



ASHFORD
BOROUGH COUNCIL

Agenda Item No: 9

Report To: ASHFORD JOINT TRANSPORTATION BOARD

Date: 15TH JUNE 2010

Report Title: Ashford Town Centre Streets –Scheme Update

Report Author: Jamie Watson – Project Manager, Kent County Council

Summary:	The purpose of this report is to update the Joint Transportation Board on an operational review by Kent County Council of the re-configure A292 Ashford Ring Road and shared space zone.
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Key Decision: YES

Affected Wards: All Ashford Wards

Recommendations : **Agree that further changes to the network at Forge Lane/New Street/Somerset Road junction take place to ban the straight ahead movement along with minor alterations at various locations to assist with reducing congestion.**

Policy Overview: Central Government's Regional Planning Guidance RPG9 and Ashford's Future Study (Halcrow, 2002) sets the context for the growth of Ashford and the provision for an additional 31,000 homes and 28,000 jobs by 2031.

Masterplanning studies to guide the sustainable delivery of the projected growth in the town are reported further in the Greater Ashford Development Framework (Urban Initiatives, April 2005), Ashford Town Centre Development Framework (Urban Initiatives, August 2005) and the Transport Strategy for Ashford (KCC, November 2005).

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1. Purpose of the Report

The purpose of this report is to update the Joint Transportation Board on an operational review by Kent County Council on the re-configure A292 Ashford Ring Road.

2. Background

The transformed ring road is integral to the vision for the town by setting the scene for high quality public realm as well as stimulating developer opportunities along the highway frontage. Key objectives were to:

- Break the concrete collar one way system and introduce two way traffic
- Improve pedestrian priority at junctions – crossings located on desire lines and single, not split or staggered crossings where possible
- Reduce street furniture
- Shared space zone for Bank Street and Elwick Road

For clarity, this report will refer to Ashford ring road as comprising 2 physical elements, the Ring Road and the Shared Space Zone. The Ring Road is basically the 2 way section of road to the north and east of the Town Centre and the Shared Space Zone is the south and west.

See Appendix A for an overall plan.

The alterations were delivered in two phases, the first phase being the one way to two way alterations which included the physical alterations as well as the signal timing/phasing of the junctions and then followed by the Shared Space Zone alterations, the first phase being completed in July 2007 with the second phase completed in November 2008.

4. Operational review

4.1 Junction design concept

Extensive micro-simulation modelling was undertaken covering various development scenarios. Traffic flows extracted from this modelling was used in the initial design assessment and the design of the traffic signals to develop basic green times and staging order.

Puffin Crossings

Puffin type crossings were introduced on all controlled movements, at traffic signal controlled junctions and stand alone crossings as part of the pedestrian friendly theme. Puffin (Pedestrian User Friendly Intelligent) crossings incorporate a combination of nearside wait indicators to aid the visually impaired, on crossing detectors to extend the clearance period following the green man to assist those who walk at a slower pace and kerbside detectors designed to cancel the pedestrian demand if no one is waiting to cross the road when the lights are ready to change in favour of pedestrians.

The desire for less street furniture and single, in line crossings created wide crossing points around the ringroad, up to 15m across four lanes of traffic. This is particularly noticeable at the North Street/Somerset Road junction and the Mace lane/Wellesley

Road junction. These single crossings require the junctions to operate less efficiently than staggered crossings as an “all red” to traffic stage is required to allow the pedestrian stage to run. The wide crossings have to provide a minimum clearance period to allow the pedestrians to clear the crossing, this period appears in some instances to be wasted time to drivers and indeed pedestrians waiting for the next green signal. Many pedestrians are seen to accept gaps in the traffic and cross the road against a red man, waiting in the centre of the road on the narrow islands to cross the ringroad in two halves. This may be acceptable to the able bodied but not all users of the crossings will feel safe to cross this way.

The wide crossings have also created technical challenges with the use of on crossing detectors and kerbside detectors for pedestrians. Trying to ensure pedestrians are covered completely across the wide crossing has proved difficult and can lead to extra safety periods being introduced creating inefficiencies at the junctions. Due to limitations with the current type of kerbside detectors it is not always possible to ensure the pedestrian demand is cancelled as required so an “all red” stage could run unnecessarily.

Positioning of signal equipment

The desire to achieve an uncluttered feel to the street environment created many non standard features in the traffic signal design including the number and positioning of signal poles and heads. The requirement for pedestrian crossings to be located directly on the desire line put the crossings on the corners of the junctions making the positioning of signal equipment less than ideal for the pedestrians. Changing the normal provision of primary and secondary poles and heads has created confusion at some locations with drivers in particular failing to see and respond to traffic signals.

Signing and Lining

The non standard provision of signs and lines has created operational difficulties and inefficiencies. Drivers are often seen to switch lanes between junctions and carry out inappropriate late manoeuvres on approaches to junctions. A separate study has been commissioned by KCC looking at signing and lining issues, particularly relating to enforcement of traffic regulation orders.

The Keep Left hooped bollards on many of the central reserves/islands have not proved successful and are very susceptible to vandalism and vehicle impacts. A complete change from hooped to more standard bollards will be taking place within the next few months. The need to replace the hooped bollards within the shared space zone is to be discussed further by officers with a view to removing them entirely.

4.2 Safety

Personal injury accidents for the old ring road and the shared space and Bank Street are indicated in the table below.

Verified ‘After’ crash data is available up until end December 2009, some 30 months since the change to two-way working on the whole route, and 12 months since the completion of the shared space element. Since the opening of the shared

space in November 2008 there has been one slight injury accident. This involved a pedal cyclist emerging from Bank Street and hitting a taxi.

Table 1. 'Before and After' crashes for ring road, shared space and Bank Street

Ring Road (excluding shared space)	2004	2005	2006	2007 ½ year	2008	2009	Total	Av. Annual
Before (One Way)	16	17	14	-	-	-	47	15.6
After (Two way)	-	-	-	9	14	8	31	12.4
Shared space (Before)	5	3	5	-	-	-	13	4.3
					2008 (Nov)	2009		
Shared Space (After)	-	-	-	-	0	1	1	1
Bank Street (Before)	0	1	3	0	-	-	4	1.14
Bank Street (After)					0	1	1	1

The table above shows the before and after crash rates and the average annual crash rates.

Fortunately severity rates are low, with only two serious casualties (pedestrians) over the whole before and after period.

The analysis for the remaining length of ring road (excluding shared space) is encouraging, as the annual rate is reduced in the 'after' period, however, there is one location that will receive further investigation as part of the annual Casualty Reduction Measure process.

Somerset Road junction with North Street

In the 36 month 'before' period there were 6 accidents incurring casualties to either pedestrians or pedal cyclists (all slight) at this junction.

In the 30 month period following the change to two-way working there have been 7 crashes incurring pedestrian or pedal cyclist injury at the same location. These have also been slight injury. A further incident in March 2010 involving a cyclist is also known about however crash data is not yet available. Again, this will be investigated as part of the normal crash remedial work carried out in Ashford.

Traffic approaching from the east is controlled in 2 separate phases, ahead traffic and right turn traffic. When the ahead movement is running, with traffic conditions fairly light, pedestrians cross from the north side of the junction heading south against the red man. When they reach the central reserve they can see the right turn held on a red light and may assume the ahead movement is also on a red light and proceed to cross the road with the right turning vehicles masking cars approaching on green in the ahead lane.

4.3 Shared Space Zone

The shared space concept has attracted an enormous amount of interest from many authorities and visits have been made by groups coming from as far as Japan. The scheme has been a major award winner, capturing ten wins in the last year including the prestigious Royal Town Planning Institute award for Town Regeneration.

Post opening monitoring indicates that the shared space concept to date has been successful at reducing speeds and injury crashes. Speeds have been reduced to an average of 21.5mph and there has been one personal injury accident since opening in November 2008 involving a car and cyclist. Several incidents have occurred involving the raised bus kerbs in Bank Street. These are being dealt with by providing visual enhancements to highlight the change of height between the carriageway and footway.

Inclusivity Concerns

Nationally there is concern felt by those with visual impairments that shared space is a “no go area” and this has led to various petitions being raised against its use. In order to address this, a series of workshops and events is underway, to look at how the needs of all can be incorporated into new designs.

Local Access Workshops

At a local level some steps have been taken to understand and respond to these fears and two workshops have been held in Ashford looking specifically at shared space.

Kent Design Forum

The theme of the forthcoming Kent Design Forum (June 24th) will be “inclusive design” and will be focusing on the needs of people with all kinds of impairments when accessing public realm and shared space in particular.

Speeds and traffic volume

Speed checks through the shared space zone have remained consistent with the average remaining at 21.5mph in either direction. A solar powered speed indicator device is deployed from time to time to remind drivers of their speed.

Traffic volumes appear broadly stable at 10,000 vehicles per day. Further speed and volume monitoring is scheduled for July 2010.

4.4 Variable Message Signs

Provision of Variable Message Signs for the main car parks within Ashford Town Centre have taken place with a new sign being placed in Mace Lane and alterations to the existing signs in North Street and Romney Marsh Road.

5. Efficiencies which are being investigated to reduce congestion

5.1 Co ordination of junctions

Efficiencies relating to time savings and trying to improve movement of traffic around the ring road can primarily be achieved by revalidating the SCOOT network. SCOOT (Split Cycle Optimisation Technique) is a dynamic control method currently used on the ringroad junctions, using a system of loops buried in the carriageway feeding an online traffic model which constantly updates and attempts to provide the most appropriate green times. It tries to provide the optimum cycle time for the region, junctions in the same region use the same cycle time to achieve co ordination and aid progression and gives the right split of green time to each approach to clear queues. SCOOT in Ashford currently operates on a daily basis between 0600 and 2200 hrs. Outside these hours the junctions work on standard Vehicle actuated (VA) mode, isolated from each other. As part of the validation process these times are to be reviewed as it may be more appropriate to start later and finish earlier giving more flexibility in the early morning and early evening periods. It could be argued that currently SCOOT is not working particularly well in Ashford as the cycle times are already at their maximum, taking away one of its 3 optimisation tools.

To this extent, further proposals for the individual junctions are being investigated from a “Do Minimum” to more significant alterations.

A “Do minimum” may consist of simplifying the traffic signal controller configuration allowing junctions to provide better co ordination, additional, clearer road markings and signs, additional signal heads on existing posts, to a “Do Maximum” which could consist of providing staggered crossings to all junctions.

5.2 New Street Jct with Somerset Road and Forge Lane

There have been many complaints received about the operation of this junction and there have been changes made to the layout and signal timings since the ringroad opened in November 2008. The main issue being the queues in Forge Lane. Whilst green times are reduced to encourage the use of Somerset Road, Wellesley Road and Station Road as a route around the Town Centre rather than through the Shared Space Zone, residents of Godinton Road, Norwood Gardens and the Town Centre streets around Apsley Street, Regents Place etc need to use Forge Lane are held in the queue. A temporary camera has been placed at this junction to assist with the efficiency however further changes are planned. The further changes are:

- Ban the ahead movement of traffic from Forge Lane into Somerset Road forcing all traffic to turn left into New Street. This option will be introduced under an experimental Traffic Order (lasts up to 18 months) and will allow Forge Lane to receive a green signal at the same time as traffic turning right into Forge Lane from New Street thus reducing the complexity of the junction. The central reserve will need to be extended to prevent the straight on movement. If successful, these alterations would become permanent.
- The physical layout of the junction was designed to allow two lanes of traffic to turn right from Somerset Road into New Street but due to the minimal signing and lining provided, only one lane, the offside lane is used to turn right. Through additional signing and lining, it is proposed to utilise both lanes more efficiently.

Proposals for this junction are included in Appendix B

5.3. Apsley Street/Godinton Road jct improvements

The long awaiting completion of this junction is to be incorporated into the work to complete the highway works to the frontage of the Latitude Walk development. This will comprise an overrunnable central island to encourage the Apsley Street slip road users to turn left into Apsley Street and also cater for the large articulated lorries turning in and out of Apsley Street. Additional bollards will be placed along the slip road again to encourage the use of the carriageway rather than the wide footway. Additional signing is also to be looked at to see if this will assist. This work is to take place June 2010 and be completed by August 2010.

Proposals for this junction are included in Appendix C

5.4. Parking enforcement – Shared Space Zone

A separate report is being presented to the Joint Transportation Board by Ashford Borough Council. The intention is for the shared space zone to be fully enforceable on 1st July 2010.

6.0. Maintenance

Bank Street, Tufton Street and Godinton Road are heavily used by pedestrians and at present are the main commercial streets within the Shared Space area. The maintenance regime for these streets is being examined as the granite particularly, is showing up the dirt and grime more than anticipated. Trials have taken place in small areas within Godinton to seal the granite so that dirt and grime can be washed off more easily. To date this has not been successful as it is still showing heavy staining. Kent CC and Ashford BC are to continue to work closely together to find a suitable solution.

7.0 Conclusion

As a reminder, the previous one way system built in the early 70's was a racetrack and particularly pedestrian unfriendly. The recent alterations have provided a safer and more pleasant environment however the ring road has suffered with congestion at peak periods of traffic and pedestrian demand with many vehicles using the shared space to avoid the junctions around the north and east of the town. The newly introduced wide Puffin crossings have not been entirely successful, being criticised for introducing long waiting times and not giving a clear indication when it is safe to cross. The wide crossings also introduced technical challenges trying to ensure pedestrians are safely detected when using the crossings. Reduced signing and lining has also added to the initial confusion for drivers. With this innovative scheme it was inevitable that there would be teething problems and changes have been made and are continuing to be made, in an attempt to resolve some of the issues.

The performance of the individual junctions has been investigated and proposals for further efficiencies still to be completed however "do minimum" and "do maximum" work has been completed. The "do minimum" can provide low cost efficiencies but congestion is likely to remain particularly around North Street and Wellesley Road.

The “do maximum” category consists primarily of removing the single wide pedestrian crossings and creating more conventional dual crossings thus reducing waiting times and improving junction efficiency by removing the “all red” to traffic stage. This option is more likely to produce tangible improvements in moving traffic around the network but will be expensive and could be argued as going against the original key objectives of the scheme.

8.0 Funding

At present there is neither the desire or indeed sufficient funding for the “do maximum” proposals however the “do minimum” proposals will be completed using the remaining funding available (contingency) from the original ringroad alteration budget. The contingency, set aside from the English Partnership contribution to the overall ringroad alterations budget, is £600,000.

9.0 Recommendation

Further changes to the network at Forge Lane/New Street/Somerset Road junction take place to ban the straight ahead movement along with minor alterations at various locations to assist with reducing congestion.

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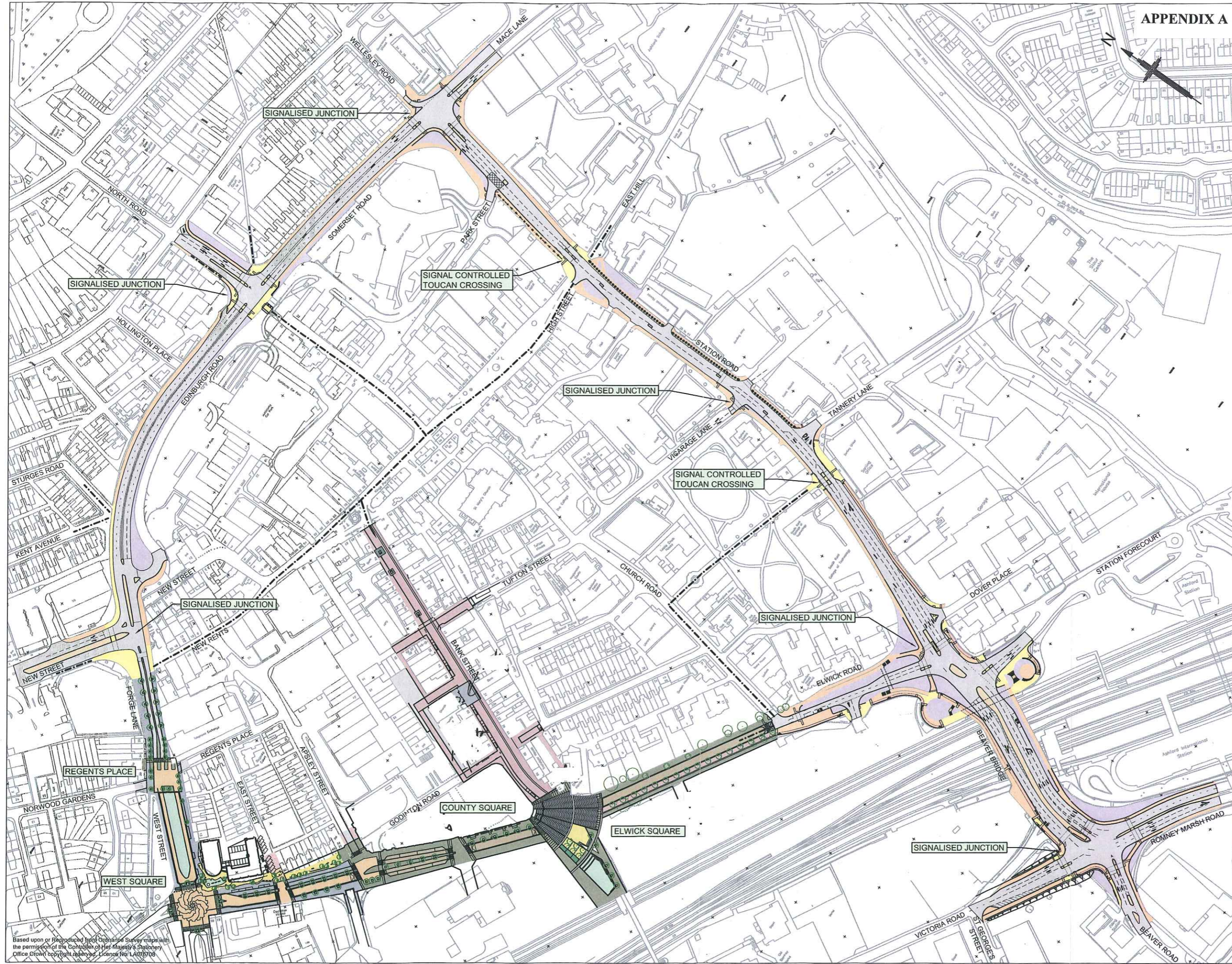
Appendices

Appendix A – Overall Plan of Ring Road

Appendix B – Junction Improvements at Forge Lane/New Street/Somerset Road

Appendix C – Junction Improvements at Apsley Street/Godinton Road

- LEGEND**
- Existing Segregated Cycle Track to be retained
 - Existing Cycle Track to be abandoned
 - Proposed Cycle Route



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KENT COUNTY COUNCIL
REGENERATION & ECONOMY

JACOBS
Ashford, Kent, UK
Tel: 01222 620000

ASHFORD RING ROAD

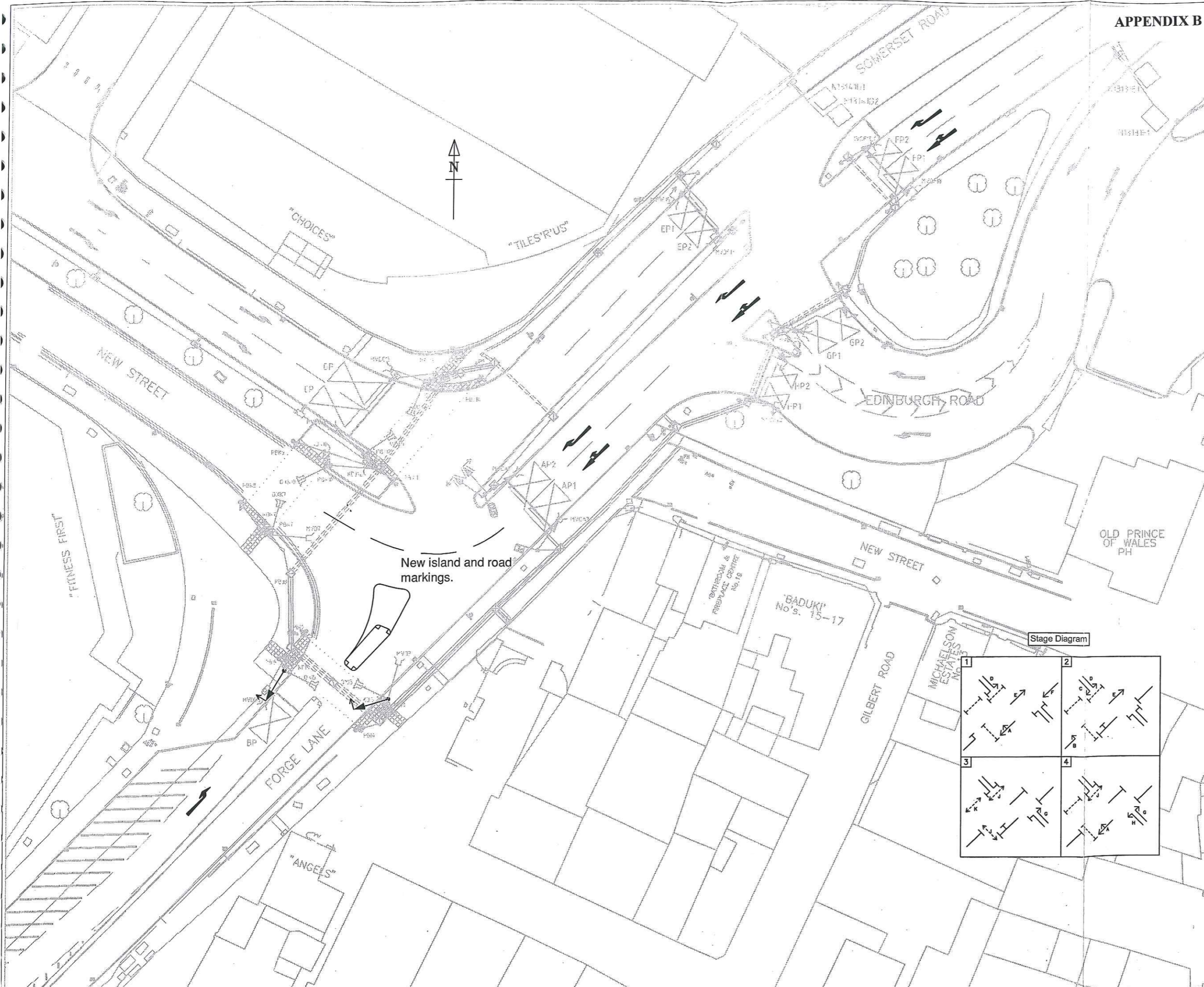
SCHEME LAYOUT

PRELIMINARY

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17791/SK/083

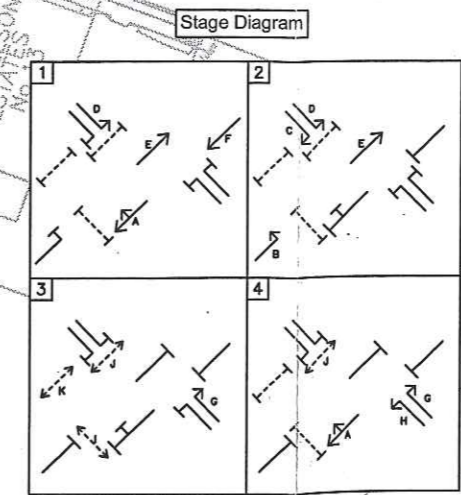
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- KEY**
- Junction Box (with under kerb ducts)
 - Junction Pit (no under kerb ducts)
 - Duct FW/1 100 mm dia
 - Duct FW/2 100 mm dia
 - Duct CW/2 100 mm dia
 - Signal Controller Cabinet
 - Traffic Signal
 - Microwave Vehicle Detector
 - Near-sided Pedestrian Signal and Push Button
 - Kerb-side Detector
 - Pedestrian / Cycle On-crossing Detector
 - Photo Electric Cell
 - Location for future Bus Priority Receiver
 - Detector Loops and Identify
 - Layout of Blister Tactile Surface Modules (Red)
 - Road Studs
 - Kerb / Footway Alignment
 - HFS (HFS beyond stopline must be coloured Black)
 - Pole Numbers
 - Equipment Mnemonic

- Notes**
- 1 This drawing is based on Topographical Survey digital data.
 - 2 High Friction Surface (HFS) shown is for reference only.
 - 3 This drawing shall be read in conjunction with KCC Standard Details-
KCC/400/002 - Pedestrian guardrail.
KCC/500/049 to /052 - Ducting and Junction Pits.
KCC/100/015 - Tactile paving at controlled pedestrian crossing points.
KCC/1200/019 to /021 - Installation of signal equipment.
KCC/1200/28 - Traffic Signal Pole Retention Socket.
 - 4 This drawing shall be read in conjunction with the Contract Specification Appendices-
Appendix 5/2 - Service Duct requirements.
Appendix 12/3 - Traffic Signs: Studs.
Appendix 12/5 - Traffic Signs: Traffic Signals.
Appendix 14/5 - Electrical Equipment.
 - 5 Tactile indicators are fitted to Pole Nos. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14.
 - 6 Poles Nos. 4, 6, 8, 9, 11 and 14 are 2m short poles.
 - 7 The Bus Priority cable terminates in Pole No. 1. It has been tagged at either end as 'Bus Priority'.
 - 8 The details of any existing services shown on this drawing are based upon information supplied by the statutory bodies and other authorities concerned. The accuracy of this information cannot be guaranteed and the presence of other apparatus, in particular service connections to individual properties, should be expected.

New island and road markings.



0	19/05/10	Proposal drawing	AA		
Rev	Revision Date	Purpose of revision	Drawn	Checked	Approved



Project: Ashford Ring Road - 2 Years on

Drawing title: New Street / Somerset Road, Ashford Site No 13/1034 Operational Review Proposals

Drawing state: Proposal

Scale: 1:200 @ A1 Do not scale

Drawing number: B1504200/S/60 Rev: 0

This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

New bin strategically located to force vehicles to remain within the feeder lane

New John Atkin bollards located to scourge vehicles straying onto the footway, and aligned with the central reserve trees at 10m centres

New cycle stands located to discourage vehicles cutting the corner

Area of new granite flag pavement to tie in with existing flags - radius of building as shown
Tactile guidance strip re-align

25x150mm tactile granite sets laid in a red bond, colour mid-grey to match existing

125x125x150mm tactile granite sets laid in a staggered bond, colour mid-grey to match existing

Reflective glass 'beads'

Porphyry sets, laid rigidly in concentric courses

300mm wide mid-grey granite kerb with 50mm bullnosed upstand to allow over-run by large vehicles

DKI

