

RENFREW TOWN CENTRE REGENERATION

Joint paper by

**Scott Allan
Transportation Manager, Renfrewshire Council**

&

**Duncan Birrell
Regional Director, Colin Buchanan**

Preface

In 2008 a revised traffic system was introduced in Renfrew TC, a town with a population of around 20,000 to the west of Glasgow. This was part of a £3.9m regeneration project designed to revitalise a town suffering economic decline through the loss of traditional industry.

A key objective was to retain high volumes of traffic in streets predominantly designed for people within the context of high quality urban design. Delivery of the traffic management scheme was a partnership involving Renfrewshire Council and Colin Buchanan. This paper presents a view from both Council and Consultant on a project which severely tested public and political support during implementation.

THE COUNCIL'S VIEW

Introduction

This paper describes the transportation elements of a regeneration strategy for Renfrew, a town of approximately 20,000 population, sitting to the west of Glasgow which had suffered from retail and general economic decline. The paper describes the process of public consultation, design of a revitalised town centre, implementation and subsequently the outcomes for both retail activity and traffic/pedestrian movements. This project was an ambitious attempt to implement innovative street design in a situation where high traffic volumes would continue through the main shopping areas. The Council worked in close partnership with Colin Buchanan with respect to the design of the traffic system and the compromise between streetscape aspirations and necessary requirements for traffic.

Background

Renfrew is a town of approximately 20,000 population sitting west of Glasgow, sandwiched between the M8 motorway and the River Clyde. Historically the town thrived on industrial activity along the River Clyde but like many similar locations suffered a decline in both employment and the retail centre associated with the migration of economic activity to new technologies and new locations. The town retains significant strengths however in that it lies adjacent to Glasgow Airport, has excellent access to the M8 and continues to provide a gateway to the River Clyde.

Early in 2003, the Council commissioned a study targeted at enhancing the attractiveness and accessibility of Renfrew town centre, maximising the linkages between the existing town and the urban extensions and reinforcing the economic vitality and viability of the town centre. Just east of Renfrew a major masterplan was in the process of implementation involving 2,500 new houses, commercial development and retail all on former industrial sites. This ribbon of development links Renfrew to the Braehead retail Complex and IKEA.

Anticipated from the study were proposals for streetscape improvements, traffic management and parking proposals, urban design guidance and advise on the enhancement of linkages to adjacent economic generators. The primary objective was to create an environment for improved investment in the town centre, through a more attractive environment that would capitalise on a growing population and serve to complete with more modern alternative facilities which existed nearby, such as Braehead within the context of an historical town centre.

Working with consultants, the Council sought to extract as wide a view from people and businesses active in Renfrew as possible. Various working groups were held therefore in the preparation of options culminating in an extensive public consultation in the autumn of 2004.

The commercial heart of Renfrew town centre essentially involves two streets, namely High Street and Hairst Street. High Street and Hairst Street meet at a focal point in front of a spectacular Town Hall. Traffic surveys had indicated that a significant volume of traffic passing through Renfrew was through traffic which brought no economic benefit. To a large extent the A8 which essentially runs through the town acts as an alternative to the M8 for a significant number of local trips. The proposals emanating from the first element of study and subject to consultation therefore proposed the following:-

- The creation of a town centre environment which was pleasant and attractive incorporating reduced carriageway widths, more space for pedestrians, high quality landscaping and streetscape and a design which strengthens Renfrew's identity. The proposed transition to identify town centre space as opposed to strategic road was designed to deter the significant volume of through traffic.
- Creation of two innovative pieces of design, firstly a double mini-roundabout in the form of a shared surface at Renfrew Cross where traffic volumes exceed 20,000 vehicles per day. In addition, in front of the Town Hall the major junction of High Street and Hairst Street was proposed as a fully uncontrolled junction on a shared space. Again this location was anticipated to carry traffic volumes in excess of 10,000 vehicles per day.
- Changes were proposed to car parking to increase available spaces on street in the vicinity of shops catering for short stay parking.

The proposals were estimated at that time to cost in the order of £3.9m. A full public consultation exercise was carried out towards the end of 2004 and generally the public reaction was extremely positive. Some key issues which emerged however were a lack of public support for shared surfaces with large traffic volumes and consequently a need to reconsider traffic signal control solutions with full pedestrian facilities. In consequence, extensive redesign was carried out to formalise signal control at the two key junctions within the town centre and model their potential operation. In the case of the Cross, there is a slight stagger on the primary route through the Cross, making design of a signal control system particularly complex.

The concept of enhancing the medieval street layout on Hairst Street was retained by removing the former central reservation and substantially widening the footways. Hairst Street has a traditional village centre appearance of a street wide at one end, narrowing down at the other end. Removal of clutter produced by the existing road layout had the potential to really open up this space and display historical buildings in a much more favourable context.

At this stage in the process there was general political support across the Council for the proposals, although there was a campaign for the retention of flowerbeds in the High Street which became very emotive and potential a deal breaker. Perhaps surprisingly, this one issue became the biggest single focus of consultation feedback and was quickly conceded.

Initial evaluation of the traffic system suggested that during peak periods congestion could be an issue, particularly at the Cross. A fundamental decision was taken to assume that 60% of through traffic would divert onto alternative routes. A risk in carrying out an evaluation on this basis was that no modelling package could realistically predict this and it was largely a subjective assumption. It did however reflect the fact that strategic signposting, journey times and the nature of the road would in normal circumstances suggest that traffic would avoid Renfrew town centre rather than run through it. Modelling predicted that if 60% of the traffic running through the town centre without stopping on the old A8 was to divert then traffic congestion would be no worse than prior to the proposals on the table. In numbers a 60% reduction in through traffic on the A8 represented something of the order of 5,000 vehicles per day diverting in comparison with around 20,000 vehicles per day travelling in and around the Cross in Renfrew.

Construction commenced in 2006 and was mostly complete by July 2008. During the period of construction, local opinion began to move significantly against the proposals. Working in town centres is always difficult and with reduced road space, extensive congestion became normal. A concern was the extent to which the prolonged construction phase turned local elected members and the general public against the overall concept. With the streetscape mostly complete in July 2008, the new traffic system was enacted and the complex signal traffic control junction at the Cross tested. Conditions were optimum for the switch on due to low summer traffic levels and fine weather.

The complex junction operated reasonable well with the exception of many near misses as locals found difficulty in adapting to new lane layouts and complex movements through the junction.

In the early days, traffic congestion was minimal and consequently people who had avoided Renfrew began to return, slowly raising the traffic volumes to levels prior to the commencement of roadworks. By November 2008 extensive congestion was a feature of Renfrew town centre and once again there was a significant reaction against the traffic operation of the scheme.

The design elements of the scheme were generally well appreciated, particularly clutter free streets and the wide footways. A negative aspect however was the extent of reaction by the public against semi-shared surfaces and 50mm kerb heights. Many members of the public found it difficult to interpret which spaces were for vehicles and which spaces were for people. Whilst the general appearance of the town centre was exceptional, the scheme became plagued with motorists who parked on peoples spaces.

Traffic counts in November of 2008 identified that through traffic on the A8 had only reduced by around 30%. There had also been significant re-routing of traffic through the town centre in view of the new traffic management system. People clearly chose routes differently depending on the ease of making certain movements. In consequence overall traffic volumes at the congested cross had reduced by 27%. Considerable effort is now being put into refining signal timings and linkage between the two key signal control junctions to better manage the actual traffic volumes and routings.

Towards the end of 2008 and into 2009, the town centre was dealt a further blow with the early stages of recession. Retailers described a clear decline in trade and naturally blamed it on the town centre regeneration strategy. Given the problems of raising finance during recession, the private sector finds it more difficult to capitalise on the opportunities created by the more attractive town centre and the general mood is one of concern that while the town may look more attractive, accessibility has been lost. Only time will tell whether the scheme is truly successful but at this stage views across different sectors of the community are clearly mixed, with community groups strongly supporting the enhanced pedestrian and visual aspects of the town whilst retailers and business people raise concern over congestion and accessibility.

A factual analysis at this time identifies increased congestion at peak times and consequent delays to traffic in comparison with the previous situation and we hope to reduce this.

A key question in this scheme is whether the current philosophy that enhancing pedestrian space through good streetscape design, passing the street back to the people and placing traffic lower in the hierarchy actually contributes to economic regeneration. Studies nationally continue to show enhanced economic performance following pedestrianisation but in locations like Renfrew, where there is a wide range of accessible and highly competitive alternatives, the wisdom of this regeneration approach may be questionable. Unlike an assessment of traffic, a view on the success of increased economic activity can be highly opinionated and subjective.

Significantly however, in a town like Renfrew, public opinion appears heavily influenced by increased congestion. Support for a regeneration project at grass routes level, is likely to depend at least in the short term on successful traffic management systems which are perceived not to bring detriment.

THE CONSULTANT'S VIEW

Design Development

Renfrew Town Centre has suffered a notable decline in recent years and at the same time has seen a significant increase in the volume of through traffic. This increase in traffic has resulted in congestion problems within the town centre, road safety concerns and issues relating to pedestrian movement and the pedestrian environment .

Renfrewshire Council identified the need to regenerate Renfrew Town Centre and therefore approved the appointment of consultants to prepare proposals for traffic management and environmental improvements within the Town.

Renfrewshire Council recognized, at a very early stage, the importance the High Street and its overall function within the characteristic of Renfrew Town Centre. As such Renfrewshire Council sought to re-evaluate the function of the High Street and the surrounding area and assess it as a place rather than simply a street or a thoroughfare. This therefore became the philosophy behind the overall project which falls very much in line with the latest Scottish Government view as set out in the *Designing Streets Consultative Draft*.

Initial proposals for the Town Centre included the provision of double mini roundabouts at the Inchinnan Road / Glebe Street junction to replace the existing single roundabout. Alterations to the layout and function of the High Street were also proposed to accommodate parking, bus access and an overall improved pedestrian environment. These initial proposals also included the removal of the traffic signals at the High Street / Hairst Street junction with the introduction of a pedestrian priority zone.

The Council had previously commissioned Martin Stockley Associates along with Willie Miller Associates to prepare design proposals for the improvement of Renfrew Town Centre. As part of this study, a number of PARAMICS models were produced by Atkins in order to assess the potential traffic impact of the Town Centre proposals.

Following on from a successful Public Consultation in 2004, a very strong public preference was expressed for the retention of traffic signals at the High Street / Hairst Street junction mainly to maintain pedestrian crossing facilities. This, in conjunction with the proposals for the double mini roundabout at the Inchinnan Road / Glebe Street junction, meant that further analysis of Town Centre traffic movements was required in order to develop an optimum solution for both pedestrian and vehicle movements.

It was at this point that Colin Buchanan were appointed by Renfrewshire Council to join the consultancy team and to provide traffic and transportation advice in respect of the traffic solutions for the Town Centre.

As a direct consequence of the issues raised at the Public Consultation, Colin Buchanan were commissioned to re-examine the junction options for the Town Centre and to revisit the previous modeling work undertaken by Atkins.

Paramics Modelling

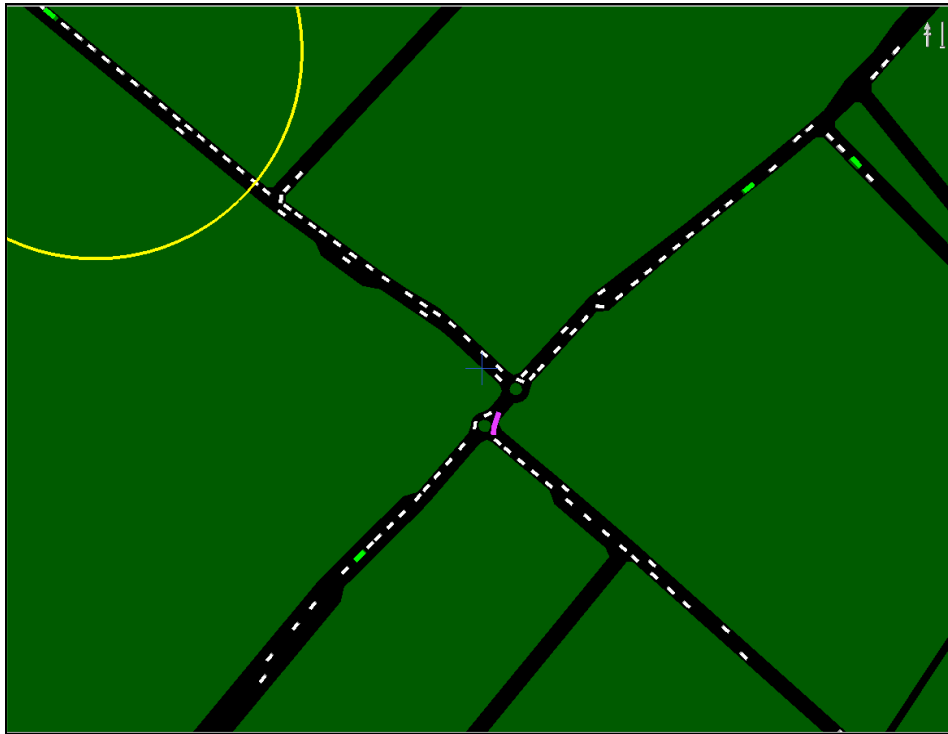
The original PARAMICS models used for the study were created by SiAS in 1999. The purpose of the original models was to assess the impact of Braehead Shopping Centre and consequently the focus of the original models was the M8 between junctions 25A and 29.

Atkins updated the SiAS models to improve the level of detail within the Renfrew area and to update the demand matrices using a series of roadside interviews and turning counts.

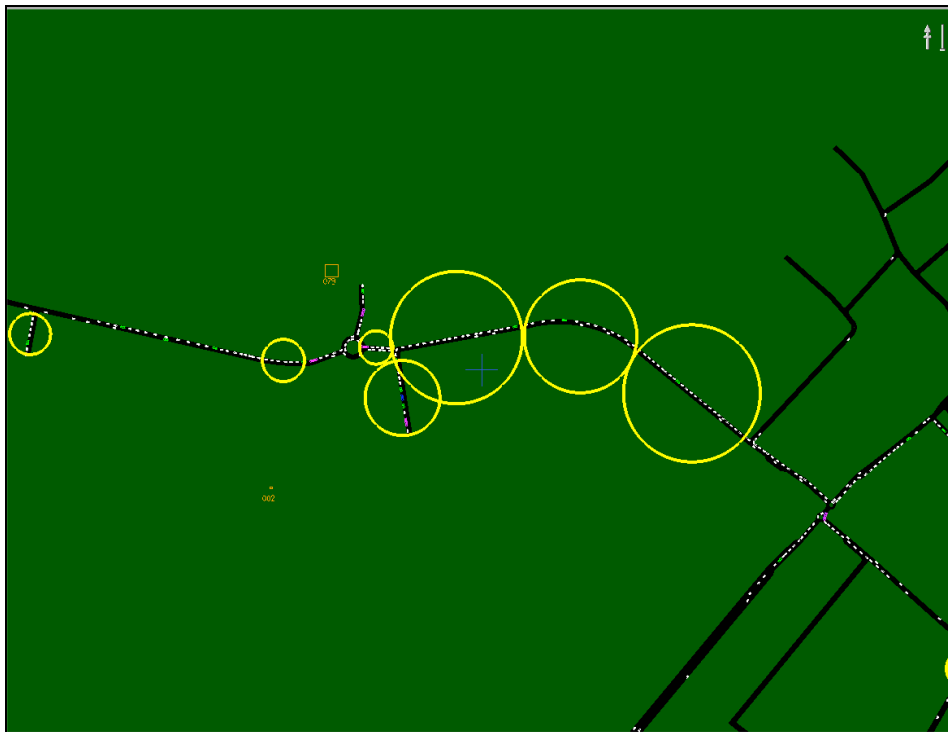
The A8 runs directly through Renfrew Town Centre and is very much used as the main route to Glasgow for traffic from Bishopton, Erskine and Inchinnan. This road passes directly through the centre of Renfrew, effectively severing the town. Traffic on the A8 provides no benefit to the Town Centre and indeed creates significant levels of congestion during the morning and evening peak periods.

Renfrewshire Council recognized at an early stage that this “through” traffic was undesirable and that, in conjunction with providing an overall improvement to the Town Centre, the traffic management proposals could also be used to control and indeed manage the “through” movements in the town.

At a very early stage in the detailed assessment of the Town Centre proposals it became clear that the use of double mini roundabouts at the Inchinnan Road / Glebe Street junction would be problematic. Not only would the double mini roundabouts restrict the movement of large vehicles but the capacities of the junctions were such that they could not accommodate the predicted volumes of traffic. The PARAMICS model therefore predicted significant congestion.



Queuing within Renfrew Town Centre – PM Peak (1715)



Queuing on Inchinnan Road – PM Peak (1715)

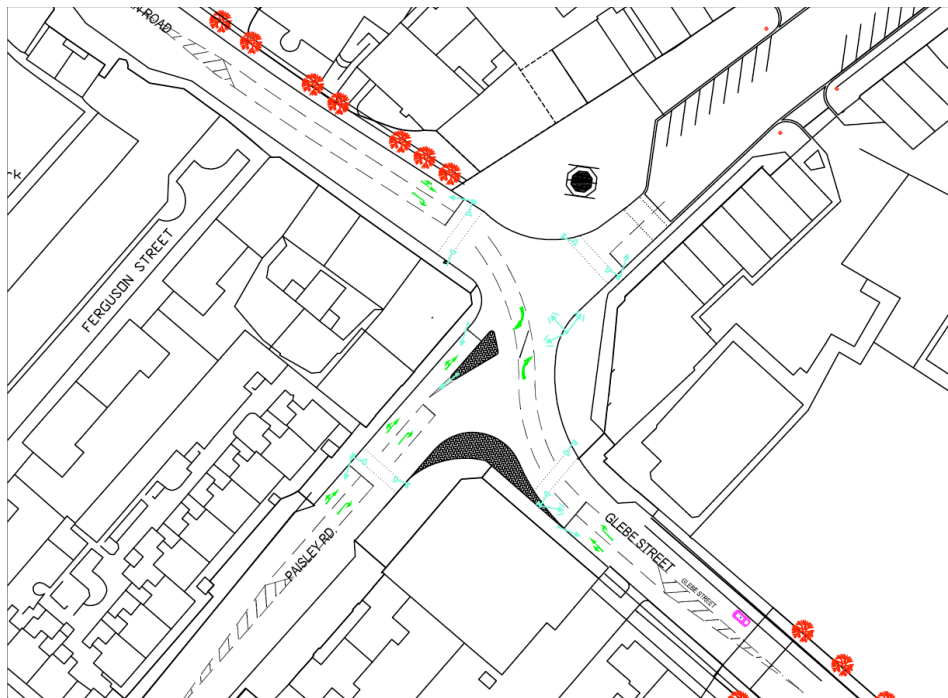
Due to the capacity and road safety issues created by the introduction of double mini roundabouts Colin Buchanan determined that the best solution for the Inchinnan Road / Glebe Street junction was in fact the introduction of traffic signals.

Traffic Signal Design

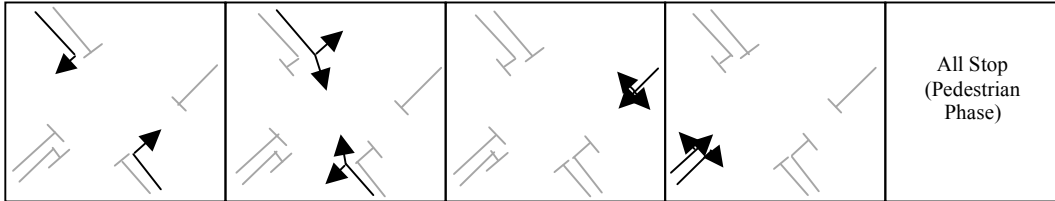
The design of the Inchinnan Road / Glebe Street junction was made all the more difficult due to a stagger on the primary A8 route and the fact that existing building lines presented significant constraints to the design of the junction.

The provision of pedestrian facilities was of course key to the junction design and these had to dovetail into the proposals for the High Street and the overall pedestrian environment for Renfrew Town Centre.

The initial designs for the junction included the introduction of build outs on Glebe Street in order to introduce an element of deflection on the primary route to ease the passage of vehicles. In addition, an internal island was proposed to guide right turning traffic from Paisley Road.

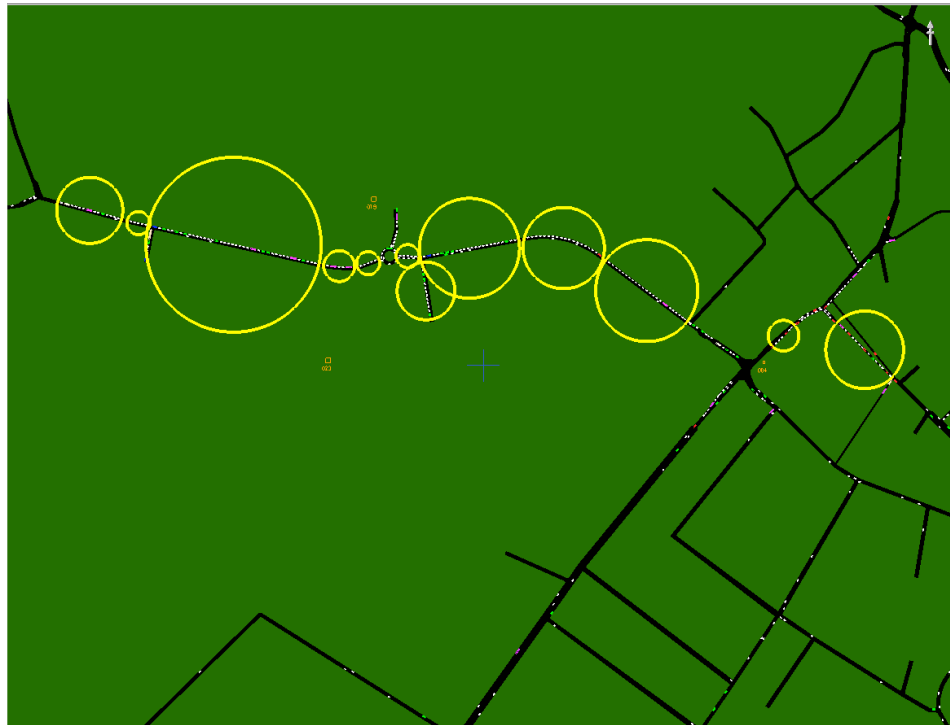


Initial Traffic Signal Design Inchinnan Road / Glebe Street



Staging Diagram Signal Design

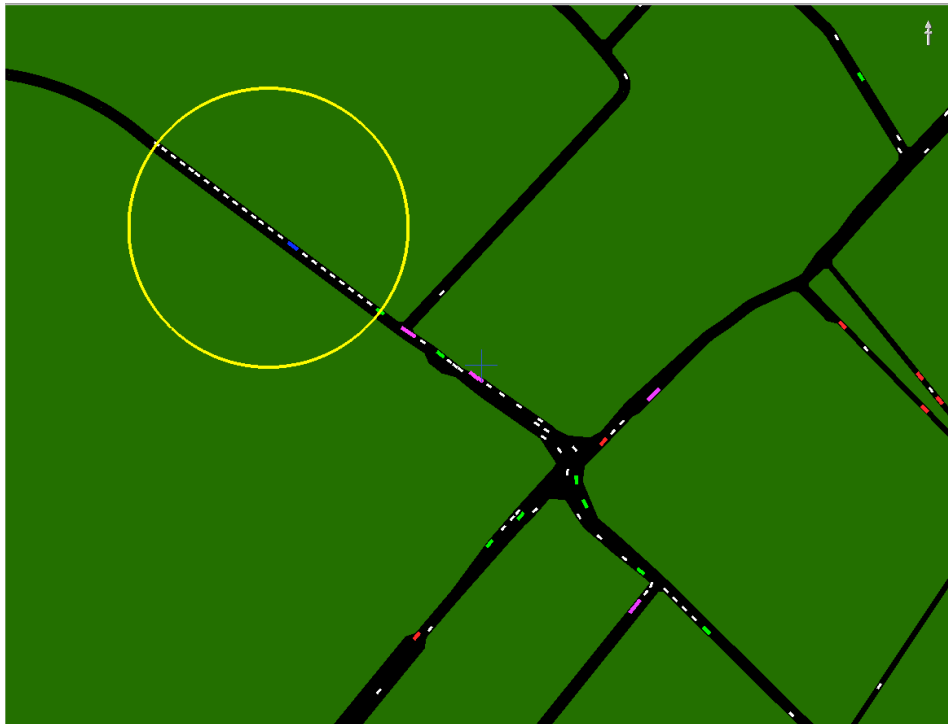
Initial testing of the proposals within PARAMICS indicated that a traffic signal controlled junction of this form using the staging proposed would introduce significant queuing on the main approaches. This however was in contrast to the separate Linsig assessment undertaken which indicated that there would indeed be queuing on the main approaches but not of the magnitude predicted by the PARAMICS model.



Initial Traffic Signal Design Predicted Queuing AM Peak

A review of the PARAMICS model parameters indicated that one of the parameters relating to driver familiarity was set to low. The familiarity factor allows drivers to reroute depending upon the level of congestion on the network. Setting the familiarity factor to a level inline with the PARAMICS default level meant that as congestion increased familiar drivers would re-route and possibly use the M8. This re-routing was of course in line with the aspirations of the Council.

The Paramics model was re-run and the results predicted from the model were very close to those predicted from the Linsig assessment. Congestion was still apparent within Renfrew Town Centre however its magnitude was predicted to be significantly less and was of a level which was manageable and acceptable to the Council.



Amended PARAMICS Model Predicted Queuing AM Peak

Construction of the traffic signals within the Town Centre was completed in July 2008 and the signals were commissioned on a quiet Sunday morning. The junctions operated reasonably well during the initial period although there were a number of issues with drivers adapting to the new layout and not reading signs or indeed signal aspects correctly.

During the summer months the level of congestion within the Town Centre remained at a constant level, mainly due to the drop in general traffic flows associated with the summer holiday period.

Towards the end of 2008, as traffic flows returned to a more normal level, the extent of congestion within Renfrew Town Centre increased considerably. Immediately there was a negative reaction to the level of congestion and the local view was that the signals were to blame. In reality the levels of congestion experience on street related very well to the levels predicted within both the PARAMICS and Linsig modelling and were at a level which was previously acceptable to the Council.

Recent traffic surveys within the Town Centre have shown that there has indeed been a drop in through traffic on the A8 of around 30%. Although this is less than the Council's aspirations for a 60% reduction, the introduction of the traffic management measures within the Town Centre have been successful in achieving a significant reduction in through traffic.

Traffic congestion remains within the Town Centre and Colin Buchanan are currently working with the Council to refine the signal timings based upon current vehicle flows. The aim is to improve the situation still further by reducing congestion to a level more acceptable to local residents and Town Centre traders and thereby improving still further the pedestrian experience.

Conclusion

Overall the traffic management proposals within Renfrew Town Centre have met with the aspirations of the Council and allowed the town centre environment to become more pedestrian friendly and inviting. It is hoped that this will in turn provide the catalyst for regeneration of the Town.

The debate however remains as to whether changing the hierarchy in a Town Centre such as Renfrew is appropriate and only time will tell if the scheme has indeed been a true success.