

Improvement to A39 Westleigh Junction

Report of the Deputy Executive Director of Environment, Economy and Culture

Please note that the following recommendations are subject to consideration and determination by the Cabinet (and confirmation under the provisions of the Council's Constitution) before taking effect.

Recommendations: It is recommended that:

- (a) the revised layout shown on drawing EATS(N) 351/39/0 be approved;**
- (b) the final estimated cost of £660,000 be approved, for implementation;**
- (c) copies of this report and decision be sent to the District, Town and Parish Councils, stakeholders and those who responded to the consultation.**

1. Summary

Consultation with the stakeholders and District Councils has taken place regarding the proposed introduction of traffic signals to enhance safety at this junction. This report provides feedback on the consultation and presents further analysis of the improvement options supporting the implementation of the traffic signals.

2. Background

At the 14 July 2010 meeting, Cabinet resolved:

“that the traffic signal improvement layout shown on drawing EATS(N)351/20/0 be approved for consultation with local District and Parish Councils and that delegated authority be given to the Cabinet Member for Highways and Transportation for final scheme approval, providing there are no materially significant objections at the consultation stage.” (Minute *215 refers).

At that meeting the Cabinet had been presented with a number of options that had been assessed in terms of safety benefits, value for money and future growth of the network. These options are indicated below with their estimated costs (2009 prices);

- (a) Banning of Right Turns at the junction (£240,000)
- (b) Ban Right Turn From the A39 (£240,000)
- (c) Alternative Right Turn Lane (£480,000)
- (d) Installation of Traffic Signals (£630,000)
- (e) A Small Roundabout (£1.42m)

The first three options were discounted mainly due to the risk of transfer of the accidents to other parts of the network and the poor value for money these schemes would offer. It was also noted that none of these options would deal with the future growth forecast for Bideford and Barnstaple over the next 15 years.

The prospective roundabout and traffic signal options had been developed further, and tested to assess their ability to cope with anticipated growth. Both schemes were shown to require further expansion over the next 15 years and therefore two further schemes were developed for 2026 traffic flows. These are indicated below along with their costs;

- (a) Large Roundabout (£2.8m)
- (b) Expanded Traffic Signal layout (£1.14m)

The major consideration for the large roundabout was the additional land that was required, and the high costs to upgrade from the small roundabout. However it was concluded that the traffic signal layout could be easily extended at a later date and the costs could probably

be met in part by developer contributions. Hence Cabinet concluded in July 2010 that the traffic signal option would be both more cost effective and more flexible.

Following representations from Bideford and Northam Town Councils during the consultation (detailed below), the Torridge Highways and Traffic Orders Committee (HATOC) raised objection to the scheme and this was reported to the Cabinet at its meeting in April 2011. Further support for the traffic signals scheme by the North Devon HATOC was also reported at this meeting.

3. Consultation

The consultation was undertaken in a number of ways to ensure maximum inclusion. Each of the Statutory Consultees, including District and Parish Councils, emergency services and Freight Transport Associations received consultation letters and plans both through the post and via email.

A website displaying the plan and exhibition text was made public, along with a linked email address so comments could be made online. This was backed up with a two week, unmanned exhibition placed at both Barnstaple and Bideford libraries, where the public were invited through the press to write or email their comments.

There were initially 4 responses from Statutory Consultees and 13 from members of the public. Sustrans and the Police both supported the proposed junction changes, with the Police making further suggestions to the scheme, which has led to minor amendments. Northam and Bideford Councils both objected to the signals, seeking a roundabout instead.

Twelve public responses objected to the signals with seven of those wanting a roundabout in its place. The main reason stated in objection was concern about congestion and length of the queues that traffic signals would cause. Two public responses also provided alternative layouts which have been reviewed and it is considered that they would not be feasible as they would be likely to fail a safety audit.

Following the initial consultation process, a meeting was held with Northam and Bideford Councils, where similar objections were raised regarding queue lengths and congestion. A further alternative layout was proposed by a Town Councillor, who suggested retaining the priority junction with a right sided merge lane. This was reviewed by the safety auditors who considered the design concept to be non standard and therefore counter intuitive. Also, this proposal would not remove the right turn conflict at the centre of the junction.

A further two letters of objection have been received from members of the public following recent press coverage of the HATOCs' meetings. Both object to the signals, preferring a roundabout, raising queue lengths and congestion as a major concern.

4. Option analysis

Due to the concerns raised about queue lengths of the prospective traffic signal scheme, further junction capacity analysis has been carried out. The analysis has looked at the capacity of the junction and longest queue lengths likely to occur using current traffic flows (2009 data) and drawing a comparison between the traffic signals and small roundabout options.

The analysis shows that the two options (signals and small roundabout) would each be well within the junction capacity at current flow levels, with the queues and delays slightly higher for the signals. The longest queue length on the signals is shown as being 9 vehicles (in comparison to 3 vehicles on the roundabout.) This would be as expected at signals as there is a need to stop and wait as the signals pass through the various phases, but the modelling work suggests that the queues would clear during each phase.

Some concern had been expressed by consultees that queues would stretch back from the signals over the Torridge viaduct, but it should be noted that the signal layout proposed has two lanes eastbound at the stop line, which together will provide more capacity through the junction than the single eastbound lane over the viaduct.

5. Implications of Future Growth at Bideford and Barnstaple

The prospective traffic signal and roundabout junction layouts have also been tested to assess their ability to accommodate anticipated traffic growth over the next 15 years. From traffic models developed as part of the Local Development Framework for Barnstaple and Bideford, traffic flow predictions for 2026 have been developed for this junction.

As expected tests with these 2026 figures show that both options would be working well above their design capacity, particularly during the evening peak hour and as a result the queue lengths and delay would significantly increase. The 2026 queue lengths on the small roundabout are also predicted as being significantly higher at 103 vehicles, compared to 63 vehicles on the traffic signals.

As a further check, these figures were used to analyse the two options that have been developed to cope with the increase in traffic growth, the large roundabout and the expanded signals layout. Each of these options would have sufficient capacity to handle the 2026 flows, with the large roundabout performing slightly better than the signals. The queue length for the large roundabout is low at 2 vehicles, whereas the traffic signals will be a maximum of 12 vehicles, in each of the two lanes. The overall delay would be greater with the signals, due to the need to complete the full cycle of the lights.

6. Conclusions

The analysis above demonstrates that safety enhancements could be achieved at the Westleigh junction by introducing either a roundabout or traffic signals. However, the roundabout layout would provide relatively poor value for money at £1.42m, and it would not be possible to cost effectively expand the size of the roundabout to accommodate future development growth. In contrast, a traffic signal layout would provide good value for money only costing £660,000, and would be capable of extension later to provide more capacity in relation to future traffic growth. It is therefore concluded that the installation of a traffic signal layout as shown in drawing EATS(N)351/39/0 would be the more appropriate at Westleigh junction.

7. Financial Considerations

No further low cost accident remedial measures have been identified for the Westleigh junction, and therefore any of the options considered would involve a significant capital cost. However, there is funding available in the capital programme approved by the County Council in February 2011, of £660,000 for design and implementation of safety measures on the A361/A39 in 2011/12, including £30,000 of Section 106 monies.

Hence there is adequate funding available to deliver the most cost effective of these solutions tested, the traffic signal layout, should Members approve this.

8. Sustainability and Carbon Impact Considerations

Thus far, the options which have been considered have been subjected to a design and safety audit process. As part of more detailed design development, the final proposals will need to be subject to an environmental assessment process, to judge their impact on drainage, air quality, noise, vibration, geology and ecology.

By virtue of their more limited civil engineering impact it is likely that the traffic signal options would give rise to less concern than the roundabouts in this regard, but traffic signals may be considered to impose an adverse visual impact.

With regard to carbon impact, it is unlikely that either the traffic signal or roundabout options would produce a significant change in traffic patterns, and therefore the carbon impact is likely to be broadly neutral, though there would be a carbon impact caused by the construction activity.

9. Equality Considerations

A full Equality Impact and Needs Assessment has been completed to accompany the detailed junction design. The following positive impact was identified - there is the potential that elderly drivers will find the new junction easier to negotiate and this may reduce collisions.

10. Legal Considerations

There are no specific legal considerations relating to these proposals.

11. Risk Management Considerations

No risks have been identified at this stage.

12. Reason for Recommendation

An improvement to the A39 Westleigh junction is considered appropriate in order to resolve the long standing safety concerns at this location. A number of options have been considered in terms of their ability to deliver a reduction in accidents, and to accommodate future travel demand. The recommendation is that a travel signal layout would be the most appropriate design to implement as it would provide a more cost effective solution than the other junction layouts considered, and has greater capability for achieving enhanced capacity at a later date.

Ian Harrison

Electoral Division: Fremington Rural

Cabinet Member for Highways and Transportation,
Councillor Stuart Hughes

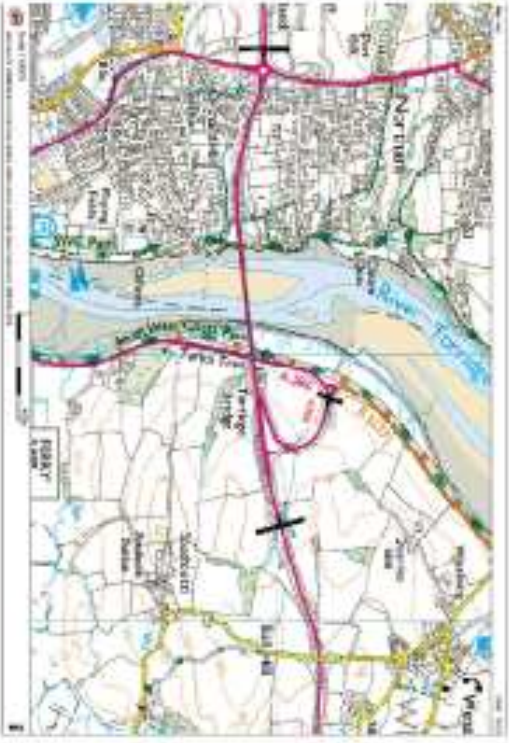
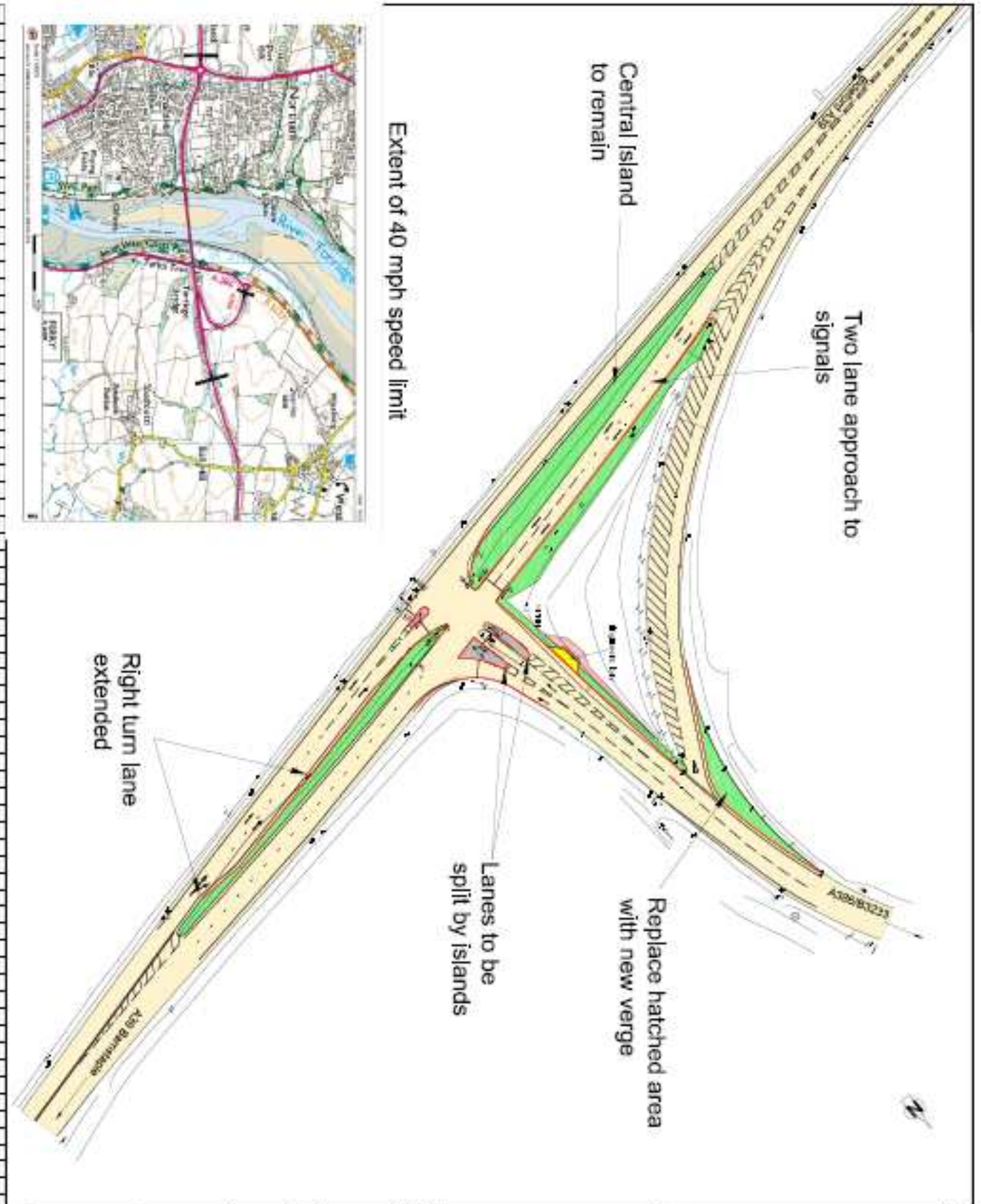
Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref
1. A39 Westleigh Junction Design Files		EATS (N) 351



EATSI(N)251/29/0

- Tarmac
- 40mph
- Island
- Right-turn lane
- Lane marking



Devon
County Council

Transport Planning
Planning and Design

2023/24
2023/24

4.5.0
Westleigh - North

TRAFFIC SIGNALS

Traffic Signals
Control Plan
Signal Plan

EATSI(N)251/29/0