SAVOY CONSULTING
Specialist Solutions in Transport Planning

POTENTIAL RESIDENTIAL DEVELOPMENT: COLLINGHAM LANE, LONG ITCHINGTON

Transport Technical Note – December 2020

Introduction

Our client, Rosconn Strategic Land, has instructed Savoy Consulting to undertake the preparation of a technical note dealing solely with access considerations in relation to a potential residential development in Long Itchington. At this time, it is anticipated that up to 100 dwellings could be accommodated on the site.

The site in question is located on Collingham Lane, approximately 360 metres from its junction with Stockton Road.

To undertake this work, Savoy Consulting has had to update the traffic counts carried out in 2017 at the key junction of A423 Southam Road/Stockton Road. Due to current government restrictions it was not felt appropriate to undertake fresh traffic counts as traffic flows are currently below 2019 levels. Therefore, the traffic counts from 2017 were updated using appropriate TEMPro growth factors for Stratford District.

Two transport assessments which were produced to accompany planning applications in the area (Bloor Homes and Rosconn Strategic Land) that could affect the operation of these junctions have been examined. These applications have subsequently been granted planning permission and 'built out' There are currently no other committed developments in the area that need to be taken into consideration.

Existing Conditions

Southam Road, Stockton Road and Collingham Lane, from its junction with Stockton Road to the proposed site access, are all subject to a 30 mph speed limit.

The junction of Southam Road/Stockton Road is currently a priority controlled T-junction with a free flow left slip lane from Southam Road southbound to Stockton Road southbound.

Collingham Lane forms a priority T-junction with Stockton Road.

Proposed Access Strategy

Savoy Consulting is aware that the local highway authority has previously raised concerns in relation to the capacity of the junction at A423 Southam Road/Stockton Road.

As part of our brief therefore Savoy Consulting has been instructed to investigate the possibility of improving the junction at A423 Southam Road/Stockton Road and investigate the provision of a suitable junction on Collingham Lane to provide access to the potential residential development.

As has already been indicated, due to current government restrictions it was not felt appropriate to undertake fresh traffic counts as traffic flows nationwide are currently below 2019 levels. The 2017 traffic counts were updated using appropriate TEMPro growth factors.

To address the capacity concerns it has been decided to progress a junction improvement which takes the form of a traffic signal controlled junction for pedestrian facilities. This junction improvement is shown on the attached plan at **Appendix A.** This drawing is now accompanied by a Stage 1 Road Safety Audit **(Appendix D).**

Access to the proposed development site would be achieved by extending Collingham Lane into the site at a point where the road forks sharply to the north. The proposed junction is subject to a 30 mph speed limit.

A plan showing the proposed site access is attached at **Appendix B.** Collingham Lane is relatively narrow north of the new site access. By creating a formal bellmouth at this point this will allow any cars travelling south to pull into the new junction to allow cars travelling north to pass.

Copies of the full junction analysis results can be supplied electronically to the local authority if required but the analysis assumes a pedestrian stage is 'called' every cycle.

An interrogation of TRICS has been undertaken to establish likely traffic generation from a development of 100 dwellings. A copy of the TRICS output data is attached at **Appendix C**.

Based on the results of the traffic counts the traffic generation from 100 dwellings has been assigned to the local highway network using the 2011 Journey to Work census data and is shown in the tables over.

Stockton Road/Collingham Lane Junction

Arm A Stockton Road (E)
Arm B Collingham Lane
Arm C Stockton Road (W)

Development Traffic

AM	A	B	C
A		0	0
B	0		40
C	0	18	

PM	A	B	C
A		0	0
B	0		19
C	0	34	

Southam Road/Stockton Road Junction

Arm A Southam Road (N)
Arm B Stockton Road
Arm C Southam Road (S)

Development Traffic

AM	A	B	C
A		12	0
B	31		10
C	0	4	

PM	A	B	C
A		30	0
B	17		6
C	0	10	

To test the operation of the new traffic signal controlled junction, eight different scenarios have been tested, namely:

- 2020 Base AM and PM Peaks No Development
- 2020 Base AM and PM Peaks Plus Development
- 2030 Base AM and PM Peaks No Development
- 2030 Base AM and PM Peaks Plus Development

Traffic growth figures have been obtained by using the appropriate TEMPro factors (RTF2018 MSOA Stratford on Avon 012).

The signal junction has been tested using the computer program LINSIG. To ensure the junction is entirely safe for use by pedestrians, a full pedestrian phase has been included in the junction design and again as a worst case scenario in terms of junction analysis, it has been assumed it will be 'called' every cycle.

A summary of the results is set out below for 2020 Base Year with and without development and 2030 with and without development. If the local authority needs to see the full LINSIG outputs these can be supplied electronically.

2020 Baseline

Arm	AM Peak Degree of Saturation	PM Peak Degree of Saturation
A423 Southam Road (N)Ahead/Left	67.1%	75.9%
Stockton Road Right/Left	75.0%	78.6%
A423 Southam Road (S)Ahead/Right	68.0%	42.2%

2020 Baseline + Development

Arm	AM Peak Degree of Saturation	PM Peak Degree of Saturation
A423 Southam Road (N)Ahead/Left	71.2%	82.9%
Stockton Road Right/Left	77.7%	84.3%
A423 Southam Road (S)Ahead/Right	77.1%	47.1%

2030 Baseline

Arm	AM Peak Degree of Saturation	PM Peak Degree of Saturation
A423 Southam Road (N)Ahead/Left	70.5%	79.7%
Stockton Road Right/Left	79.0%	82.8%
A423 Southam Road (S)Ahead/Right	71.2%	46.4%

2030 Baseline + Development

Arm	AM Peak Degree of Saturation	PM Peak Degree of Saturation
A423 Southam Road (N)Ahead/Left	74.5%	86.6%
Stockton Road Right/Left	81.7%	88.7%
A423 Southam Road (S)Ahead/Right	80.0%	49.4%

Analysis of Results

The summary of the results shows the degree of saturation. The definition of the degree of saturation for a traffic signal controlled junction is a measure of how much demand it is experiencing compared to its total capacity. Degree of saturation (DoS) is given as a percentage. It is generally accepted amongst highway engineers the threshold for cessation of effective operation of a traffic signal junction is 90% saturated.

From these results it can be readily seen that the DoS is at worst 88.7% in the PM peak in 2030 scenario with development flows included.

It is therefore Savoy Consulting's opinion that if this site is allocated for residential development, by signalising this priority junction an effective access solution can be provided which will also bring clear benefits to all road users in the area.

Local Amenities

For completeness an analysis of local amenities currently available in this part of Long Itchington has been undertaken and is summarised in the table below.

Amenity	Distance from site	Journey time on foot	Journey time by bicycle	Drive time
The Shop and Post Office	650 m	8 mins	2 mins	-
Long Itchington Primary School and Pre-School	700 m	8 mins	3 mins	-
Long Itchington Co-Operative Convenience Store	1.2 km	14 mins	5 mins	-
Southam Pharmacy	3.7 km	-	18 mins	5 mins
Southam Leisure Centre	3.8 km	-	19 mins	5 mins
Cox's Dental Surgery, Southam	4.1 km	-	20 mins	5 mins
Southam College (Secondary School)	4.3 km	-	21 mins	5 mins
Tesco Supermarket, Southam	4.9 km	-	-	6 mins
St Wulfstan Doctors Surgery	5.1 km		-	6 mins

Summary and Conclusions

This technical note has been prepared by Savoy Consulting to consider the highway implications of a potential residential development accessed from Collingham Lane, Long Itchington.

It is acknowledged that the County Council may have had concerns about the capacity of the A423 Southam Road/Stockton Road junction. To understand the operation of the existing junctions full classified turning counts have previously been carried out at the Southam Road/Stockton Road and Stockton Road/Collingwood Lane junctions.

After careful consideration a traffic signal design has been developed that accords with all relevant highway design standards and also provides sufficient capacity to meet traffic demands for the foreseeable future. This design also incorporates a full pedestrian stage which will assist any pedestrians wishing to negotiate this busy junction.

A new priority junction on Collingham Lane has been designed in accordance with relevant highway design standards to provide access to the residential development.

From all the work undertaken in preparing this technical note Savoy Consulting is entirely satisfied that a satisfactory means of access can be provided for the development and all potential capacity issues on the local highway network can be addressed by the installation of traffic signals at the A423 Southam Road/Stockton Road junction.

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