



TRANSPORT SUMMARY

East Riding of Yorkshire Council

October 2007

This summary was prepared for the 2007 issue of the Preferred Options Area Action Plan, however the results / proposals remain valid for the 2009 Second Preferred Options Area Action Plan.



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1 Introduction

1.1 BACKGROUND

1.1.1 WSP has been commissioned by East Riding of Yorkshire Council to determine the traffic impact of the regeneration proposals associated with the Bridlington town centre Area Action Plan (AAP). In addition, WSP have developed a preferred option to mitigate the impact of the additional traffic generated by the proposals. This report is a brief summary of the work undertaken and the feasibility of the final regeneration scheme.

1.1.2 A strategic SATURN model and a Micro-Simulation model were developed in 2004 by WSP which have been used to assess the impact of the latest proposals. The 2004 models have been updated to include improvements and changes to the network that have been implemented since the original models were developed.

1.1.3 At present there are congestion issues during peak season. Due to the seasonal nature of the town, the morning peak is between 11:00 and 12:00. The Evening peak period is between 16:00 and 17:00.

1.2 REGENERATION PROPOSALS

1.2.1 The regeneration proposals include major retail and office development along the Hilderthorpe corridor between Hilderthorpe and Quay Road. A review of the existing parking provision was undertaken as part of the AAP. In addition, on street parking will be removed to help the flow of traffic and control parking.



2 Network Assessment

2.1 INTRODUCTION

2.1.1 Traffic growth on the primary routes into the town centre has been assessed and demonstrated a decline in overall traffic levels from 2004 to 2007. Hence no growth has been applied to the 2007 model.

2.2 TRIP GENERATION

2.2.1 WSP provided Atkins Consultant with details of the existing zone network for the VISSIM and SATURN models. Atkins then determined the change in trips to and from each of the zones that will change as part of the proposals. Atkins description of the trip generation is included in Appendix A

2.3 SCENARIOS ASSESSED

2.3.1 In order to determine the best strategy for the transport network in Bridlington, a number of options have been tested using the VISSIM model. These include the following:

- Close Bridge Street reducing the severance and opening up the harbour area;
- Close Bridge Street, Manor Street and Queen Street providing a large pedestrian area in the town centre;
- Close Beck Hill reducing the severance between the regeneration proposals;
- Close Springfield Avenue reducing the severance between the regeneration proposals;
- Widening of Hilderthorpe to improve capacity and allow traffic in and out of the town centre with less delay;
- 5 Arm roundabout at Tesco's access providing frontage to Tesco's;
- 5 Arm signalised junction at Tesco's' access providing frontage to Tesco's;
- Relocate the bus station close adjacent to the train station providing an interchange in Bridlington;
- Train station car park access relocated to provide access from Hilderthorpe and reduce conflict on Quay Road close to the level crossing.

2.3.2 Each of the options has been tested and the outcome is described in Section 3.



3 Option Testing

3.1 ROAD CLOSURES

3.1.1 With the regeneration traffic included in the VISSIM model of Bridlington a series of road closures and diversions were tested as part of the 2016 proposals to determine which areas could be opened up to provide better pedestrian facilities within the town centre. The road closures were as follows:

- Bridge Street;
- Bridge Street, Manor Street and Queen Street;
- Springfield Avenue; and
- Beck Hill.

3.1.2 The closure of Bridge Street meant that traffic was re-routed onto Beck Hill. This increased the queues on Beck Hill, however, improvements could be made to counteract this effect.

3.1.3 The closure of Bridge Street Manor Street and Queen Street meant that there is no longer a route through the town via the Promenade. A route that is heavily used, but unnecessarily, since Trinity Road provides an alternate route. The Promenade has a number of demand intensive pedestrian crossings. Hence the traffic using this route experiences significant delays. By closing Bridge Street Manor Street and Queen Street, traffic is forced to use Trinity Road.

3.1.4 These road closures cause congestion at the existing mini roundabout on Prospect Street. However, the closure of these three roads is considered beneficial to the regeneration of Bridlington. Hence, it is proposed that these roads will be closed and the mini roundabout junction be signalised to accommodate the traffic.

3.1.5 Of these road closures, Springfield Avenue and Beck Hill cause the most congestion. This is due to the fact that there are only three distributor roads between Hilderthorpe Road and Quay Road. However, since the proposals are along this corridor it was felt that these roads caused severance to the proposals with heavy traffic on them. Hence, Springfield Avenue is proposed to be traffic calmed to provide safe passageway through the proposals for pedestrians while Beck Hill remains open. This will reduce the traffic using Springfield and increase traffic flow on Beck Hill. To accommodate the additional traffic, it is recommended that Beck Hill priority junction be signalised. In addition, as part of the proposals, Beck Hill is to be improved to increase its capacity.



3.2 BESSINGBY ROAD/KINGSGATE/B&Q ROUNDABOUT

3.2.1 The existing signals on Hilderthorpe at Station Road prevent the B&Q roundabout behaving normally and blocking back occurs between junctions. As part of the Major Scheme Proposals, funds were awarded to upgrade the roundabout to a signalised junction. As part of the regeneration proposals, it was felt that a roundabout providing access into the new location of Tesco's from the Station Road junction would be desirable. However, this would only reverse the existing problem. An alternative to this could be to have both junctions as roundabouts. A roundabout at Station Road could provide for a fifth arm into Tesco's, allowing Tesco's traffic to be removed from the network sooner and provide a good frontage for Tesco's. This option was tested in isolation and utilising the VISSIM model. The large volume of traffic using Station Road was held up by the large volume of traffic entering Bridlington. There was significant queuing on Station Road, the new Tesco's access and Hilderthorpe outbound traffic. Hence this concept proved impractical in terms of operational performance. The same issue occurred when five arms were provided on the signalised Station Road junction. There was insufficient green time at the junction to allow for a fifth arm.

3.2.2 The preferred option therefore identifies that both junctions will be four arm signalised crossroads operating on VA. Further improvements are required however since there would still be significant queuing on Station Road, although less than the other options. Therefore it is recommended that the bridge on Station Road be widened to provide a longer flare. The access to Tesco's will be located opposite Savage Road and will form a signalised crossroad junction.

3.3 WIDENING OF HILDERTHORPE ROAD

3.3.1 There is an existing issue in Bridlington along Hilderthorpe Road in both directions. Upgrading the B&Q roundabout to a signalised junction to coordinate with Station Road junction will improve the flow of traffic. However, the increase in traffic generated by the regeneration proposals will occupy any spare capacity that was provided. Hence further improvements are required. A lot of the capacity problems along this road are caused by one lane of traffic provided for both the ahead and right turning traffic. Hence the right turning traffic blocks the ahead traffic. There are land take issues along Hilderthorpe Road that prevent two lanes throughout its length on both sides. However, a hybrid of three lanes in total along its length has been tested within VISSIM and provides considerable relief to the congestion along Hilderthorpe Road. There is a small section that requires two lanes in both directions at the new signalised junction with New Burlington Road providing access into the new retail, offices and apartments.

3.4 BUS AND TRAIN STATION

3.4.1 The existing bus station is located on Princess Street. Buses enter the station via Chapel Street and Marshall Avenue and exit the station via the Promenade. However, the bus station is a 10-15 minute walk from the train station. Relocating the bus station adjacent to the train station would provide an interchange in Bridlington. In addition, the bus station would be closer to the new retail provided as part of the regeneration proposals.



3.4.2 The new bus station location would be accessed via Hilderthorpe and Quay Road so not to disrupt existing bus service routes. However, the service routes would need further consideration since the closure of Bridge Street, Manor Street and Queen Street would mean that buses would no longer be able to use the promenade as a through route. However, the reversal in direction of Cross Street would provide a turning point. Further consideration of the bus routes is required to ensure that the bus companies will be happy with the relocation of the bus station.

3.4.3 The train station car park is currently accessed via Quay road; however, due to the new link road to the bus station, the train station car park will be accessed via Hilderthorpe. Since the car park is only small, this does not cause a significant impact.



4 Recommendations

4.1 RECOMMENDATIONS

4.1.1 Of the options tested, those that are considered practical are as follows:

- Close Bridge Street, Manor Street and Queen Street;
- Reduce the traffic on Springfield by providing traffic calming along its length;
- Relocate the bus station;
- Relocate the train station car park access;
- Tesco Access located opposite Savage Road;
- Bessingby Road/Kingsgate/B&Q roundabout to be a signalised crossroads;
- Hilderthorpe/Station Road junction to remain a signalised crossroads but increase the flare on Station Road;

4.1.2 In order to accommodate the above proposals, the following improvements are proposed to accommodate the rerouting of traffic and increase in traffic levels generated by the regeneration traffic:

- Signalise Prospect Street mini roundabout and Wellington Street;
- Signalise Beck Hill, provide a right turn lane of at least four vehicle lengths
- Provide a hybrid of 3 lanes along Hilderthorpe;