

Estuary Junction, Main Operational Observations

Date: Friday, 16 October 2026

Observation period: Approximately 14:00 to 14:30

Weather: Dry Bright

Traffic Volume: Moderate – High: Constant flow but off peak.

Executive Summary

The newly opened Estuary junction was observed to have two significant functional problems.

1. HGV turning restriction from the R125 Balheary Road West onto the northbound R132.

2. Right turn queue from the northbound R132 onto Balheary Road West.

The following are observations only and should be properly measured by a suitably qualified Traffic Engineer.

1. HGV turning restriction, R125 Balheary Road to northbound R132

The turning geometry was observed to be too tight for HGVs approaching from the R125 Balheary Road from the west to complete the right turn onto the northbound R132 normally.

On a green signal, with the R132 on their left, HGVs must crawl towards the central island and then swing sharply left to obtain sufficient rear wheel clearance before completing the turn.

This necessary manoeuvre blocks following traffic and prevents left turning vehicles from moving until the HGV has cleared the junction.

Effect on traffic

The manoeuvre is slow and consumes a large part of the available junction space. While an HGV is positioning itself and making the turn, following traffic cannot proceed normally. Cars that could otherwise turn left are also held because the HGV needs the available road space to complete the manoeuvre.

One HGV can therefore consume a significant part of a signal phase and sharply reduce the number of vehicles that clear the junction.

Network effect

The effect is not confined to the immediate junction. Despite the main road works having been removed, a Swords Express service was observed taking approximately 10 minutes to travel from the Fire Station area to the new Estuary junction.

Traffic was observed backing more than 100 metres on Watery Lane, while traffic from North Street was also feeding into the same congestion.

A 33A driver surveyed at the location reported being approximately 10 to 15 minutes behind schedule.

See images at end of document.

This shows that the HGV turning restriction is reducing junction throughput enough to trigger delays across adjoining roads and bus routes.

This is not a temporary construction issue

The problem was initially assumed to arise because the junction was unfinished, with the expectation that the remaining curved sections of the former roundabout might become slip roads. The published designs show that this is not the case.

2020 consultation schematic: <https://consult.fingal.ie/en/system/files/materials/16085/Public%20Consultation%20Document.pdf#page=16>

Reference: Figure 6.1, Estuary Junction Emerging Preferred Option

Later planning drawing: https://consult.fingal.ie/ga/system/files/materials/17999/14.%20R132CP%20Planning%20Drawings_0.pdf#page=9

Reference: Drawing 200021-DBFL-RD-SP-DR-C-1107

The restriction therefore appears to be part of the permanent junction design.



Figure 6.2: Existing and Proposed Estuary Junction Layouts

Figure 3. 2020 consultation render of the proposed Estuary junction. The visualisation shows the intended finished geometry and does not show a separate vehicle slip road for the R125 Balheary Road west approach to the northbound R132.

Source: [Public Consultation Document, page 17, Figure 6.2](#)

Temporary mitigation possible solutions

A temporary slip road could be formed using traffic cones along the remaining outer curve of the former roundabout. Left turning traffic from the R125 could use this temporary lane to join the northbound R132 separately from the main junction movement.

This would remove left turning cars from the road space currently required by HGVs and allow HGVs to make the right turn more naturally.

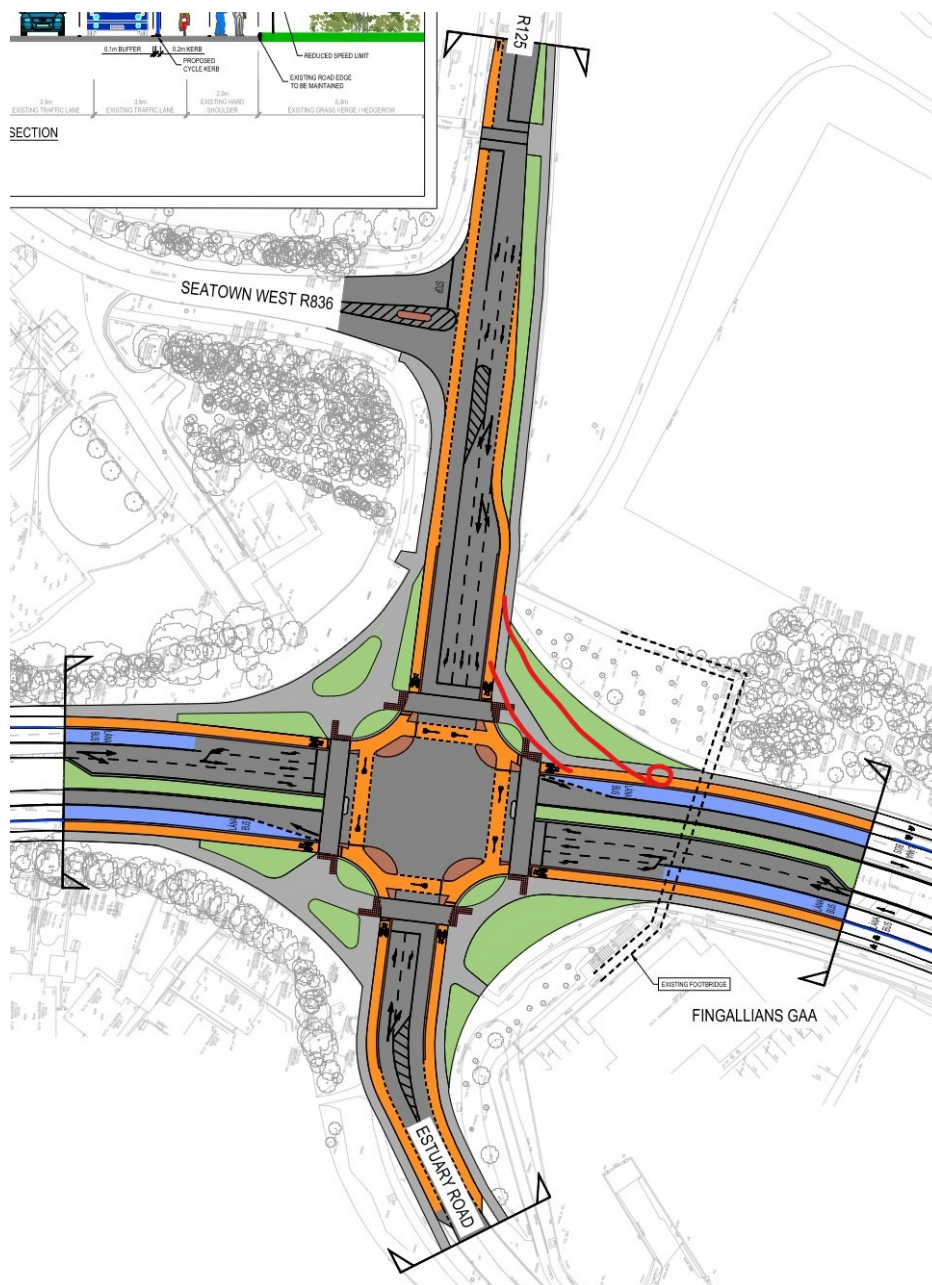


Figure 1. Proposed temporary R125 to northbound R132 slip arrangement. Red line indicates the proposed temporary slip route using the former roundabout geometry. Red circle indicates the proposed stop point before joining the northbound R132. Annotated extract based on Drawing 200021-DBFL-RD-SP-DR-C-1107.



Figure 2. Live view of the Estuary junction during current works. The red annotation shows the same potential temporary slip route and stop controlled merge point in the existing physical space.

Controlling the temporary slip road

The temporary slip cannot simply operate as an unrestricted turn because vehicles joining the R132 must yield to northbound traffic approaching from the right.

The simplest emergency arrangement would be a temporary stop sign at the end of the slip. Vehicles would stop and enter the R132 when the normal junction signal sequence creates a safe gap. When northbound R132 traffic is stopped at the signals, traffic waiting on the slip would naturally receive an opportunity to join.

If observation showed that the stop controlled arrangement was insufficient, a temporary signal connected to the existing junction sequence would be the next option.

Conclusion on Issue 1

This is an emergency mitigation for an immediate operational problem. The underlying HGV restriction is long term because the same restrictive geometry appears in both the consultation proposal and the later planning drawing.

The 2020 public consultation also expressly identified reduced vehicular capacity as a disbenefit of replacing the roundabout with the signalised junction.

How a turning restriction of this scale remained in the final design is a separate question. The immediate requirement is to prevent the problem being completed and accepted as the permanent operation of the junction.

2. Right turn queue from the R132 north approach onto Balheary Road West

The dedicated right turn lane cannot accommodate the observed demand and the signal phase does not reliably clear the queue. Once the lane fills, waiting traffic backs into the main R132 lanes and reduces through capacity for Right and through traffic causing a tailback.

Traffic approaching the junction from the north on the R132 and turning right onto the R125 Balheary Road West is provided with a dedicated right turn storage lane.

This lane is not insignificant in size. However, it is still unable to accommodate the observed volume of right turning traffic. The issue is not simply whether a right turn lane exists. The issue is that the junction cannot process this turning demand quickly enough.

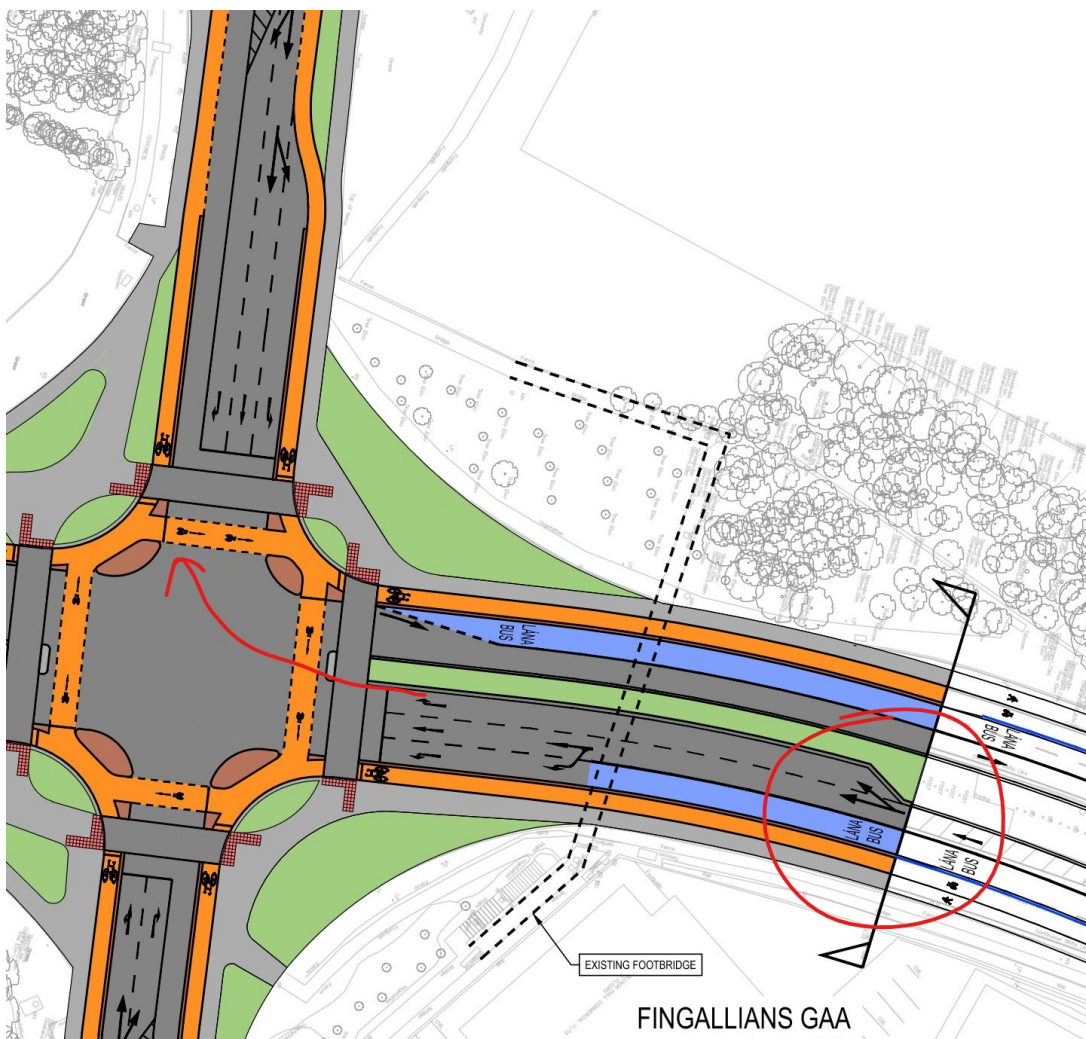


Figure 4. Northbound R132 right turn onto Balheary Road West. Annotated extract showing the dedicated right turn storage lane. The issue is not the absence of a turn lane, but that the movement still cannot deal with the volume of right turning traffic and the queue backs into the main R132 flow.

Failure to clear the queue

Observed demand for this movement is greater than the junction can reliably discharge. Once the turning lane fills, the queue extends backwards into the main R132 traffic lanes. Vehicles travelling straight through the junction are then obstructed by traffic waiting to turn right.

The underlying problem is therefore a combination of storage capacity and discharge capacity. The right turn signal phase does not consistently clear the volume of traffic waiting to turn onto Balheary Road West.

During the field observation, approximately 20 vehicles cleared during one right turn phase, yet the demand was sufficient for the turning queue to build again shortly afterwards.

Observed cycle: the right turn lane fills; the queue reaches the through lanes; R132 through capacity is reduced; the right turn phase clears part of the queue; the lane then fills again.

This shows that even a substantial right turn pocket is not enough if the junction cannot release vehicles at the rate required.

Conclusion on Issue 2

The northbound right turn requires urgent adjustment while the junction remains in its trial phase.

The problem should not be understood simply as a short lane. It is a movement with insufficient overall capacity because the available storage and the available green time together are not enough for the level of demand.

Signal timing should be calibrated against live observed demand, with the objective of clearing the turning queue before it repeatedly spills back into the R132 through lanes.

Overall conclusion

The Estuary junction is not simply experiencing normal bedding in after opening. Two specific operational failures are already visible.

The first is geometric and affects HGV turning from Balheary Road onto the northbound R132. The second is a capacity and signal issue affecting the northbound R132 right turn onto Balheary Road West.

Both are already creating wider congestion and bus delays. The junction is still at the point where practical intervention is possible. **That intervention should happen now, before these problems become accepted as permanent features of the finished layout.**

These problems are already having wider network effects. Swords Express was observed taking approximately 10 minutes to travel from the Fire Station area to the new junction. Traffic was backing more than 100 metres along Watery Lane, while North Street traffic was feeding into the same congestion. A 33A driver surveyed at the location reported running approximately 10 to 15 minutes behind schedule from North street Direction.

The immediate priority should be to intervene while the junction is still in its trial and finishing stage.

		
Traffic merge form North Street onto Balheary 33 + 41 bus delays	Gridlock between Firestation and Junction R132 in background	Watery Lane and North Street Gridlock feeding into Balheary Road R