitted for audit indicate that there may be insufficient deflection at the entry to the roundabout for the northern and southern approaches. This presents a potential risk of vehicles failing to yield and / or entering the circulatory carriageway of the roundabout at an inappropriately high speed resulting in loss of control, side-swipe or side-impact type collisions.

Recommendation

It is recommended that the design team ensures that there is appropriate deflection for all approach arms to the roundabout. It is further recommended that the design is appropriate to the proposed design speed of the new installation.

**Problem 3.1.4**

Location: Throughout the extents of the proposals

Summary: HGV movements at junctions throughout the extents of the proposals

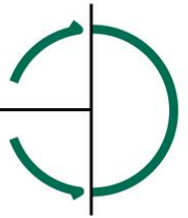
It is unclear from the information provided for audit if large vehicles such as HGVs can manoeuvre through the proposed roundabout junction and priority junctions throughout the scheme within the confines of the carriageway. This presents a potential risk of other road users, particularly non-motorised users, being struck by passing vehicles, including trailers of HGVs.

Recommendation

It is recommended that the design team ensures appropriate swept path analyses are completed to ensure that the anticipated vehicle types and vehicle speeds can be safely accommodated by the proposed roundabout junction and priority junctions throughout the scheme within the confines of the carriageway, and adjust the carriageway alignment, if required.

It is further recommended that the design team ensures the proposed junctions throughout the scheme are appropriate in terms of scale, junction radii and general configuration to safely accommodate the anticipated HGV traffic in the port.





**Problem 3.1.5**

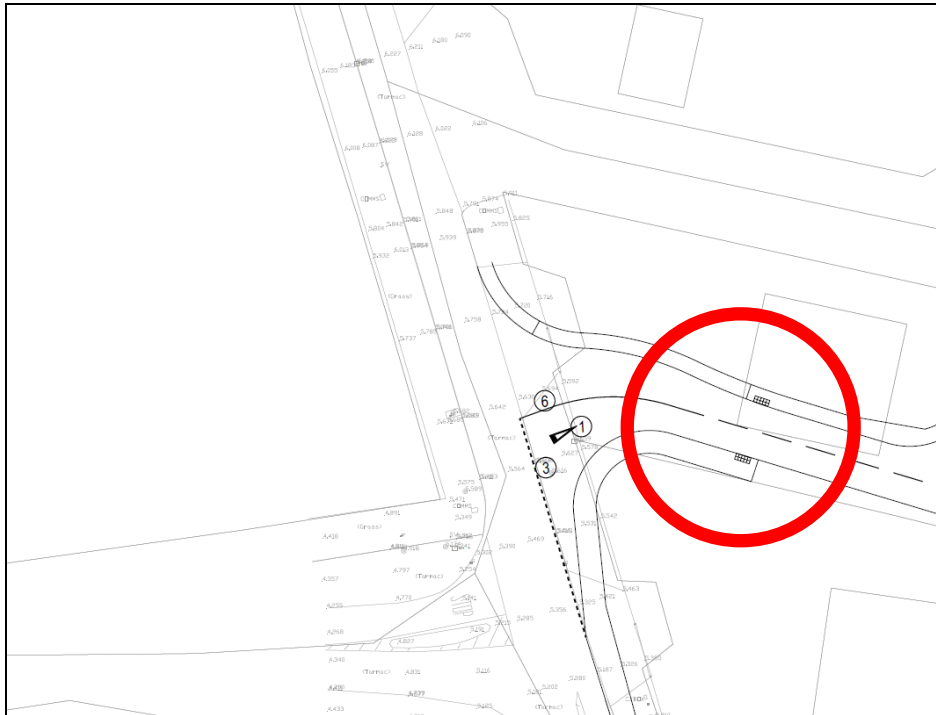
Location: Proposed New Priority Junction on Main Port Access Road

Summary: Proposed Pedestrian Crossing Outside Desire Lines

The pedestrian crossing located close to the proposed new priority junction on the main port access road (see Figure 3.3) appears to be well outside pedestrian desire lines for the majority of users and will potentially not be used by most pedestrians. This may potentially result in pedestrians or other non-motorised users crossing the carriageway at inappropriate locations and coming into conflict with passing traffic.

Recommendation

It is recommended that the design team ensures that there is appropriate continuity of pedestrian facilities at this junction along pedestrian desire lines.



**Figure 3.3: Proposed Uncontrolled Pedestrian Crossing in Vicinity of New Priority Junction on Main Port Access Road** (Source: RPS drawing *Proposed Road Markings – Sheet 1 of 4*, ref: H0548-RPS-XX-00-DR-HE-110-02)



### **Problem 3.1.6**

Location: Throughout the extents of the proposals

Summary: Pedestrian Facilities

The information provided for audit does not clearly indicate the extent, configuration and tie-in details of the proposed pedestrian facilities. Inadequate or inappropriate pedestrian facilities along pedestrian desire lines may potentially result in pedestrians or other non-motorised users entering the carriageway at inappropriate locations and coming into conflict with passing traffic.

Recommendation

It is recommended that the design team ensures that there are appropriate pedestrian facilities throughout the scheme along pedestrian desire lines, and which appropriately tie-in to existing pedestrian facilities.

### **Problem 3.1.7**

Location: Throughout the extents of the proposals

Summary: Signage

The information provided for audit does not show details of signage. An inappropriate level of signage may lead to road users failing to yield where required and potentially coming into conflict with other road users.

Recommendation

It is recommended that the design team ensures that appropriate signage is included and subject to the RSA process.

### **Problem 3.1.8**

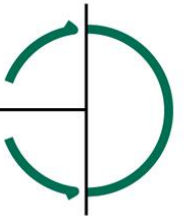
Location: Throughout the extents of the proposals

Summary: Drainage

The information provided for audit does not show details of drainage. Without appropriate drainage the proposed road surface may pond with the potential to cause skid or slip accidents.

Recommendation

It is recommended that the design team ensures that appropriate drainage is included and subject to the RSA process.



**4 COMMENTS**

It is recommended that a Stage 2 Road Safety Audit be undertaken at detailed design stage.



## 5 CONCLUSIONS

This Stage 1 Road Safety Audit Report recommends various actions, which should be considered for inclusion in the detailed design process. Where recommendations are not incorporated into the design this should be documented in an Exception Report and forwarded to the ILTP Road Safety Audit Team. The Design Team should document and provide the rationale for incidences where the audit recommendations have not been incorporated or where alternatives are put forward.

The Design Team should respond to all issues raised in this Stage 1 Road Safety Audit Report through returning a signed copy of the Road Safety Audit Feedback Form included in the appendices.



**6 ROAD SAFETY AUDIT TEAM STATEMENT**

**6.1 Statement**

We certify that the drawings and documents provided with the Audit Brief have been examined. The examination has been carried out with the sole purpose of identifying any features of the scheme that could be improved or modified in order to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be considered for implementation.

**6.2 Signatures**

**6.2.1** Audit Team Leader Signature

**Name:** Ken Swaby  
**Position:** Transport Engineer  
**Date:** 25 / 04 / 2018  
**Organisation:** ILTP Consulting

**Signed:**

**6.2.2** Audit Team Member Signature

**Name:** Mark Andrews  
**Position:** Transport Engineer  
**Date:** 25 / 04 / 2018  
**Organisation:** ILTP Consulting

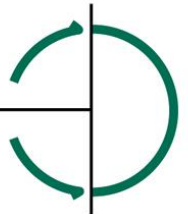
**Signed:**



**ROAD SAFETY AUDIT FEEDBACK FORM**

**Road Safety Audit Reference** RSA SHANNON FOYNES S1 KS 275  
**Audit Stage** Stage 1  
**Date Road Safety Audit Completed** 25<sup>th</sup> April 2018

<b>Para No. in Report</b>	<b>Problem Accepted (Y/N)</b>	<b>Recommendation Accepted (Y/N)</b>	<b>Comments / Alternative Measures (Describe)</b>	<b>Alternative Measures Accepted by Auditor? (Y/N)</b>
3.1.1				
3.1.2				
3.1.3				

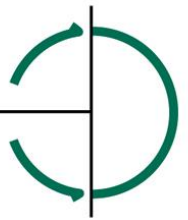


Para No. in Report	Problem Accepted (Y/N)	Recommendation Accepted (Y/N)	Comments / Alternative Measures (Describe)	Alternative Measures Accepted by Auditor? (Y/N)
3.1.4				
3.1.5				
3.1.6				
3.1.7				



Para No. in Report	Problem Accepted (Y/N)	Recommendation Accepted (Y/N)	Comments / Alternative Measures (Describe)	Alternative Measures Accepted by Auditor? (Y/N)
3.1.8				





**Signed**

**Design Team Leader**

Date   /  /  

**(Please Complete and return to the Auditor)**

**Safety Audit Signed Off;**

**Road Safety Audit Team Leader**

Date   /  /