

**MEETING**

**FINCHLEY AND GOLDERS GREEN AREA ENVIRONMENT SUB-COMMITTEE**

**DATE AND TIME**

**TUESDAY, 16 OCTOBER 2012  
AT 7.00PM**

**VENUE**

**AVENUE HOUSE, EAST END ROAD, FINCHLEY, LONDON N3 3QE  
OR AT THE CONCLUSION OF THE FINCHLEY AND GOLDERS GREEN RESIDENTS  
FORUM BY 8.00PM, WHICHEVER IS EARLIER**

**TO: MEMBERS OF THE COMMITTEE (Quorum 3)**

Chairman: Councillor Graham Old (Cllr Eva Greenspan)  
Vice Chairman: Councillor Melvin Cohen (Cllr Reuben Thompstone)

|                     |                 |                             |
|---------------------|-----------------|-----------------------------|
| <b>Councillors:</b> | (Substitutes)   | (Substitutes)               |
| Geof Cooke          | (Anne Hutton)   | Colin Rogers (Arjun Mittra) |
| Daniel Seal         | (John Marshall) | Ross Houston (Kath McGuirk) |
| Lord Palmer         | (Jack Cohen)    |                             |

**You are requested to attend the above meeting for which an agenda is attached.**

**Aysen Giritli – Head of Governance**

Governance Services contact: Chidi Agada 020 8359 2037 [chidilim.agada@barnet.gov.uk](mailto:chidilim.agada@barnet.gov.uk)

Media Relations contact: Sue Cocker 020 8359 7039

**CORPORATE GOVERNANCE DIRECTORATE**

## ORDER OF BUSINESS

| Item No | Title of Report   | Pages     |
|---------|---|-----------|
| 1.      | Minutes   |           |
| 2.      | Absence of Members  |           |
| 3.      | Declaration of Members' Personal and Prejudicial Interests  |           |
| 4.      | Public Question Time (If any)   |           |
| 5.      | Members' Items (If any)   |           |
| 6.      | The leasing of the Pavilion in Cherry Tree Wood Brompton Grove East Finchley N2   | 1 - 10    |
| 7.      | Road Traffic Personal Injury Accident Clusters  | 11 - 32   |
| 8.      | Review of Pedestrian Safety and Pedestrian Facilities in East Finchley in the Vicinity of Martin School Incorporating Four Main Locations:<br>i) Church Lane<br>ii) A1000/Creighton Avenue Junction<br>iii) A1000/Church Lane Junction, and<br>iv) Church Lane / East End Road Junction | 33 - 114  |
| 9.      | Bus stop on the 382 route towards Finchley Central in Summers Lane N12  | 115 - 130 |
| 10.     | Verbal Update(s)<br>Speeding in Petworth Road and neighbouring roads  |           |
| 11.     | Matters referred from Finchley and Golders Green Residents Forum (If any)   |           |
| 12.     | Any other Item(s) that the Chairman decides are urgent  |           |
| 13.     | MOTION TO EXCLUDE THE PRESS AND PUBLIC  |           |
| 14.     | The leasing of the Pavilion in Cherry Tree Wood Brompton Grove East Finchley N2 (Exempt)  | 131 - 134 |

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### **FIRE/EMERGENCY EVACUATION PROCEDURE**

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You should proceed calmly; do not run and do not use the lifts.

Do not stop to collect personal belongings

Once you are outside, please do not wait immediately next to the building, but move some distance away and await further instructions.

Do not re-enter the building until told to do so.

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|------------------------------|---|
| <b>Meeting</b>               | Finchley & Golders Green Area<br>Environment Sub- Committee   |
| <b>Date</b>                  | 16 October 2012   |
| <b>Subject</b>               | <b>The leasing of the Pavilion in Cherry<br/>Tree Wood Brompton Grove East<br/>Finchley N2</b>  |
| <b>Report of<br/>Summary</b> | Commercial Director<br><br>To ask the Sub-Committee if it wishes to make<br>representations to the Executive in relation to the<br>proposed grant of a lease of the pavilion in Cherry<br>Tree Wood, Brompton Grove, N2 |

|  |  |
|--|--|
| <b>Officer Contributors</b>                            | Judith Ellis – Valuation Manager<br>Richard Malinowski – Principal Valuer<br>Jenny Warren – Greenspaces Manager                          |
| <b>Status (public or exempt)</b>                       | Public with a separate exempt report   |
| <b>Wards Affected</b>                                  | East Finchley  |
| <b>Key Decision</b>                                    | No   |
| <b>Reason for urgency /<br/>exemption from call-in</b> | Not applicable   |
| <b>Function of</b>                                     | Executive  |
| <b>Enclosures</b>                                      | Appendix 1 – Section 123 Notice<br>Appendix 2 - Lease Plan<br>Appendix 3 - Pavilion Elevation<br>Appendix 4 – Summary of representations |
| <b>Contact for Further<br/>Information:</b>            | Judith Ellis, 020 8359 7364/judith.ellis@barnet.gov.uk<br>Richard Malinowski, 020 8359 7359 /<br>richard.malinowski@barnet.gov.uk        |

## **1. RECOMMENDATIONS**

- 1.1 That the Sub-Committee consider whether or not it wishes to make representations to the Executive in respect of the proposed grant of a lease of the pavilion in Cherry Tree Wood to Mr Sarfaraz Dostezad.**

## **2. RELEVANT PREVIOUS DECISIONS**

- 2.1 Delegated Powers Summary Report approved 9<sup>th</sup> July 2012 reporting the terms of the letting of the pavilion to Mr Sarfaraz Dostezad.

## **3. CORPORATE PRIORITIES AND POLICY CONSIDERATIONS**

- 3.1 The Corporate Plan 2012-13 has a corporate priority of 'Better Services with Less Money'. A key principle of the medium term financial strategy is to continually review the use of council assets so as to reduce the cost of accommodation year on year and to obtain best consideration for any surplus assets to maximise funds for capital investment and/or the repayment of capital debt. This letting does this by producing a rental income and the refurbishment of an empty and dilapidated property.

## **4. RISK MANAGEMENT ISSUES**

- 4.1 There are no policy considerations and officers do not anticipate significant levels of public concern. If the Council does not proceed with the letting then an empty building attracts the obvious detrimental nuisances such as vandalism and arson and will eventually require demolition. To offset the risks of further vandalism, Greenspaces have installed fencing around the building. However this has been breached on a number of occasions involving further vandalism.

## **5. EQUALITIES AND DIVERSITY ISSUES**

- 5.1 The property was widely marketed such that it was open to any category of persons to submit a bid, irrespective of race, sex, disability, sexual orientation, marital status, transgender, age, religion or religious belief. Further, the Council's Equalities Policy takes account of the Council's statutory duty to promote equal opportunities and to eliminate discrimination and inequality amongst persons of different race, gender and disability. The proposed disposal has been evaluated against the principles in the Equalities Policy and no adverse implications for any, specific, equalities group has been identified.

## **6. USE OF RESOURCES IMPLICATIONS (Finance, Procurement, Performance & Value for Money, Staffing, IT, Property, Sustainability)**

- 6.1 The Council will benefit from the annual rent detailed in the accompanying exempt report with the responsibility for repair and maintenance being passed to the tenant.

## **7. LEGAL ISSUES**

- 7.1 Local authorities are given powers under Section 123(1) of the Local Government Act 1972 (as amended) to dispose of land held by them in any

manner they wish, including the grant of leases. The only constraint is that, except with the consent of the Secretary of State, a disposal must be for the best consideration reasonably obtainable.

- 7.2 Section 123 (2A) of the Local Government Act 1972 (as amended) provides that a local authority may not dispose under Section 123(1) of that Act of any land consisting or forming part of an open space unless, before disposing of the land, they cause notice of their intention to do so to be advertised for two consecutive weeks in a newspaper circulating in the area in which the land is situated, and consider any objections to the proposed disposal which may be made to them.
- 7.3 The lease will be formally documented on the basis of the terms detailed in the Delegated Powers report.

## **8. CONSTITUTIONAL POWERS (Relevant section from the Constitution, Key/Non-Key Decision)**

- 8.1 The Council's constitution in Part 3, Responsibility for Functions, paragraph 3.10 details the executive functions of the Area Environment Sub-Committees. These include the day-to-day promotion, management and development of parks and open spaces.
- 8.2 The Council's constitution in Part 4,– Management of Real Estate, Property and Land, Paragraph 7 (i) states "Whenever a decision is taken by the Executive or the relevant Director acting under delegated powers to advertise the possible disposal or appropriation of open space land, the Director or designated officer shall report the matter to the next relevant Area Environment Sub-Committee to enable it to decide whether it wishes to make representations to the Executive in relation to the disposal of the open space land".

## **9. BACKGROUND INFORMATION**

- 9.1 The park is currently served by a small 150 sq ft (13.93 sq m) modular kiosk that was leased to Sally Anne Wigfield. The lease on the kiosk has now expired however the tenant will be permitted to remain under a tenancy at will until the pavilion café opens. Once the letting of the pavilion has been concluded, the kiosk will be relocated to another park and put on the open market.
- 9.2 The subject premises comprise a pavilion of 1,044 sq ft (97 sq m) with a covered veranda of 511 sq ft (47.5 sq m) at the front giving a total area of 1555 sq ft (144.5 sq m) as shown edged red on the attached plan. The building was originally used as a sports pavilion and changing rooms but since the playing fields in the park often became waterlogged during the winter months this use ceased. Subsequently it was used for a short time as a nursery but then became vacant and has deteriorated over the years. The pavilion is fenced off, derelict and the only other option is to demolish. Nevertheless the pavilion has character and is situated adjacent to a children's play ground and in the opinion of officers once refurbished would enhance considerably the facilities available in the park.
- 9.3 The premises have been marketed for a number of years and several proposals, mainly for nurseries were received in the past. A nursery use would not be approved by planners as this would give rise to traffic issues along Brompton

Grove, an unadopted, unmade up and unlit road at the rear of the park. During the last two years discussions have taken place with the existing kiosk operator and various proposals were put forward and considered by officers but these discussions stalled as the plans were ambitious, expensive and funding was not available. Further marketing including additional advertising took place over the past year and an acceptable offer was eventually received. The operator of the kiosk also submitted a proposal but this was below the recommended offer. The recommended proposal has already been approved by a Delegated Powers report dated 9<sup>th</sup> July 2012.

- 9.4 It has been agreed with Mr Sarfaraz Dostezad that the Council will grant him a lease for a period of 25 years on a full repairing and insuring basis and contracted out of the Landlord and Tenant Act 1954. The permitted use will be as a café and the trading hours will be the usual park opening hours. The property will be repaired and minor changes externally comprising either new front or café style doors as shown on the drawing in Appendix 3, are proposed. The financial terms have been included in the exempt part of this report. It is the view of the Valuation Manager that the proposed disposal complies with the Council's statutory duty to achieve the best consideration reasonably obtainable.
- 9.5 The extent of the letting is the building shown edged red on the lease plan in Appendix 1. The blue and green areas comprise the external seating areas where the tenant will be allowed to place tables and chairs. The green area is part of the footpath along the frontage and the blue area comprises soft ground and so the tenant will be permitted to place a hard surface, subject to any Greenspaces requirements. A right of way for vehicle deliveries is shown coloured brown.
- 9.6 As the land is held as public open space, the proposed disposal was advertised in the Barnet Press for two consecutive weeks on 28<sup>th</sup> June and 5<sup>th</sup> July 2012. A Notice of the proposed disposal was also posted at the property. These required that any objections to the letting were to be made to the Council by 13<sup>th</sup> July 2012.
- 9.7 Following the advertisement, 18 communications were received, the details of which are summarised in the table under Appendix 4. Of these 10 are considered as objections and the remaining 8 regarded more as representations or observations relating to the loss of the kiosk.
- 9.8 Officers have been informed by the prospective tenant that the menu available at the premises will be varied with a Middle East and Mediterranean cuisine, salads and vegetarian options, sandwiches and pastries. It will not be a pizzeria as appears to have been suggested by a number of objectors.
- 9.9 The kiosk currently located in the park was intended as a temporary facility as it was hoped that in time the pavilion would be refurbished and provide these facilities. It is the opinion of officers that the park cannot support two cafes and so the kiosk currently operated by Sally Anne Wigfield will have to close once the pavilion opens for business. Greenspaces will relocate the kiosk to another park where there are currently no catering facilities. Thus the rent for the kiosk, as detailed in the exempt report, will cease to be payable but should be recouped on another site.



**10. LIST OF BACKGROUND PAPERS**

10.1 None.

|  |            |
|--|------------|
| <b>Cleared by Finance (Officer's initials)</b> | <b>SR</b>  |
| <b>Cleared by Legal (Officer's initials)</b>   | <b>SWS</b> |

## Appendix 1

### LONDON BOROUGH OF BARNET

#### COMMERCIAL DIRECTORATE

#### SECTION 123(2A) OF THE LOCAL GOVERNMENT ACT 1972

#### **Proposed Lease - Pavilion building** **Cherry Tree Wood, East Finchley**

NOTICE IS HEREBY GIVEN that the Council is intending to grant of a lease for 25 years for the above pavilion for the use as a cafe.

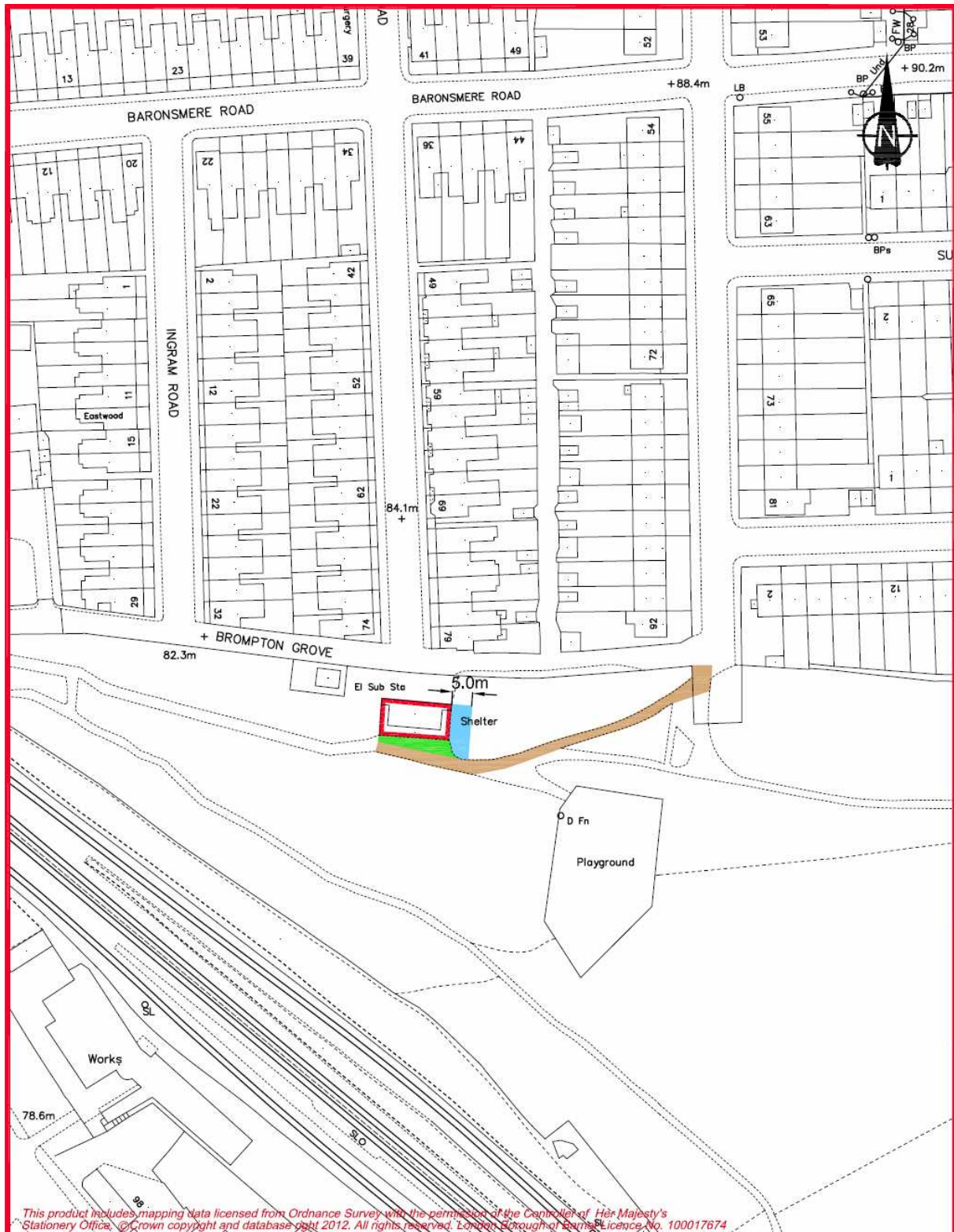
A plan showing the proposed leased area may be viewed at the offices of Property Services, Building 2, North London Business Park, Oakleigh Road South, London N11 1NP. It may be viewed between the hours of 9.00 am to 5.00 pm Mondays to Fridays (excluding public holidays).

Before making any further decision on the proposal, the Council will consider any written representations received. All written representations, which should be addressed to the Interim Assistant Director of Commercial Services, 1<sup>st</sup> floor, Building 2, North London Business Park, Oakleigh Road South, London N11 1NP (quoting reference: Property Services Disposal of Cherry Tree Wood) must arrive no later than 5pm, 13<sup>th</sup> July 2012.

Dated this day 28<sup>th</sup> June 2012

Mark Peat  
Interim Assistant Director or Commercial Services  
1<sup>st</sup> Floor Building 2  
North London Business Park  
Oakleigh Road South  
London N11 1NP

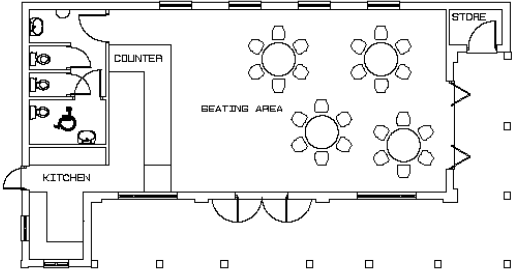
## Appendix 2



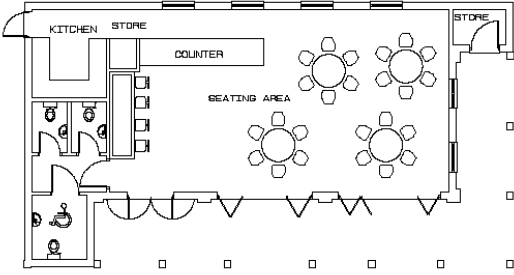
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|  |  |   |   |
|--|--|---|---|
| Initiated by S.S.<br>Drawn by K.E.B.<br>Checked by S.S.<br>Date 14/05/12 | <b>SCHEME:</b><br>CAFE IN CHERRY TREE WOODS,<br>HIGH ROAD, EAST FINCHLEY, N2<br><br><b>TITLE:</b><br>LEASE PLAN<br><br>Scales 1:1250 | Craig Cooper,<br>Commercial Director.<br><br>London Borough of Barnet,<br>North London Business Park,<br>Oakleigh Road South,<br>New Southgate,<br>London, N11 1NP.<br>Tel. 020 8359 2000 | <br><br>DRAWING No. <span style="border: 1px solid black; padding: 2px 10px;">24405</span> |
|--|--|---|---|

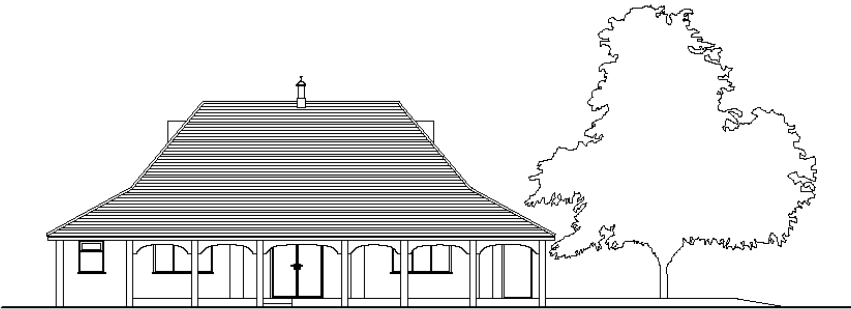
# Appendix 3




PROPOSED PLAN (A)



PROPOSED PLAN (B)



PROPOSED FRONT ELEVATION

| NO.  | DATE   | BY         | REVISIONS |
|--|--------|------------|-----------|
| <b>DESCRIPTION</b>   |        |            |           |
| Site Address   |        |            |           |
| CHERRY TREE WOOD PAVILLION<br>EAST FINCHLEY<br>NE  |        |            |           |
| <b>JOB TITLE</b>   |        |            |           |
| CONVERSION OF PAVILLION<br>TO CAFE   |        |            |           |
| <b>Drawing Title</b>   |        |            |           |
| PROPOSED PLAN AND ELEVATIONS   |        |            |           |
| Scale  | 1:100  | Date       | JUL. 2012 |
| Drawn by   |        | Checked by | PRC       |
| <br>Architectural & Planning Consultants<br>TEL: 020 - 8440 - 7777<br>FAX: 020 - 8386 - 9556 AK |        |            |           |
| Proj. No.  | 381833 |            | Rev.      |

## Appendix 4

| <b>Communication</b> | <b>Date</b> | <b>Summary of Representations</b>   |
|----------------------|-------------|---|
| Letter               | 05.07.2012  | Preference for pavilion to be demolished and site restored to woodland as change of use will alter character and tranquillity of the park.  |
| Letter               | 06.07.2012  | Existing café provides appropriately scaled facility. Extra traffic, noise, smells, litter  |
| Letter               | 07.07.2012  | Barnet should adopt private road and apply a condition that lessee makes good Brompton Grove. Best to demolish.   |
| Letter               | 07.07.2012  | Against Pizza use, pizza boxes and concern over rats  |
| Letter               | 08.07.2012  | Too many cafes in High Street, rats, noise and cooking smells will spoil peace and quiet. Resurfacing Brompton Grove endanger users. In a dangerous state. Return to natural state. |
| Letter               | 08.07.2012  | As above  |
| Letter               | 10.07.2012  | No proper consultation  |
| Letter               | 11.07.2012  | Whether tenant is fit person  |
| Letter               | 11.07.2012  | Written by Tenant of Kiosk  |
| Letter               | 10.07.2012  | No consultation   |
|                      |             |   |
|                      |             |   |
| Email                | 10.07.2012  | Concerns re existing kiosk – tenant works with Treehouse  |
| Email                | 10.07.2012  | Concerns re existing kiosk  |
| Email                | 10.07.2012  | Concerns re existing kiosk - Pizza proposal   |
| Email                | 10.07.2012  | Concerns re existing kiosk  |
| Email                | 10.07.2012  | Concerns re existing kiosk - Pizza proposal   |
| Email                | 18.07.2021  | Concerns re existing kiosk - Pizza proposal   |
| Email                | 28/07.2012  | Concerns re existing kiosk - Pizza proposal   |
| Phone                | 13.07.2012  | Further information requested   |

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|----------------|---|
| Meeting        | Finchley & Golders Green Area<br>Environment Sub- Committee   |
| Date           | 16 October 2012   |
| <b>Subject</b> | <b>Road Traffic Personal Injury Accident<br/>Clusters</b>   |
| Report of      | Interim Director of Environment,<br>Planning and Regeneration   |
| Summary        | The report contains the review carried out on several (nine) accident cluster sites identified in the report presented to this committee in March 2012. |

|   |  |
|---|--|
| Officer Contributors                        | Themba Nleya   |
| Status (public or exempt)                   | Public   |
| Wards Affected                              | All  |
| Key Decision                                | No   |
| Reason for urgency / exemption from call-in | Not applicable   |
| Function of                                 | Executive  |
| Enclosures                                  | Appendix A – Accident Clusters Details and Responses<br>Appendix B – Summary Review of Nether Street Width Restriction |
| Contact for Further Information:            | Themba Nleya, Senior Engineer, 020 8359 4198   |

## **1. RECOMMENDATION**

### **1.1 That the sub-committee;**

- i) Notes those items recommended for no further action,**
- ii) Notes the “quick win” actions and proposals for each of the highlighted cluster sites as is detailed in Appendix A and accordingly the Interim Director for Environment, Planning and Regeneration to implement the measures, and**
- ii) Instructs the Interim Director for Environment, Planning and Regeneration to progress as planned those items identified as requiring further investigative work with a view to implement pending further design and consultation with local elected members and residents.**

### **1.2 That any objections from any related consultation that may be necessary be resolved by the Interim Director for Environment, Planning and Regeneration in consultation with the Cabinet member for Environment.**

## **2. RELEVANT PREVIOUS DECISIONS**

### **2.1 Finchley and Golders Green Area Environment sub-committee, 24 November 2011, item 6 resolved:**

- That an update report including a breakdown of accidents at hotspot locations over the last three years be brought to the next appropriate meeting of the sub-committee.

### **2.2 Finchley and Golders Green Environment sub-committee, 14 March 2012, item 6. Following discussion and consideration of a report on road traffic accident locations the subcommittee resolved:**

- That priority attention be given to pursuing actions as set out in the report on clusters 1, 13 and 24 and that all “quick wins” actions should be pursued where practicable, including addressing specific points on de-cluttering (cluster 19) and obscured visibility (cluster 23)
- That a report on the outcome of the investigations into “quick-wins” be brought to the next meeting of the sub committee

## **3. CORPORATE PRIORITIES AND POLICY CONSIDERATIONS**

### **3.1 The Corporate Plan priority “A Successful London Suburb” includes the objective “to work with all strategic partners (particularly the Police) to ensure Barnet is a safe place”.**

## **4. RISK MANAGEMENT ISSUES**

### **4.1 No risk management issues arising directly out of this report.**

## **5. EQUALITIES AND DIVERSITY ISSUES**

### **5.1 In Barnet the majority of road traffic casualties are car occupants but, in common with other areas, pedestrians, cyclists and motorcyclists are more likely to be seriously injured if involved in an accident. Younger adults aged 17 to 30 are disproportionately likely to be traffic casualties but older people (over 70) are more likely to suffer serious injury. 12-**



16 year olds are also slightly more likely to be seriously injured. Men are more likely to be road traffic casualties than women.

- 5.2 There are documented links e.g. Deprivation and Road Safety in London: A report to the London Road Safety Unit (2006), and Road Safety of London's Black and Asian Minority Ethnic Groups: A report to the London Road Safety Unit (2006), between deprivation and accident risk and some evidence of variation between ethnic groups that is independent of differences in deprivation, although these are not well understood.

## **6. USE OF RESOURCES IMPLICATIONS (Finance, Procurement, Performance & Value for Money, Staffing, IT, Property, Sustainability)**

- 6.1 It is intended that the funding required to implement the proposed measures be met from Capital funding secured from TfL for the boroughs Local Implementation plan (LIP) specifically, the Traffic and Road Safety allocation for financial year 2012/13.

- 6.2 Fund will be required as follow:

- Cluster 1: N/A
- Cluster 5: N/A (Enforcement Action by Police)
- Cluster 6: £10k
- Cluster 13: £15k
- Cluster 18: Nil
- Cluster 19: Nil (No Further Action)
- Cluster 23: Nil
- Cluster 24: £12k
- Cluster 26: Nil (No Further Action)
- Total: £37,000**

- 6.3 There will be no staffing, IT, property, sustainability, or procurement issues as a result of the implementation of these measures.

- 6.4 Any financial implications will be contained within the Environment, Planning and Regeneration budgets.

## **7. LEGAL ISSUES**

- 7.1 The Council has a statutory duty under section 39 of the Road Traffic Act 1988 to monitor traffic accidents on its road network and take such measures as appear appropriate to address them.

## **8. CONSTITUTIONAL POWERS**

- 8.1 Constitution Part 3 – Responsibility for Functions – Area Environment Sub- Committees perform functions that are the responsibility of the Executive including highways use and regulation not the responsibility of the Council

## **9. BACKGROUND INFORMATION**

- 9.1 Accident information is recorded by the Police in accordance with the national Stats 19 reporting system. In London the information is provided to Transport for London who produce a wide range of reports and also make the data available to individual boroughs.

- 9.2 A report to the Area Environment sub-committee in November 2011 identified locations in the borough and in the sub-committee's area where seven or more Personal Injury

Accidents had occurred in the three year period 2008-2010. The report also included background information which may be helpful in interpreting this report.

- 9.3 A subsequent report was presented to the Area Environment sub-committee in March 2012 when it was agreed that priority attention be paid to investigating possible actions at the identified locations including “quick wins”.
- 9.4 Appendix A provides the original assessment for the worst four clusters as well as the assessment made by the Traffic and Development Section in terms of potential improvements to each of these sites.
- 9.5 Appendix B provides the summary review of the Nether Street Width Restriction.

**10. LIST OF BACKGROUND PAPERS**

- 10.1 Finchley and Golders Green Area Environment sub-committee report and decision, 24 November 2011
- 10.2 Finchley and Golders Green Area Environment sub-committee report and decision, 14 March 2012

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| <b>Cleared by Finance (Officer's initials)</b> | <b>JH</b> |
| <b>Cleared by Legal (Officer's initials)</b>   | <b>SS</b> |

### Cluster 1 BALLARDS LANE J/W NETHER STREET

#### Facts presented to March 2012 committee

18 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

1 accident resulted in serious injury

17 accidents resulted in slight injury only

#### **Contributory factors** assigned as likely or possible (not all factors included)

1 driver/rider vision affected by stationary or parked vehicle

1 wrong use of pedestrian crossing facility

1 pedestrian impaired by alcohol

1 sudden braking and/or following too close

2 exceeding speed limit

1 disobeyed automatic traffic signal

2 junction overshoot

1 disobeyed traffic signal

1 emergency vehicle on a call

#### **Accident patterns**

4 accidents (possibly 5 – one additional accident with a confusing description) involved right turner from Ballards Lane into Nether Street across the path of a NE-bound vehicle.

4 pedestrian accidents (1 at the junction of Nether Street and Albert Place, 3 at traffic signals Ballards La/Nether Street). 2 accidents at signals involved a SW-bound vehicle one a NE-bound vehicle)

2 accidents involved a vehicle turning right out of Albert Place in the path of a vehicle on Nether Street

2 shunts on different approaches to the signals

2 SW-bound vehicles pulling out into side of motorcycle

1 right turn out of Nether Street in collision with a NE-bound vehicle, 1 NW-bound emergency vehicle in collision with a NE-bound vehicle, 1 right turn into Chaville Way (station access) in collision with SW-bound vehicle.

55% of accidents occurring in darkness (compared with 27% borough road average).

#### **Possible Action:**

These roads are not in the Capital Investment Programme under the street lighting PFI but will be planned for intervention replacements at some point. Longer term average accidents in darkness is lower but still above average (may reflect busy times at this location). Investigate cost/benefit of bringing forward replacement of street lighting.

#### **Results of cost/benefit or “quick-win” review/:**

This item is not deemed a “quick win”. Currently the Lighting Section is in liaison with the PFI contractor to explore possible accommodation within the PFI contract and exploit relevant covenants.

**Cluster 1 – Recommendations:**

That the Interim Director for Environment, Planning and Regeneration to progress liaison with PFI contractor that explores the cost/benefit of bringing forward the replacement of street lighting with a view to implementing the lighting replacement where possible.

**Estimated Cost:**

The estimated cost is yet to be determined although it is expected that some aspects will be accommodated within the existing PFI contract and some will not.

## **Cluster 5**

### **GOLDERS GREEN ROAD J/W FINCHLEY ROAD**

#### **Facts presented to March 2012 committee**

15 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

1 accident resulted in serious injury

14 accidents resulted in slight injury only

#### **Contributory factors** assigned as likely or possible (not all factors included)

5 disobeyed traffic signal

1 travelling too fast for the conditions

2 defective traffic signals

1 loss of control

1 vehicle door opened or closed negligently

1 junction overshoot

1 inexperienced or learner driver/rider

1 dazzling sun

1 passing too close to a cyclist, horse rider or pedestrian

1 vision affected by rain sleet snow or fog

1 pedestrian wearing dark clothing at night

#### **Accident patterns**

5 accidents appear to have involved a collision between a vehicle travelling north on the Finchley Road and a vehicle travelling west from Golders Green Road. In 1 case the traffic signals were out, and in 1 possibly faulty. In the other cases a vehicle was considered to have disobeyed the signals (2 x northbound vehicle – one of which was at a temporary traffic signal, and one where the vehicle at fault was uncertain).

2 accidents involved a southbound vehicle disobeying traffic lights in collision with a westbound vehicle, presumably at the east side of the Gyratory by North End Road as the only feasible location given the descriptions. In both cases the southbound vehicle is recorded as disobeying the signals.

3 pedestrian accidents without common factors (1 pedestrian foot run over south of junction, 1 loss of control accident hitting pedestrians on pavement south of junction, 1 vehicle pulled over hitting pedestrian on east side of junction)

1 vehicle moved off trapping passengers foot, 1 vehicle reversed into motorcycle north of junction, 1 left turning bus hit vehicle on it's offside, 1 door opened into motorcycle on the inside north of junction, 1 shunt on North End Road approach.

Accident conditions and vehicle involvement broadly average

#### **Possible Action:**

Minor traffic management measures implemented 2009/10.

The high number of vehicles disobeying traffic signals may be due to confusion or deliberate action. Consider whether northbound traffic on Finchley Road has clear view of signals and whether confusion may arise from signage or other features. Liaise with Police regarding enforcement at this location if appropriate.

**Results of “quick-win” review/:**

A review of the signals has not led to any proposals for changes. Meanwhile, a request has been sent to the Police for targeted enforcement to be considered concerning moving traffic contraventions at this location particularly with regards to ‘disobeying traffic signals’.

**Cluster 5 – Recommendations:**

None but that the committee notes the matter regarding possible enforcement has since been referred to the Police.

**Estimated Cost:**

Nil.

**Cluster 6**  
**SQUIRES LANE J/W HIGH ROAD**

**Facts presented to March 2012 committee**

15 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

1 accident resulted in serious injury

14 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

1 wrong use of pedestrian crossing facility

2 passing too close to cyclist, horse rider or pedestrian

1 travelling too fast for the conditions

2 slippery road due to weather

3 loss of control

1 failed to signal / misleading signal

1 driver/rider vision affected by stationary or parked vehicles

2 following too close

1 illegal turn or direction of travel

1 aggressive driving

1 junction restart

**Accident patterns**

4 accidents involved vehicles turning left colliding with a cyclist. 2 on the southbound side of the road, 2 on the northbound side (cyclists travelling ahead except one northbound cycle also turning left).

3 accidents involved a child pedestrian – 2 in collision with motorcycles. 2 probably crossing Squires Lane near the junction.

4 shunt accidents – all on different approaches to the junction.

2 vehicle turning right (to NCR slip) across path of southbound vehicle.

1 loss of control on slip road, 1 head on when overtaking a stationary vehicle on Squires Lane.

Above average cycle and child accidents.

**Possible Action:**

Consider whether pedestrian crossing arrangements at mouth of Squires Lane can be improved.

Remove redundant/misleading cycle lane signage and consider whether cyclist warning signage, alternative routing of cyclists or other work to increase awareness for left turning traffic of cyclists on their inside and/or to encourage cyclists to avoid positioning themselves inside of left turning traffic, would be beneficial.

**Results of “quick-win” review/:**

The route has been scouted by officers and the removal of signs is on programme. This is scheduled to be complete by end of October 2012.

**Cluster 6 – Recommendations:**

That the committee notes the progress and endorse the associated spend from the current year's LIP allocation.

**Estimated Cost:**

£10k for the works cost including officer time.



**Cluster 13**  
**NETHER STREET JW ARGYLE ROAD**

**Facts presented to March 2012 committee**

12 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

3 accidents resulted in serious injury

9 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

1 driver/rider vision affected by stationary or parked vehicle(s)

2 disobeyed give way or stop sign or marking

4 loss of control

1 travelling too fast for the conditions

3 slippery road due to weather

2 nervous/uncertain/panic

1 traffic calming (eg speed cushions, road humps, chicanes)

1 distraction outside vehicle

1 distraction in vehicle

1 vision affected by rain, sleet, snow or fog

1 other (misjudged width restrictions)

1 swerved

**Accident patterns**

8 accidents involved a northbound vehicle colliding with the width restriction. 1 involved a southbound vehicle hitting a bollard possibly at the width restriction when avoiding another vehicle.

1 cyclist from Alexandra Grove pulling out in front of a vehicle on Nether Street, 1 vehicle from Argyle Road pulling out into side of a vehicle on Nether Street, 1 vehicle on Argyle Road turning right into Avondale Avenue across the path of a cyclist.

**Possible Action:**

Separate review of width restriction and associated markings.

**Results of “quick-win” review/:**

A review has been done and the subsequent analysis of accidents’ trend at the Nether Street width restriction appears to suggest a co-relation between the spike of incidents during 2009/10 period and changes to the line and road markings that were introduced at the time but this is not conclusive. Highways are, as a result considering, reverting the markings to what they were previously or as far back as May 2008. Appendix B provides a summary of the ‘quick win’ investigation.

**Cluster 13 – Recommendations:**

That the committee instructs the Interim Director for Environment, Planning and Regeneration to revert the road markings and lines as per recommendation and endorse the associated spend to be incurred from the current year’s LIP allocation.

**Estimated Cost:**

£8k for the design aspect and works cost including officer time.

**Cluster 18**  
**FINCHLEY ROAD J/W HAMPSTEAD WAY**

**Facts presented to March 2012 committee**

11 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

1 accident resulted in serious injury  
10 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

2 wrong use of pedestrian crossing facility  
1 loss of control  
1 nervous/uncertain/panic  
1 slippery road due to weather  
1 sudden braking  
1 disobeyed give way or stop sign or marking  
1 exceeding speed limit  
1 driver/rider impaired by alcohol  
2 junction restart  
1 passing too close to cyclist, horse rider or pedestrian  
1 aggressive driving

**Accident patterns**

5 pedestrian accidents – at least 4 on or near pedestrian crossing. 1 involving filtering motorcycle  
3 right turn accidents but otherwise without common factors  
1 shunt, 1 lane change colliding with motorcycle, 1 vehicle pulled out into filtering motorcycle  
  
3 motorcycle filtering

Above average pedestrian accidents, accidents involving motorcycles and older people slightly above average.

**Possible Action:**

Investigate whether pedestrian crossing responds promptly. Timings may be governed by linkages to other signals on Finchley Road but slow response may contribute to misuse by pedestrians.

**Results of “quick-win” review/:**

A review of the signals has not led to any proposals for changes as the phasing is working according to design. Changing the timings is not expected to achieve an optimum balance or superior performance than is currently experienced when the needs of all users are taken into consideration.

**Cluster 18 – Recommendations:**

None

**Estimated Cost:**

Nil

**Cluster 19**

**EAST END ROAD JW HIGH ROAD GREAT NORTH ROAD**

**Facts presented to March 2012 committee**

10 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

0 accidents resulted in serious injury

10 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

1 disobeyed traffic signal

2 sudden braking and/or following too close

2 loss of control

1 driver/rider illness or disability, mental or physical

2 pedestrian crossing road masked by stationary or parked vehicle

1 passing too close to cyclist, horse rider or pedestrian

1 swerved

1 nervous/uncertain/panic

**Accident patterns**

4 shunts – 3 different approaches

2 pedestrian accidents involving stationary vehicles

1 fall from motorcycle, 1 lane change accident, 1 vehicle pulling out into side of another

Conditions and vehicle involvement broadly average.

**Possible Action:**

Improvements carried out 2009/10. No further action.

**Results of “quick-win” review/:**

Last improvements at the location were carried out in 2009/10.

A follow-up review shows there have been 2 additional personal injury accidents in the eight months from October 2011 to May 2012 (this being the additional period of data available since the last report), one resulting in serious injury and one in slight injury.

One accident involved a shunt 40m south of the junction, the other a collision between a northbound vehicle and a vehicle making a (possibly illegal) right turn.

The rate of accidents at this location has been 3.2 accidents per year over the past five years and has remained fairly consistent throughout this period. This rate of accidents is above the borough average figure for accidents at Automatic Traffic Signals (2008-2010) of 2.19 per site per year – although it is a relatively busy junction.

No further action has been identified as a result of the review.

**Cluster 19 – Recommendations:**

None

**Estimated Cost:**

Nil

## Cluster 23

### GOLDERS GREEN ROAD J/W PRINCES PARK AVENUE

#### Facts presented to March 2012 committee

10 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

1 accident resulted in serious injury

9 accidents resulted in slight injury only

#### **Contributory factors** assigned as likely or possible (not all factors included)

2 disobeyed give way or stop sign or markings

2 travelling too fast for the conditions

1 swerved

1 fatigue

1 inexperience with type of vehicle

1 dangerous action in carriageway (eg playing)

1 nervous/uncertain/panic

1 loss of control

#### **Accident patterns**

3 northwestbound shunts/collision with stationary vehicle

3 vehicles turning right out of side roads in collision with cycle or motorcycle (2 from Princes Park Av, 1 from Heather Av)

2 pedestrian accidents without other common features

1 reversing/parking accident, 1 accidental acceleration.

30% accidents on wet road surface v 20% average. 40% accidents in darkness v 27% average.

#### **Possible Action:**

Accidents occurring due to wet road surface and in darkness are both above average, but not significantly and therefore no further action is merited at this time. Therefore this location should be kept under review should this position alter.

#### **Results of “quick-win” review/:**

The hoarding at the adjacent site restricts the inter-visibility and officers believe its removal could alleviate the associated accident risk. However, as there is no valid planning permit for this site to date, the issue has been referred to Planning Enforcement. However it is likely that the hoarding will be retained until this situation is resolved. .

A follow up study on the traffic trends at this location indicates that there was just one slight injury accident in the eight months from October 2011 to May 2012 (this being the additional period of data available since the last report). This incident involved a passing vehicle clipping a pedestrian in the road who was leaning into another vehicle.

The most recent three year period therefore shows 7 personal injury accidents (compared with 10 previously as a number of accidents in 2008 and 2009 no longer fall within the most recent 3 years).

In view of the low level of accidents since the last report it is proposed to continue to keep this location under review.

**Cluster 23 – Recommendations:**

That the committee notes progress on the follow-on study and instruct the Interim Director for Environment, Planning and Regeneration to retain the location on the list of sites under review and to provide an update as appropriate.

**Estimated Cost:**

Nil

**Cluster 24**  
**NFL HIGH ROAD 25M S J.W CHURCHFIELD AVENUE**

**Facts presented to March 2012 committee**

10 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

2 accidents resulted in serious injury

8 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

1 passing too close to cyclist, horse rider or pedestrian

1 dangerous action in carriageway (eg playing)

1 failing to signal / misleading signal

1 disobeyed give way or stop sign or marking

2 junction overshoot

**Accident patterns**

3 accidents turning right from the southbound A1000, 2 into Christchurch Avenue, 1 into Homebase (1 shunt and 2 turns across path of motorcycles - 1 also s-bound, 1 oncoming)

3 accidents pulling out onto A1000, 2 from Christchurch Ave, 1 from Homebase (prob right turn though 1 described as ahead)

3 pedestrian accidents (2 children, 1 waiting to cross– vehicle failed to stop, 1 ran out)

1 reversing accident in Churchfield Ave

Accidents in darkness slightly above average (40% v 27%).

**Possible Action:**

Consider local improvements at Christchurch Avenue junction e.g. kerb realignment (where visibility restricted by tree and bus stop) extension of right turn facility on A1000, signage adjustments etc. (Bus stop locations could limit options).

**Results of cost/benefit or “quick-win” review/:**

This item is not deemed a “quick win”. The need for further surveys and feasibility studies on site which could not be progressed sooner owing to the London 2012 Olympic embargo and the schools’ summer break means the reporting back on any improvements that may be identified has had to be deferred to next available meeting.

**Cluster 24 – Recommendations:**

That the committee notes progress and instruct the Interim Director for Environment, Planning and Regeneration to provide an update at the next available meeting.

**Estimated Cost:**

£12k for feasibility studies and the associated surveys including officer time.

**Cluster 26**  
**REGENTS PARK RD J/W EAST END RD**

**Facts presented to March 2012 committee**

10 personal injury accidents occurred at this location in the three years 01/10/2008 – 30/09/2011

3 accidents resulted in serious injury

7 accidents resulted in slight injury only

**Contributory factors** assigned as likely or possible (not all factors included)

1 travelling too fast for the conditions

2 disobeyed traffic signal

1 aggressive driving

3 following too close and/or sudden braking

1 crossed road masked by stationary or parked vehicle

1 loss of control

**Accident patterns**

6 right turn accidents, 3 right turner from East End Road in conflict with ahead vehicle from Gravel Hill, 2 right turn from Gravel Hill in conflict with ahead vehicle from East End Road, one accident right turners from both Gravel Hill and East End Road in conflict.

2 shunts - vehicles from south. 1 pedestrian accident – vehicle from south, 1 vehicle pulling away from kerb in front of cyclist

**Possible Action:**

Review signal timings

**Results of “quick-win” review/:**

A review of the signals has not led to any proposals for changes as the phasing is working according to the last known design changes that have been made. Although the existing arrangement accommodates both pedestrians and traffic, it is recognised that pedestrians have to wait longer than average.

However changing the timings result in a high negative impact on vehicles for a location that is already operating at near or maximum capacity and would therefore fail to achieve an optimum balance when the needs of all users are taken into consideration. This appears to have been a factor that influenced the existing phasing when the last known changes were made.

The high number of right-turning accidents at this junction, although previously highlighted as a concern, reflects the higher-than-average volume of right-turning movements that is peculiar to this junction. As the signal timings follow the specified requirements, no further action is being proposed.

**Cluster 18 – Recommendations:**

None

**Estimated Cost:**

Nil



## Nether Street Width Restriction

### Changes that have been made

1. LHS post now in line with kerb as opposed to being slightly set back.
2. Post-to-post (**kerb-to-kerb**) widths are as follows;
  - a. NB = 2.30m = 7' 6<sup>1</sup>/<sub>2</sub>" (**2.15m = 7' 3**/<sub>5</sub>"<sup>3</sup>). This post-to-post clearance is slightly more generous than what it was during the survey of 10/10/2007 at 7' 3<sup>3</sup>/<sub>4</sub>".
  - b. SB = 2.38m = 7' 9<sup>7</sup>/<sub>10</sub>" (**2.11m = 6' 11**/<sub>13</sub>"<sup>1</sup>). This post-to-post clearance is slightly more generous than what it was during the survey of 10/10/2007 at 7' 6<sup>1</sup>/<sub>2</sub>".
3. 'Before' and 'after' photos (photo 1 & 2 respectively) appear to suggest hatching pattern and edge lining has been changed. The current hatch gives a longer taper and therefore much gentler 'chicane' effect whereas before it was steeper and arguably conveyed a more 'hazardous' feel.
4. Speed humps on opposing carriageways have been removed.

'Before' (May 2008) - Photo1



'After' (Nov 2011) – Photo2



### Analysis & comments

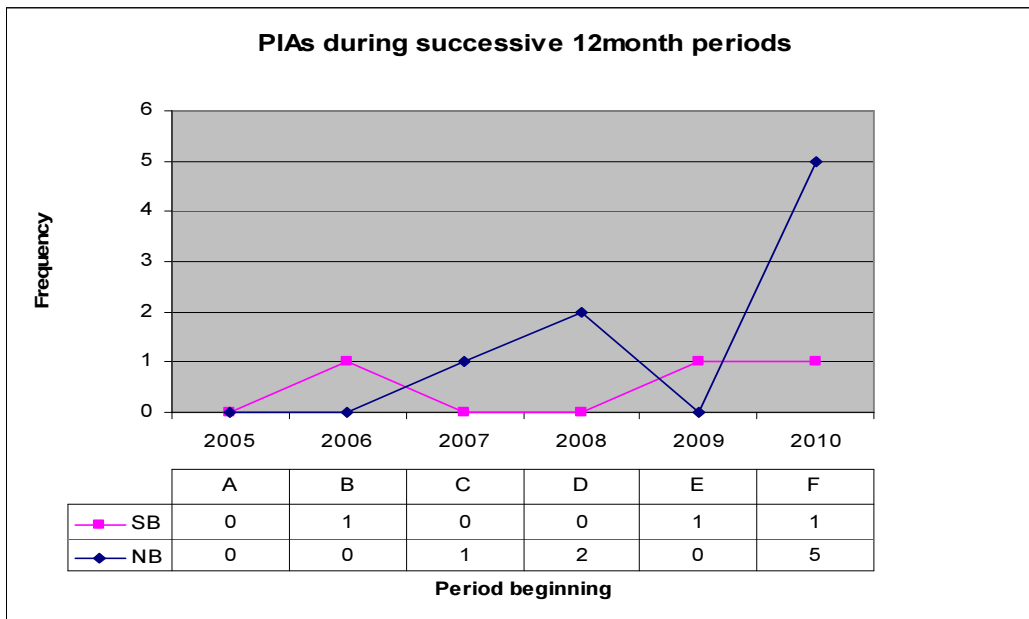
1. The adjustments made since, as borne in the 'before' and 'after' pictures, appear to have resulted in a less effective environment in terms of challenging a driver's normal perception of the street surroundings.
2. As a result the number of drivers who exercise due caution has diminished and this is borne by the 'spike' in incidents involving 'vehicle to barrier' collisions.
3. Concerns have been raised by residents, ward members and the Police regarding the incidents although the Police have expressed support for the restriction to stay.

### Conclusions

4. While the objective of a width restriction is not to act as a speed reduction measure, based on site observations there is anecdotal evidence to suggest, and a reason to believe, that more northbound drivers now do not reduce their speed enough to be able to navigate safely through the restriction. 2 family sized cars were observed on 9.08.11 driving at speeds that were 'too fast' for conditions and both suffered damage to wing mirrors.
5. The problem appears to be confined to the northbound approach. A graphical representation of successive '12-month data' for recorded personal injury incidents involving cars hitting the barrier appears to confirm a link between the spike in incidents with the changes that have been made.
6. Research (RoSPA 2005) suggests perceptual techniques which make the environment seem more complex or less safe do have success in influencing driving behaviour as

these have the potential to make a driver perceive a higher risk even though the actual risk does not.

7. Prior to removal, the technique appeared to exist at the location through use of edge markings to visually narrow the road and presumably 'reduced' speeds. A comparison of accidents before and after the changes appears to lend weight to this assumption.



|            |          | <b>NB</b> | <b>SB</b> |
|------------|----------|-----------|-----------|
| 01/08/2005 | <i>A</i> | 0         | 0         |
| 01/08/2006 | <i>B</i> | 0         | 1         |
| 01/08/2007 | <i>C</i> | 1         | 0         |
| 01/08/2008 | <i>D</i> | 2         | 0         |
| 01/08/2009 | <i>E</i> | 0         | 1         |
| 01/08/2010 | <i>F</i> | 5         | 1         |

**Recommendation**

1. Reinstate the hatching as per original reduced length / steep taper gradient as per **Photo 1**
2. Re-introduce the edge lining and previous profile around the LHS post as per **Photo 1**

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4. Speed humps on opposing carriageways have been removed.

'Before' (May 2008) - Photo1



'After' (Nov 2011) – Photo2



### Analysis & comments

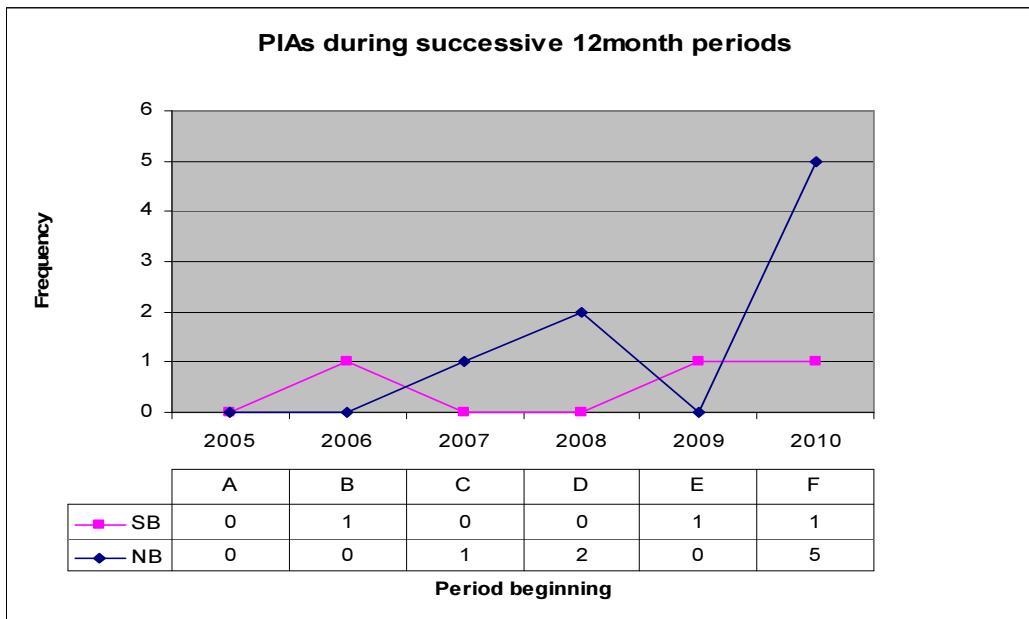
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these have the potential to make a driver perceive a higher risk even though the actual risk does not.

7. Prior to removal, the technique appeared to exist at the location through use of edge markings to visually narrow the road and presumably 'reduced' speeds. A comparison of accidents before and after the changes appears to lend weight to this assumption.



|            |          | <b>NB</b> | <b>SB</b> |
|------------|----------|-----------|-----------|
| 01/08/2005 | <i>A</i> | 0         | 0         |
| 01/08/2006 | <i>B</i> | 0         | 1         |
| 01/08/2007 | <i>C</i> | 1         | 0         |
| 01/08/2008 | <i>D</i> | 2         | 0         |
| 01/08/2009 | <i>E</i> | 0         | 1         |
| 01/08/2010 | <i>F</i> | 5         | 1         |

**Recommendation**

1. Reinstate the hatching as per original reduced length / steep taper gradient as per **Photo 1**
2. Re-introduce the edge lining and previous profile around the LHS post as per **Photo 1**

## AGENDA ITEM 8

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|                  |  |
|------------------|--|
| <b>Meeting</b>   | Finchley and Golders Green Area Environment Sub-Committee Meeting  |
| <b>Date</b>      | 16 October 2012  |
| <b>Subject</b>   | <p><b>Review of Pedestrian Safety and Pedestrian Facilities in East Finchley in the Vicinity of Martin School Incorporating Four Main Locations;</b></p> <ul style="list-style-type: none"> <li><b>i) Church Lane,</b></li> <li><b>ii) A1000/Creighton Avenue Junction</b></li> <li><b>iii) A1000/Church Lane Junction, and</b></li> <li><b>iv) Church Lane / East End Road Junction</b></li> </ul>  |
| <b>Report of</b> | The Interim Director of Environment, Planning and Regeneration   |
| <b>Summary</b>   | The report submits the findings of a systematic study to look at how best crossing facilities could be improved for the benefit of the wider community taking into account all identified pedestrian movements at the location. It also puts forward recommendations for traffic management measures for possible implementation to address pedestrian safety concerns within the context of the intervention criteria set by 'Priorities of the Traffic Management Budget' Cabinet Report of July 2002. |

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|   |   |
|---|---|
| Officer Contributors                        | Neil Richardson, Themba Nleya   |
| Status (public or exempt)                   | Public  |
| Wards affected                              | All   |
| Key Decision                                | No  |
| Enclosures                                  | <b>Appendix A:</b> Church Lane 20mph Conceptual Design; <b>Appendix B:</b> Creighton Avenue Zebra Crossing Conceptual Design; <b>Appendix C:</b> A1000/Church Lane Signalisation Feasibility Report; <b>Appendix D:</b> East End Road Pedestrian Island Conceptual Design; <b>Appendix E:</b> 36 Months Accident Data & Locations (Nov 08 to Oct 11); <b>Appendix F:</b> Speed Survey Summaries |
| Function of                                 | Executive   |
| Reason for urgency / exemption from call-in | Not applicable  |

Contact for further information: Themba Nleya, Senior Engineer, 020 8359 4198.

## **1. RECOMMENDATION**

- 1.1 That the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed 20mph speed limit on Church Lane.**
- 1.2 That the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed Zebra crossing on Creighton Avenue to consultation stage with a view to implement.**
- 1.3 That the Committee notes that there is no recommendation to make modifications to the existing junction configuration and layout of pedestrian facilities at the A1000 and Church Lane junction.**
- 1.4 That the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed pedestrian island at the junction of Church Lane and East end Road to consultation stage with a view to implement.**
- 1.5 That the Committee notes the maintenance-related improvements in the form of footway relays, signs rationalisation and changes to street furniture including pedestrian guardrail that have previously been undertaken**

## **2. RELEVANT PREVIOUS DECISIONS**

- 2.1 None.

## **3. CORPORATE PRIORITIES AND POLICY CONSIDERATIONS**

- 3.1 A formal procedure to review the appropriateness of traffic signals in the borough as it contributes to the One Barnet Plan and Corporate Plan priority “A Successful London Suburb” by keeping traffic moving.
- 3.2 Un-necessary traffic signals may cause delays, contribute to high maintenance costs, increase clutter and diminish the overall input to the transport needs of Barnet today and into the future. Therefore the recommendations also seek to contribute to the corporate priority ‘Better Services with Less Money’ as contributions for traffic signal maintenance would reduce at locations where an unjustified signalling of junctions can be avoided.
- 3.3 The London Mayor’s Transport Strategy also addresses these areas through:  
“Proposal 30: The Mayor, through TfL, and working with the London boroughs and other stakeholders, will introduce measures to smooth traffic flow to manage congestion (delay, reliability and network resilience) for all people and freight movements on the road network, and maximise the efficiency of the network. These measures will include ...c) “... keep traffic moving ...” , e) Planning and implementing ... improvements to the existing road network, ... to improve traffic flow on the most congested sections of the network, and to improve conditions for all road users

## **4. RISK MANAGEMENT ISSUES**

- 4.1 Introducing a zebra crossing at the proposed location on Creighton Avenue requires extensive pedestrian guardrail to channel users to the crossing. However the provision of guardrail for this purpose may be seen as contributing to street clutter as well as hindering sightlines. It is also counter-productive as it contradicts cost-effective strategies due to associated capital and maintenance costs.
- 4.2 At some locations, there may be concerns that pedestrian guardrail may restrict or trap cyclists caught between the rails and large vehicles and therefore eliminates chances for cyclists to escape potentially hazardous situations. Besides, the provision of guardrail is itself not always an effective way to mitigate entirely the risk that an accident or accidents may take place at pedestrian crossing points.
- 4.3 Replacing the existing pedestrian island on Creighton Avenue with a Zebra crossing can increase the risk of rear-shunt collisions and tailbacks on the A1000 High Road during periods of high pedestrian activity as sustained demand for the zebra crossing will continuously confer priority to pedestrians thus putting traffic on hold and causing journey-time delays to vehicular traffic.
- 4.4 Relocating of existing pedestrian facilities or the introduction of new, may provide a disproportionate benefit when taking into consideration the capital outlay required for the relocation of street furniture, lighting equipment, new pedestrian guardrail and associated utility improvements. On the other hand, any attempts to omit the pedestrian guardrail to curtail costs may lead to the use of undesignated crossing points thus increasing the risk of pedestrian-vehicle collisions.
- 4.5 Introducing controlled pedestrian facilities and features such pedestrian islands at those locations where there are none such as on Creighton Avenue and East End Road /Church Lane junction respectively will lead to a loss of amenity in the form of public off-street parking as park-free zones have to be created on the approaches to the crossings to ensure adequate inter-visibility. This loss of parking space may meet resistance particularly from those residents that rely on the available kerb space for their off-street parking needs should there be no spare capacity nearby that is available. This may be pertinent to this area as it sits right on the periphery of the controlled parking zone. As a result the area is characterised by high parking demand.
- 4.6 There is a cost associated with developing and implementing proposals. In order to limit abortive costs, the recommendations aim to rule out impractical or speculative proposals at early stage where acceptable alternative forms of control are unlikely to be technically feasible or economically viable or are unlikely to confer desired benefits. The Council has a duty to ensure value for money when carrying out programmes that are funded from the public purse. For this reason it may not be prudent to give sanction to the proposals to signalise the A1000/Church Lane junction and introduce a 20mph speed limit on Church Lane.

## **5. EQUALITIES AND DIVERSITY ISSUES**

- 5.1 Section 149 of the Equality Act 2010 which places and strengthens the duty on public authorities to advance equality of opportunity came into effect on 5 April.
- 5.2 This includes giving due regard to the need to advance equality of opportunity and, remove or minimize disadvantages related to particular protected characteristics and to take steps to meet the different needs that result including taking account of disabled persons' disabilities.

- 5.3 Formal or controlled pedestrian crossings provide a safer alternative to all users to cross busy roads. They can be of particular benefit to those members of the community who are less able to judge whether it is safe to cross, or less confident that they can do so. This may include vulnerable and disadvantaged user-groups such as the disabled, visually-impaired or partially-sighted, the elderly and school pupils and their carers.
- 5.4 The priority accorded to pedestrians by zebra crossings and the coloured tactile paving provides the necessary confidence to wheelchair-bound and other vulnerable users to cross more easily what would be an otherwise difficult challenge. This also allows learning disabled people or children to navigate independently where they would otherwise not be able to. Parents and other carers supervising small children may also find the reassurance of a controlled crossing particularly helpful.
- 5.6 The extent to which junctions and crossings operate safely will vary depending on the levels of vehicular and pedestrian traffic and the mix of users due to the local environment and facilities e.g. town centre, local schools etc.
- 5.7 Whereas during periods of lower traffic levels give-way priority would not be expected to adversely affect safety and optimum operation, during peak periods when demand is high both in terms of vehicular and pedestrian traffic, signalisation may be necessary to provide optimum needs of all users.
- 5.8 In some cases it will not always be economically viable to provide an alternative without disadvantaging some user-groups or one that is seen to be more biased towards catering for a particular category of road user.
- 5.9 In order to fully inform the feasibility study on the impact that signalising the A1000/Church Lane junction may bring, this report includes in **Appendix C** the output of a site specific Feasibility Study that highlights the impact of the three possible layout options that could be considered as part possible signalisation of the junction. The assessment takes into account the peculiar characteristics of the location, likely users and traffic levels to interrogate and predict the outcomes.

## 6. USE OF RESOURCES IMPLICATIONS (Finance, Procurement, Performance & Value for Money, Staffing, IT, Property, Sustainability)

- 6.1 **Finance** Estimated costs for the necessary statutory processes, including advertising, printing and all officer time which would be rechargeable, including consideration of any comments received and report writing will be met from the applicable LIP funding secured for the purpose of making improvements to the Borough's road network. Any financial implications will be contained within the Environment, Planning and Regeneration budgets.
- 6.2 Indicative costs for provision of a pedestrian island, provision of a new zebra crossing, and typical maintenance costs and/or savings are tabulated below.

| Type of Measure                      | Estimated Costs  |
|--------------------------------------|--|
| Traffic Signals at A1000/Church Lane | £50k to £155k depending on preferred layout option from Appendix C + £2.5k/year ongoing maintenance cost |
| Pedestrian Island                    | £5k  |
| Zebra crossing + guardrail           | £30k   |
| Signs + 20mph limit + VAS            | £7k  |



- 6.3 Traffic signal maintenance payments made to Transport for London (TfL) amount to some £460,000 per annum (2011/12). Annual maintenance costs per aspect (an aspect can be thought of as a “light-bulb” so each red, amber or green light, each red or green man signal, and each push button unit are an aspect) is currently approximately £80 (the saving from removal of older units may be more). A simple T-junction without pedestrian signals would have at least 18 aspects so an annual maintenance cost of at least £1,440 and a cross roads with pedestrian signals on each arm would have at least 36 aspects so an annual cost of at least £2,880. More complex arrangements would cost appreciably more.
- 6.4 **Procurement** Works involving traffic signals would have to be procured through Transport for London who is the operator of the equipment. Other highway works would be procured through the borough’s highway term contracts.
- 6.5 **Performance & Value for Money** The assessment of proposals for individual sites has included assessment of the financial costs and benefits and changes in delays and accidents at the junction.
- 6.6 There are no **Staffing, IT or Property** implications arising out of this report.
- 6.7 **Sustainability** None.

## 7. LEGAL ISSUES

- 7.1 The Traffic Management Act 2004 places an obligation on authorities to ensure the expeditious movement of traffic on their road network.
- 7.2 The GLA Act 1999 s245 and the Road Traffic Regulation Act 1984 s74A provides for Transport for London to operate and maintain traffic signals on borough roads.
- 7.3 The Equality Act 2010 s149 places a duty on public authorities to advance equality of opportunity.

## 8. CONSTITUTIONAL POWERS (RELEVANT SECTION FROM THE CONSTITUTION, KEY/NON-KEY DECISION)

- 8.1 Constitution Part 3, Responsibility for Functions – Section 3, Responsibilities of the Executive – Area Environment Sub- Committees perform functions that are the responsibility of the Executive including highways use and regulation not the responsibility of the Council.

## 9. BACKGROUND INFORMATION

- 9.1 In 2006/07 a School Travel Plan Implementation Scheme was developed to address barriers to travelling more sustainably to school that had been identified in the Martin School Travel Plan. Following consultation the following engineering measures were installed:
- i) Church Lane – footway improvements, signage improvements for the zebra crossing at the junction with A1000
  - ii) Creighton Avenue – kerb realignment and pedestrian island improvements as well as a number of improvements to the footway and carriageway along Plane Tree Walk.

- Since the end of the summer of 2011, various traffic and pedestrian safety concerns in East Finchley have been raised by various residents and stakeholders who then organised themselves into an interest group called WALKSAFE N2.
- Officers have held several meetings and discussions with both the WALKSAFE N2 group and ward members to understand the concerns better after which an e-petition with more than 2000 signatures was then submitted.
- A meeting between the WALKSAFEN2 Group representatives and the Cabinet Member for Environment took place on 10 February 2012.
- The petition was featured on the Agenda of, and debated by, the Business Management Overview and Scrutiny Committee meeting on 29 February 2012 and the Interim Director of Environment, Planning and Regeneration (EPR) was tasked to conduct investigations on site to undertake a holistic survey of the area to look at how best crossing facilities could, if there is justification, be improved for the benefit of the wider community taking into account all identified pedestrian movements at the location.
- In summary, the areas of road safety that have been under investigation include the following;
  - i) Church Lane - A review of pedestrian facilities and speeding concerns
  - ii) Creighton Avenue and A1000 High Road Junction - A feasibility study to consider a zebra crossing facility subject to visibility and technical considerations being met.
  - iii) Church Lane and A1000 High Road Junction - Review of existing pedestrian facilities (pelican and zebra crossings) and carrying out feasibility studies to explore the signalisation of the junction.
  - iv) Church Lane and East End Road Junction - A feasibility study to consider a pedestrian island facility subject to visibility and technical considerations being met.

This report is a result of the investigations and the table below summarises officer findings, and recommendations for consideration.

| <b>Church Lane - A review of pedestrian facilities and speeding concerns</b> |  |
|--|--|
| <b>Pedestrian facilities &amp; Sight lines</b>                               | <ul style="list-style-type: none"> <li>• Due to the restrictive road space, the footways on both sides of the Church Lane carriageway are narrow and confine pedestrians who are then forced to walk very close to the live traffic. At some sections pedestrian guardrail is strategically positioned to prevent pedestrians straying onto the carriageway</li> <li>• Visibility along Church Lane, taking into account recorded speeds is deemed adequate</li> </ul> |
| <b>Related Personal Injury Accidents (PIA)</b>                               | <ul style="list-style-type: none"> <li>• None related in the last 36 months</li> </ul>   |
| <b>Speed surveys</b>   | <ul style="list-style-type: none"> <li>• Speed surveys have been carried out at two locations along the one-way section of Church Lane either side of the railway bridge. The summary is shown in <b>Appendix F</b>.</li> <li>• The recorded average 85%ile speeds over the 7-day period between 6am and 6pm are 29.7mph east of the bridge and 31.3mph west of it.</li> </ul>   |

|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>• The corresponding figures for the same locations during that period coinciding with morning and after-noon school-runs (7am-10am, 2pm-5pm) are 28.8mph and 31.2mph respectively</li> <li>• As Church Lane is subject to a 30mph posted speed limit, the figures do not appear to suggest speeding during those times that the assessment was made.</li> <li>• Further, the speeds on the east side of the bridge which is on the approach to the school are marginally lower during school peak periods when children are walking to/from school reflecting increased traffic volumes during this period</li> <li>• As the complaints received from residents regarding perceived 'speeding' are so far not established, the perception is thought to arise due to the fact the footways are of narrow width which forces pedestrians to walk so close to live traffic</li> <li>• Excessive speeds and an adverse personal injury accident record are key to any considerations for measures in response to calls for 20mph speed limit or other related traffic management measures.</li> <li>• While a lower speed limit will make the area safer, based on accident records and recorded speeds, it is not obvious that the introduction of a 20mph speed limit restriction yield a significant benefit.</li> </ul> |
| <b>Related PIAs</b>                            | <ul style="list-style-type: none"> <li>• None related in the last 36 months</li> </ul>  |
| <b>Recommendation / financial implications</b> | <ul style="list-style-type: none"> <li>• Although the findings of the investigations when assessed within the context of the existing traffic management show that there would be no justification to introduce the 20mph speed limit, however officers realise that in the context of what we are trying to achieve in the area the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed 20mph speed limit on Church Lane that is shown on <b>Appendix A</b> with or without modifications.</li> <li>• Approximate cost £7k.</li> </ul>   |

**Creighton Avenue & A1000 Junction - A feasibility study to consider a zebra crossing subject to visibility and technical considerations being met.**

|   |  |
|---|--|
| <b>Existing pedestrian facilities and sight lines</b> | <ul style="list-style-type: none"> <li>• The informal pedestrian crossing incorporating an island was improved as part of previous school travel plan initiatives</li> </ul> |
|---|--|

|  |  |                         |                          |                      |         |
|--|--|-------------------------|--------------------------|----------------------|---------|
|  | <ul style="list-style-type: none"> <li>• However there are residual concerns regarding vehicles turning left into Creighton Avenue turning at speed due to a permitting kerb alignment and therefore failing to see pedestrians waiting to cross who, themselves, may be masked by adjacent private hedge</li> <li>• Existing configuration permits pedestrians to navigate across Creighton Avenue in to stages although several meetings with parents suggest users are not satisfied with the arrangement</li> <li>• Pedestrian demand for the facility was assessed during the school run hours shows high footfall</li> <li>• A zebra at the current informal crossing would cause tailbacks on the A1000, increase the risk of rear shunts</li> <li>• Offsetting the location of zebra crossing, as is shown in <b>Appendix B</b>, places it away from pedestrian desire line necessitating additional features such as guardrail</li> <li>• A new zebra crossing will result loss of off-street parking as car-free approaches have to be created for a zebra crossing to ensure adequate visibility, a development that may meet resistance especially from those residents that rely on off-street parking for their needs if no alternative parking spaces are offered.</li> </ul> |                         |                          |                      |         |
| <b>Traffic flows</b>                           |  | Left into Creighton Ave | Right into Creighton Ave | Left Out / Right Out | Ped /hr |
|  | 7.30-8.30  | 224                     | 49                       | 49/212               | 72      |
|  | 8.30-9.30  | 224                     | 45                       | 58/157               | 284     |
|  | 2.30-3.30  | 132                     | 63                       | 94/62                | 95      |
|  | 3.30-4.30  | 181                     | 63                       | 109/72               | 254     |
| <b>Related PIAs</b>                            | <ul style="list-style-type: none"> <li>• 3 out 4 incidents in the last 36 months at this location involved right-turning movements are classed as 'slight'. Includes two incidents involving pedal cycles</li> <li>• 1 incident classed as slight involved a 'passenger falling as bus pulls off'</li> <li>• None involving a pedestrian. The computed accident rate for the junction is 1.33/year</li> </ul>  |                         |                          |                      |         |
| <b>Recommendation / financial implications</b> | <ul style="list-style-type: none"> <li>• That the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed Zebra crossing on Creighton Avenue to consultation stage with a view to implement.</li> <li>• Approximate cost £30k</li> </ul>   |                         |                          |                      |         |

**Church Lane & A1000 Junction - A Review of the existing junction and Impact Assessment of Signalising the Junction**

|   |   |
|---|---|
| <p><b>Justification for traffic signals</b></p> | <ul style="list-style-type: none"> <li>• Forward visibility on all three approaches to the T-junction are deemed adequate</li> <li>• Existing configuration and relationship between the zebra crossing on Church Lane arm and the Pelican crossing across the A1000 is considered optimum taking into account assessed levels, of pedestrian demand, pedestrian movements, volumes of traffic</li> <li>• The pelican crossing is deemed appropriate as it balances the needs of vehicular traffic and pedestrians whereas signalling the junction will not confer any further advantages to pedestrians, will lead to loss of kerb parking space and exacerbates congestion.</li> <li>• The existing Transport for London criteria recommends; <ul style="list-style-type: none"> <li>i) signalling a junction for the benefit of pedestrians if turning traffic volumes exceeds 700 vehicles per hour or the flow of pedestrians is greater than 300 per hour (DfT circular 5/73 or Justification for Traffic Signals- TfL) with figures being the average of the flows during the busiest 4 hours of the day. None of the criteria is met for this location.</li> <li>ii) signalling a junction for the benefit of reducing traffic conflicts and delays if total entering intersection is 565 or greater and contribution from the side road is 170.</li> <li>iii) signalling a junction for the benefit of side road traffic where such traffic experiences unreasonable delay in trying to break into a continuous stream of traffic on a major road if total entering junction is 1356 or greater and contribution from side road is at least 112.</li> </ul> </li> <li>• The above criteria in (i) was applied as it accords with the remit of the study and is not met. Besides, any plans to signalise the A1000/Church Lane junction could be potentially vetoed by Transport for London since the location lies on a traffic-sensitive road that forms part of the London Strategic Road Network (SRN).</li> <li>• To date, an additional school warning sign on the Church Lane approach arm has since been installed and the line and carriageway markings have been refreshed to make crossings more conspicuous.</li> </ul> |
|---|---|

| Traffic flows                           |  | Total entering junction | Side road contribution | Turning traffic >700/hr? | Ped >300/hr? |
|---|--|-------------------------|------------------------|--------------------------|--------------|
|   | 7.30-8.30  | 1549                    | 271                    | No                       | No           |
|   | 8.30-9.30  | 1047                    | 350                    | No                       | No           |
|   | 2.30-3.30  | 1672                    | 302                    | No                       | No           |
|   | 3.30-4.30  | 1906                    | 350                    | No                       | No           |
| Related PIAs                            | <ul style="list-style-type: none"> <li>• 1 out of 7 incidents in the last 36 months at this location involved a pedestrian.</li> <li>• The computed accident rate for the junction is 2.3 PIA /year. By comparison, a signalised junction in Greater London would be expected to have an accident rate of 2.64 PIA / year (SQA 64 2006 Value)</li> <li>• The one incident involving a 14 year old hit at Pelican Crossing by car travelling North to South going 'drove through as ATS changed from green to amber' is classed 'serious' and all others are classed 'slight'</li> <li>• A detailed feasibility study on the potential signalisation of the junction is presented in <b>Appendix C</b></li> </ul> |                         |                        |                          |              |
| Recommendation / financial implications | <ul style="list-style-type: none"> <li>• That the Committee notes that there is no recommendation to make modifications to the existing configuration of the A1000 and Church Lane junction and the associated layout of pedestrian facilities.</li> </ul>   |                         |                        |                          |              |

**Church Lane & East End Road Junction - A feasibility study to consider a pedestrian island subject to visibility and technical considerations being met.**

| Existing pedestrian facilities and sight lines | <ul style="list-style-type: none"> <li>• The junction has a wide bell-mouth and dropped kerbs without tactile paving</li> <li>• The existing layout is not seen as user-friendly to pedestrians and vulnerable user groups as it encourages vehicles to turn at speed into Church Lane due to a permitting kerb alignment</li> <li>• Drivers run the risk of failing to see pedestrians waiting to cross or failing to stop in time</li> <li>• The existing road width configuration does not permit pedestrians to navigate across in two stages due to the absence of a suitable pedestrian island.</li> <li>• A conceptual design is as is shown in <b>Appendix D</b>.</li> <li>• Through the vehicle swept path analysis, the need to accommodate larger turning vehicles such as Refuse and Fire Tenders has offset the proposed island slightly and away from the desirable line of visibility.</li> </ul> <p>However, this is outweighed by the benefit that the</p> |
|--|---|
|--|---|

|  |   |
|--|---|
|  | introduction of the island is expected to bring as experience elsewhere shows islands can be an effective visual deterrent in curtailing speeds as it imparts to the drive the feel of a 'narrow' and 'pedestrian-zone' environment that demands cautious driving.  |
| <b>Related PIAs</b>                            | <ul style="list-style-type: none"> <li>• The 2 PIA incidents in the last 36 months recorded at this location involved turning movements and both are classed as 'slight'</li> <li>• 1 incident involved a pedestrian hit by a car turning at speed</li> <li>• The computed accident rate for the junction is 0.67 PIA /year</li> </ul>        |
| <b>Recommendation / financial implications</b> | <ul style="list-style-type: none"> <li>• That the Committee decides whether to instruct the Interim Director of Environment, Planning and Regeneration to progress the proposed pedestrian island at the junction of Church Lane and East end Road to consultation stage with a view to implement.</li> <li>• Approximate cost £5k</li> </ul> |

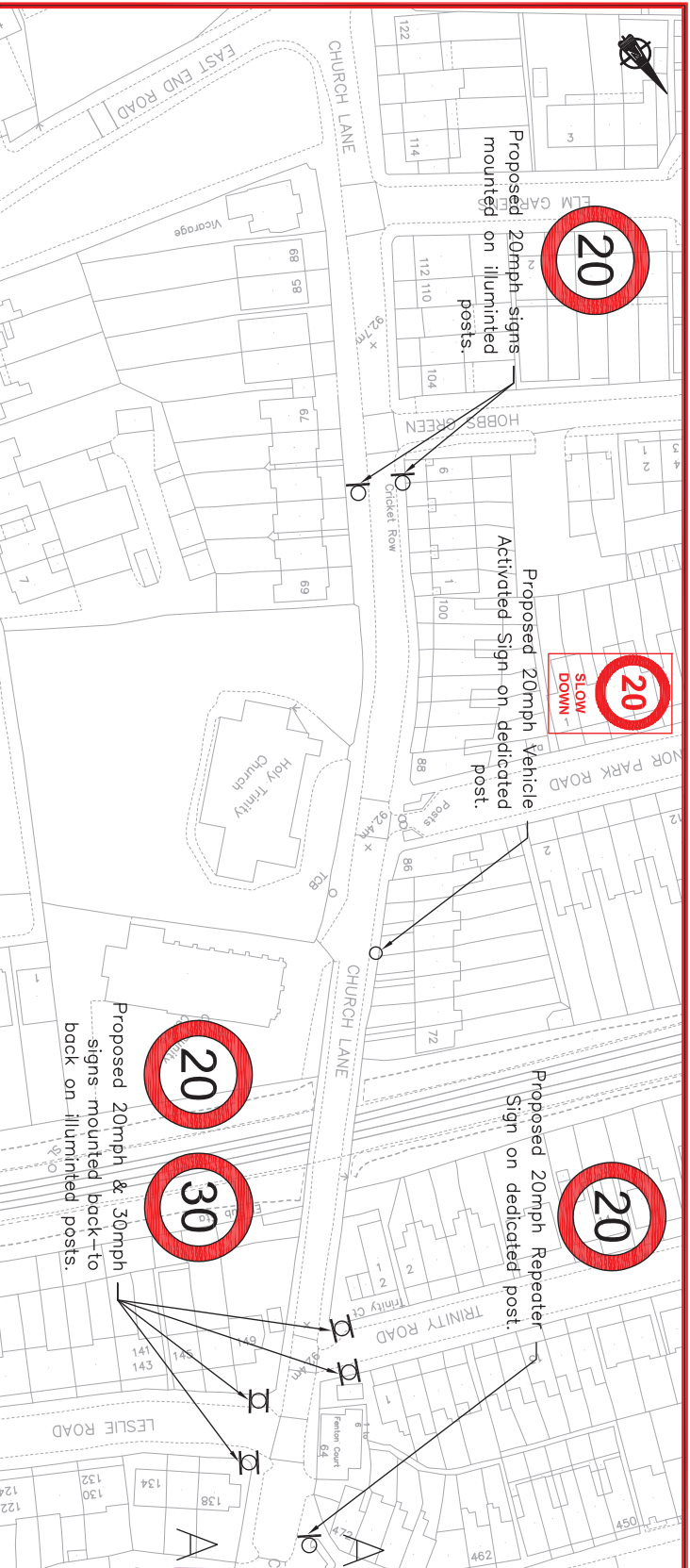
## 10. LIST OF BACKGROUND PAPERS

10.1 None.

|  |              |
|--|--------------|
| <b>Cleared by Finance (Officer's initials)</b> | <b>MC</b>    |
| <b>Cleared by Legal (Officer's initials)</b>   | <b>J O'H</b> |

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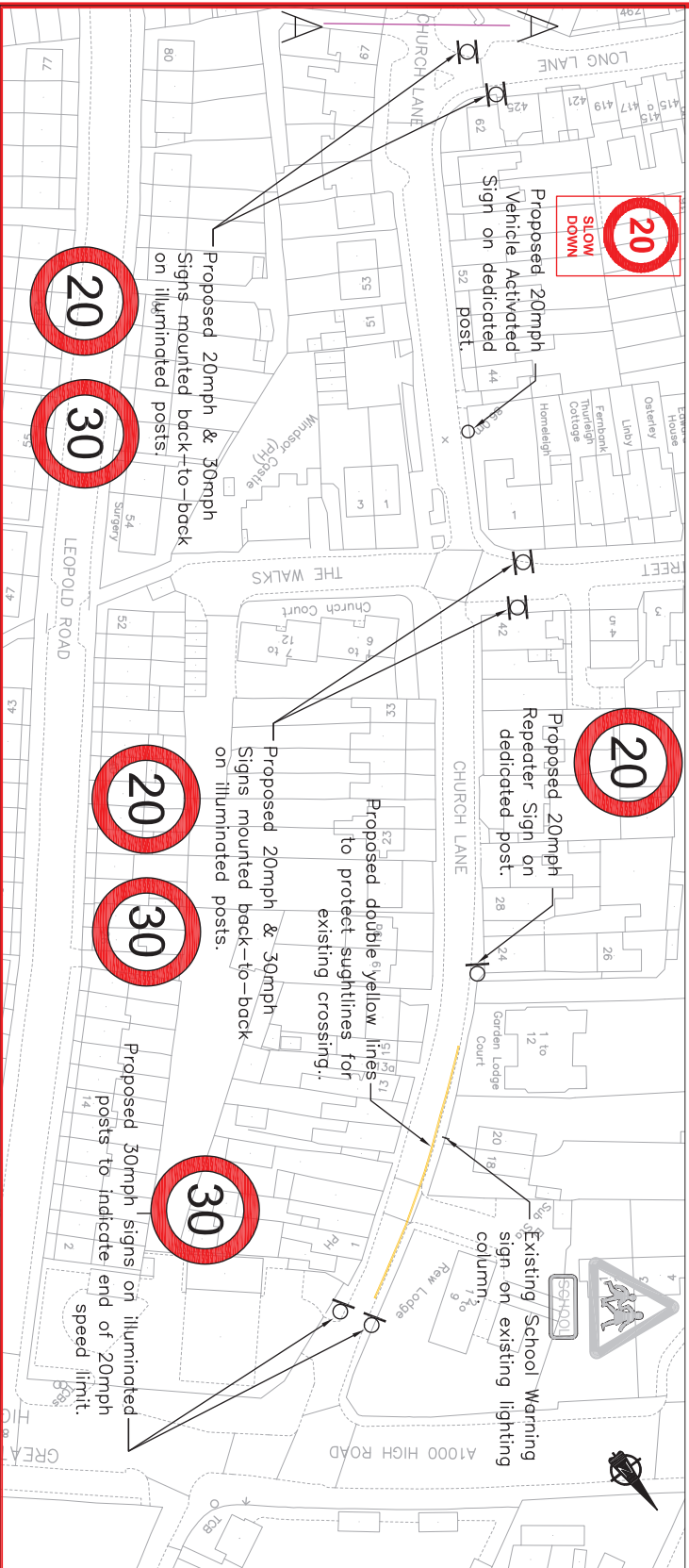
**NOTES:-**

- All works to be carried out in accordance with the London Borough of Barnet Term Maintenance Contract 2007-2012.
- Exact setting out to be agreed on site with the Engineer's Representative.

Proposed signs.

Existing highway features.

Pam Wharfe  
Interim Director, Environment, Planning & Regeneration



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Tel. 020 8359 2000

**BARNET**  
LONDON BOROUGH  
DESIGN TEAM

**SCHEME:**  
East Finchley Pedestrian Safety  
Traffic & Road Safety  
Conceptual Design

**TITLE:**  
Proposed 20mph Limit  
Church Lane  
N2

**Scales:** 1:1000@A3

|                       |            |               |
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| Initiated: NR         | Drawn: TN  | Date: Sept 12 |
| DRAWING NO: 60671 P02 | Checked: - |               |

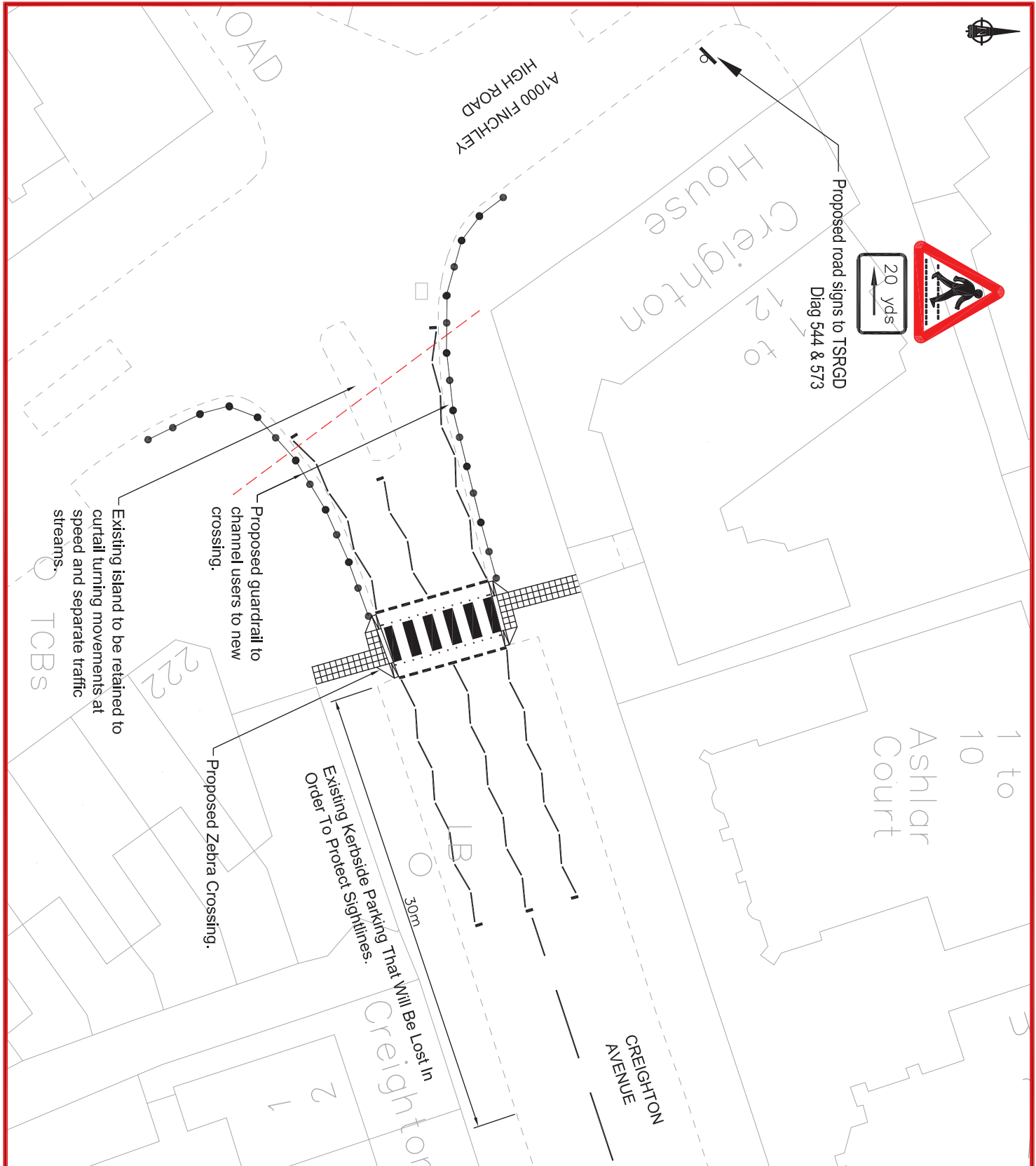
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Proposed road signs to TSRGD  
Diag 544 & 573



NOTES:-

- Proposed Highway Features
- Existing pedestrian desire line
- Proposed pedestrian guardrail



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| Revision and Date | Description | Initial |
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|                   |             |         |

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SCHEME:  
East Finchley Pedestrian Safety  
Pedestrian Facilities  
Conceptual Design

TITLE:  
Proposed Zebra Crossing  
Creighton Avenue  
N2

|            |          |          |         |
|------------|----------|----------|---------|
| Scale:     | 1:250@A3 | Date:    | Sept 12 |
| Initiated: | NR       | Drawn:   | TN      |
| Checked:   | -        | Checked: | -       |

DRAWING NO: 60671 P 01

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# London Borough of Barnet Traffic & Development Design Team

## Feasibility study

### A1000 / CHURCH LANE JUNCTION by MARTIN PRIMARY SCHOOL

|                    |                 |
|--------------------|-----------------|
| <b>Job Number:</b> | 60664           |
| <b>Doc Ref:</b>    | CorrA1000/60664 |
| <b>Author:</b>     | Antoine Aubert  |

#### Document History

| <b>Revision</b> | <b>Purpose</b>     | <b>Originated</b> | <b>Checked</b> | <b>Approved</b> | <b>Date</b> |
|-----------------|--------------------|-------------------|----------------|-----------------|-------------|
| N/A             | Draft for approval | AA                | AA             | LW              | June 12     |
| A               | Final issue        | AA                | AA             | LW              | June 12     |
|                 |                    |                   |                |                 |             |

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# 1. Introduction

## *Project Background*

---

- 1.1 The Traffic and Development Team has been asked to carry out a feasibility study looking at the impact and benefits of providing traffic signals at the junction of the A1000 with Church Lane.
- 1.2 This feasibility study is being conducted following concerns expressed by local residents and parents of children attending Martin Primary School over pedestrian safety at that location.
- 1.3 Fig 1.1 below highlights the site's location.

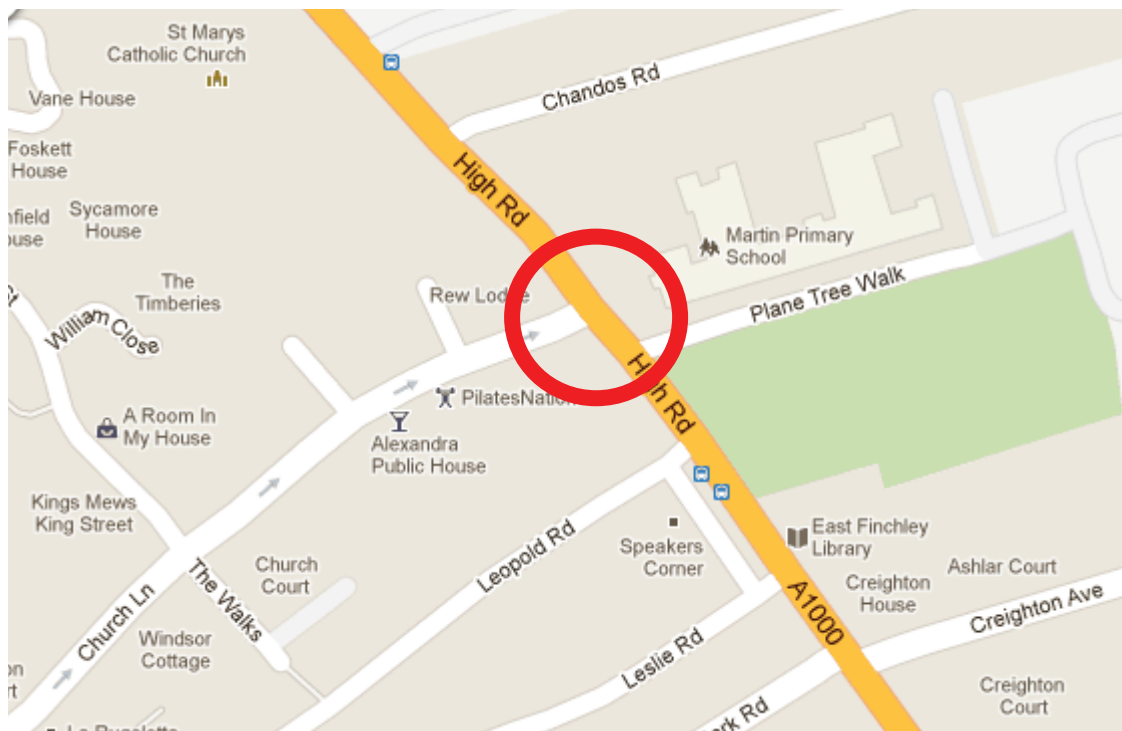


Fig 1.1 Location plan junction of A1000 High Road with Church Lane

# 2. Existing Site Characteristics

## *Current Layout*

---

- 2.1 A plan showing the existing layout of the junction can be found in Appendix A.
- 2.2 The junction is a standard major-minor priority junction with a give way on Church Lane. Church Lane operates one-way eastbound.

- 2.3 A zebra crossing (in Church Lane) and a pelican crossing (across the southern arm of the A1000) are present to assist pedestrian movements at the site. Guardrails are erected around these crossings to channel the flow of pedestrians.
- 2.4 The entrance to Martin Primary School is located on the eastern side of the junction. The majority of pedestrian movements at the junction are linked to school activities and therefore concentrated around the morning drop off and afternoon pick up times.
- 2.5 A petrol station is located on the south western side of the junction with two vehicular accesses; one on the A1000, and one in Church Lane. Although access and egress is allowed at both, the majority of vehicles tend access the station from the A1000 and leave via Church Lane.
- 2.6 Designated parking bays are present along the A1000 on the south eastern side and both north the eastern and western sides of the junction. Unrestricted parking occur on the northern side of Church Lane approximately 40 metres from the junction.

### Traffic Flows

---

- 2.7 Traffic flow at the junction have been obtained using the results of a classified manual count for traffic exiting Church Lane and an automated count for vehicles travelling along the A1000 both carried out in February 2012.
- 2.8 A 15% growth factor was applied to the count done for the A1000 to convert the results from vehicle numbers to Passenger Car Units (PCU).
- 2.9 Since pedestrian activity at the site is mainly linked with the school, the traffic flows studied were those for the morning drop off and afternoon pick up times when pedestrian crossing facilities are expected to be used the most thus reducing the junction's capacity.
- 2.10 Traffic flows on a typical weekday between 8:30-9:30am and 15:30-16:30pm are resented in table 2.1 overleaf:



|  | A1000 North | A1000 South | Church Lane | Total        |
|--|-------------|-------------|-------------|--------------|
| Weekday:<br>8.30am-9.30am<br>15.30pm-16.30pm |             |             |             |              |
| A1000 North                                  | 0<br>0      | 945<br>809  | 0<br>0      | 945<br>809   |
| A1000 South                                  | 734<br>1011 | 0<br>0      | 0<br>0      | 734<br>1011  |
| Church Lane                                  | 172<br>203  | 208<br>172  | 0<br>0      | 380<br>375   |
| Total  | 906<br>1214 | 1153<br>981 | 0<br>0      | 2059<br>2195 |

Table 2.1: Current flow PCU.

- 2.11 As can be seen the flow of traffic along the A1000 is tidal with more traffic proceeding southbound in the morning and northbound in the afternoon. Turning movements out of Church Lane also present a tidal distribution.
- 2.12 Pedestrian numbers at the junction are at their highest during morning peak when in excess of 500 pedestrians pass through the junction.

### Accident Statistics

- 2.13 Four slight personal injury accidents have occurred in the three years period between 1 January 2009 and 31 December 2011. A brief summary of these personal injury accidents is given below.
- 2.14 One was a rear end shunt in Church Lane 28m west of the junction involving two cars. This accident is the only one in this group to have happened outside daylight hours.
- 2.15 Two involved vehicles failing to give way when turning right out of Church Lane onto the A1000 one of which involved a motorcycle.
- 2.16 The last one involved an elderly passenger on board a local bus who fell as the bus moved from a stationary position when travelling northbound along the A1000 south of the pelican crossing.
- 2.17 The full detail of these accidents can be found in Appendix B of this report.

### Current Junction Operation

- 2.18 The site operates as a priority junction with traffic in Church Lane giving way to traffic on the A1000. Traffic in Church Lane can move slowly and form rolling queue as on top of giving way to the A1000 it also give way to pedestrian using the zebra crossing.
- 2.19 Opportunities to come out of Church Lane are also affected by the operation of the pelican crossing. When the pelican crossing is activated gaps appear in the northbound flow allowing left turners to proceed. On the other hand vehicles willing to turn right out of Church Lane can be impeded to do so by southbound vehicles queuing at the stop line.
- 2.20 Traffic along the A1000 flows freely except when the pelican crossing is activated by pedestrian. Queues formed as a result are up to seven cars in lengths but clear fully once the right of way is re-established for the A1000.
- 2.21 Pedestrian movements around the junction appear to be well catered for by both the zebra and the pelican crossings.
- 2.22 The default recall time for pelican crossings is set at 20 seconds meaning that the maximum time someone would need to wait once the red man is on is 20 seconds.

### **3. Alternative Junction Control**

#### *Traffic Signal*

---

- 3.1 In order to address the pedestrian safety concerns expressed at the location, three signalised layouts are being explored in this report.
- 3.2 The proposed traffic signal phases for the junction which are common to all three layouts are presented in Diagram 3.1 below.
  - Phase A: A1000 southbound (traffic)
  - Phase B: A1000 northbound (traffic)
  - Phase C: Church Lane (traffic)
  - Phase D: Green man for Church Lane (pedestrian)
  - Phase E: Green man for A1000 (pedestrian)

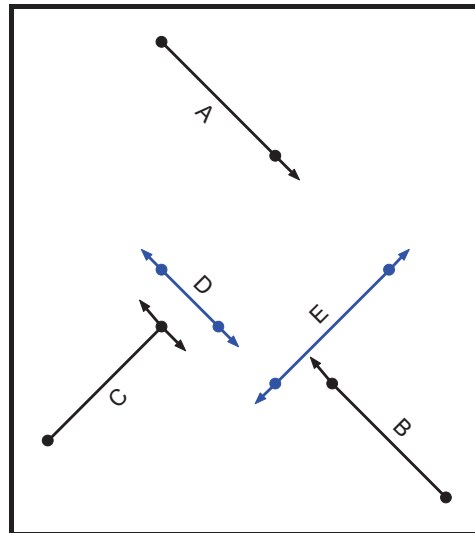


Diagram 3.1: Traffic signal phases.

- 3.3 The traffic signal sequence for this layout site would run first the main road, then the pedestrians, before finally allowing traffic in Church Lane to proceed. A representation of this sequence is given in Diagram 3.2 below.

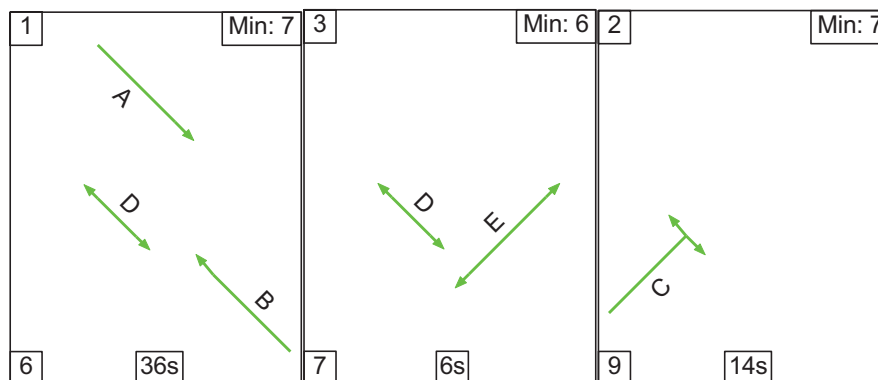


Diagram 3.2: Traffic signal sequence.

- 3.4 The maximum cycle time (one revolution of the traffic light sequence) has been set at 78 seconds to provide a balance between the need to assist pedestrians whilst keeping traffic moving at the junction. With a green man time of 6 seconds this means that the maximum waiting time for pedestrian who would have just missed out the green man invitation to cross would be 72 seconds.

### Layout 1

- 3.5 The first layout is the simplest and proposes to maintain the pedestrian crossing for the A1000 and its associated stop line in their current locations.
- 3.6 Under this scenario a green man crossing would replace the current zebra crossing in Church Lane and stop lines will be placed to control

traffic coming out Church Lane and proceeding southbound along the A1000.

- 3.7 A copy of drawing number 60664\_F\_OPT1\_01 presenting this layout can be found in appendix C.
- 3.8 Since the kerb lines around the junction will remain unchanged, there would be no need to protect or relocate underground services thus saving on potentially expensive works.

### *Layout 2*

---

- 3.9 The second layout is similar to the first one apart from the fact that the existing pedestrian crossing location across the A1000 and its associated northbound stop line are moved north toward Church Lane.
- 3.10 This is to allow for a more compact junction layout to be achieved thus reducing the amount of lost time required in the timing of the traffic lights.
- 3.11 Should this layout be preferred further assessment would need to be made to ensure that the relocation of the crossing does not affect its popularity for pedestrians accessing the school.
- 3.12 A copy of drawing number 60664\_F\_OPT2\_01 presenting this layout can be found in appendix C.

### *Layout 3*

---

- 3.13 The third layout would see the provision of short flares on the three approach lanes to increase the capacity of the junction.
- 3.14 Kerb lines would need to be modified as a result thus substantially increasing the cost of implementing this layout compared with the other two. Ground investigations would need to be carried out to assert whether underground services would need to be relocated as a result and what the associated costs of such relocations would be.
- 3.15 Parking provisions around the junction and the southbound cycle lane would need to be reduced in order to provide the necessary merge distances along the A1000 to bring traffic back from two to one lane.
- 3.16 A copy of drawing number 60664\_F\_OPT3\_01 presenting this layout can be found in appendix C.

### *Performance Comparison*

---

- 3.17 The performances of each layout during the morning and afternoon peaks have been forecasted using the traffic modelling software Linsig.

3.18 Table 3.1 & 3.2 below present the degree of saturation, delay per vehicle, and average queue for each approach in the AM and PM peaks.

| Link Num           | Link Desc                  | Layout 1                 |                           |                      | Layout 2                 |                           |                      | Layout 3                 |                           |                      |
|--------------------|----------------------------|--------------------------|---------------------------|----------------------|--------------------------|---------------------------|----------------------|--------------------------|---------------------------|----------------------|
|                    |                            | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) |
| 1/1                | A1000 NB Ahead             | 79.5                     | 25                        | 15                   | 79.5                     | 25                        | 15                   | 69.1                     | 17.7                      | 12.1                 |
| 2/1                | A1000 SB Ahead             | 110.7                    | 224.6                     | 72.7                 | 107.8                    | 181.5                     | 61.9                 | 93.1                     | 38.5                      | 24.4                 |
| 3/1                | Church Lane Left and Right | 109.8                    | 248.3                     | 30.8                 | 109.8                    | 248.3                     | 30.8                 | 91.5                     | 72.3                      | 12.3                 |
| Cycle Time (s): 78 |                            |                          |                           |                      |                          |                           |                      |                          |                           |                      |

Table 3.1: Performance comparison AM peak

| Link Num           | Link Desc                  | Layout 1                 |                           |                      | Layout 2                 |                           |                      | Layout 3                 |                           |                      |
|--------------------|----------------------------|--------------------------|---------------------------|----------------------|--------------------------|---------------------------|----------------------|--------------------------|---------------------------|----------------------|
|                    |                            | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) | Degree of Saturation (%) | Delay per Vehicle (s/PCU) | Mean Max Queue (pcu) |
| 1/1                | A1000 NB Ahead             | 109.5                    | 205.1                     | 72.9                 | 109.5                    | 205.1                     | 72.9                 | 95.2                     | 43.1                      | 28.2                 |
| 2/1                | A1000 SB Ahead             | 94.7                     | 50.3                      | 23.5                 | 92.3                     | 41.6                      | 21.3                 | 79.7                     | 23                        | 15.6                 |
| 3/1                | Church Lane Left and Right | 108.3                    | 229                       | 28.3                 | 108.3                    | 229                       | 28.3                 | 90.3                     | 68.7                      | 11.7                 |
| Cycle Time (s): 78 |                            |                          |                           |                      |                          |                           |                      |                          |                           |                      |

Table 3.2: Performance comparison PM peak

3.19 As can be seen the degree of saturation for all three layouts are high leading to delay and queues on all three approaches.

- 3.20 The compact format of layout 2 allows slightly better performances to be achieved for the A1000 southbound direction, although this improvement remains marginal.
- 3.21 Layout 3 performs best out of those reviewed due to the proposed two lane approaches at the junction. The results are however unsatisfactory with degrees of saturation in excess of 90%.
- 3.22 Full modelling output can be found in Appendix D

### *Cost Comparison*

- 3.23 The estimated costs of implementing the various layouts are presented in table 3.3 below:

| Item  | Layout 1        | Layout 2        | Layout 3                   |
|---|-----------------|-----------------|----------------------------|
| Construction cost   | £ 10,000        | £ 12,000        | £ 100,000                  |
| Protection of statutory services (tbc)                        | £ NA            | £ NA            | £ tbc with further studies |
| Traffic Signal supply and installation cost                   | £ 35,000        | £ 35,000        | £ 35,000                   |
| Professional fees to design, consult and Supervise the scheme | £10 000         | £10 000         | £20 000                    |
| <b>Total</b>  | <b>£ 50,000</b> | <b>£ 52,000</b> | <b>£ 155,000</b>           |

*Table 3.3: Cost comparison*

- 3.24 As can be seen the first two options are similar in price whereas the third is three time more expensive. The main difference in cost is due to the required kerb line amendments to provide the two lane approaches for layout 3.
- 3.25 Note that the cost of relocating underground services would also need to be added to the estimate for layout 3. Should this layout be favoured further investigations would need to take place to ascertain these costs.

## **4. Discussion**

- 4.1 All three proposed layouts would provide controlled green man crossings in Church lane and the A1000. While this might initially be perceived as an improvement for pedestrians, controlling the entire junction with traffic signals means that pedestrian waiting times will increase from a maximum of 20 to 72 seconds
- 4.2 Added delays would also be encountered when attempting to cross Church Lane and the A1000 in succession as the pedestrian phase cannot be made to accommodate the completion of both crossing movements in the same cycle. In the worst case scenario pedestrians might be asked to wait 72s for the first green man to appear and then

assuming that they have reached the second crossing point within 15s be required to wait another 63s for the green to appear on the second crossing. This would bring the overall time taken to use both crossing to two and a half minutes.

- 4.3 In terms of capacity wise there does not appear to be significant benefits in opting for the compact layout proposed in layout 2. As such should signalisation occur it is expected that the crossing for the A1000 would remain in its current location.
- 4.4 From a traffic perspective the queues and delays predicted as a result of signalling the junction are substantially worse than those currently experienced on site. While layout 3 performs better than the other two it is still not as efficient as the current layout and would come at a cost both financially and in term of loss of parking for the area.
- 4.5 The accident review done in chapter 2 shows that no pedestrian personal injury accidents have occurred at the location in the last three years.

## **5. Conclusion & Recommendation**

- 5.1 The design team was asked to assess the benefits of providing traffic signals to fully control the junction of the A1000 with Church Lane. This investigation was carried out in response to concerns over pedestrian safety at the junction expressed by parents and carers of pupils attending Martin School adjacent to the junction.
- 5.2 The review of three possible layouts showed that accommodating traffic signals at the junction would have a substantial detrimental effect on the movement of both pedestrians and traffic at the junction.
- 5.3 Given the absence of personal injury accidents involving pedestrians at the site in the last three year and the current presence of controlled pedestrian crossings at the site this report concludes that signalisation would not be appropriate for this site.

## Appendix A: Existing Layout Drawing



NOTES:-

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| Revision and Date | Description | Initial |
|-------------------|-------------|---------|
|                   |             |         |
|                   |             |         |
|                   |             |         |

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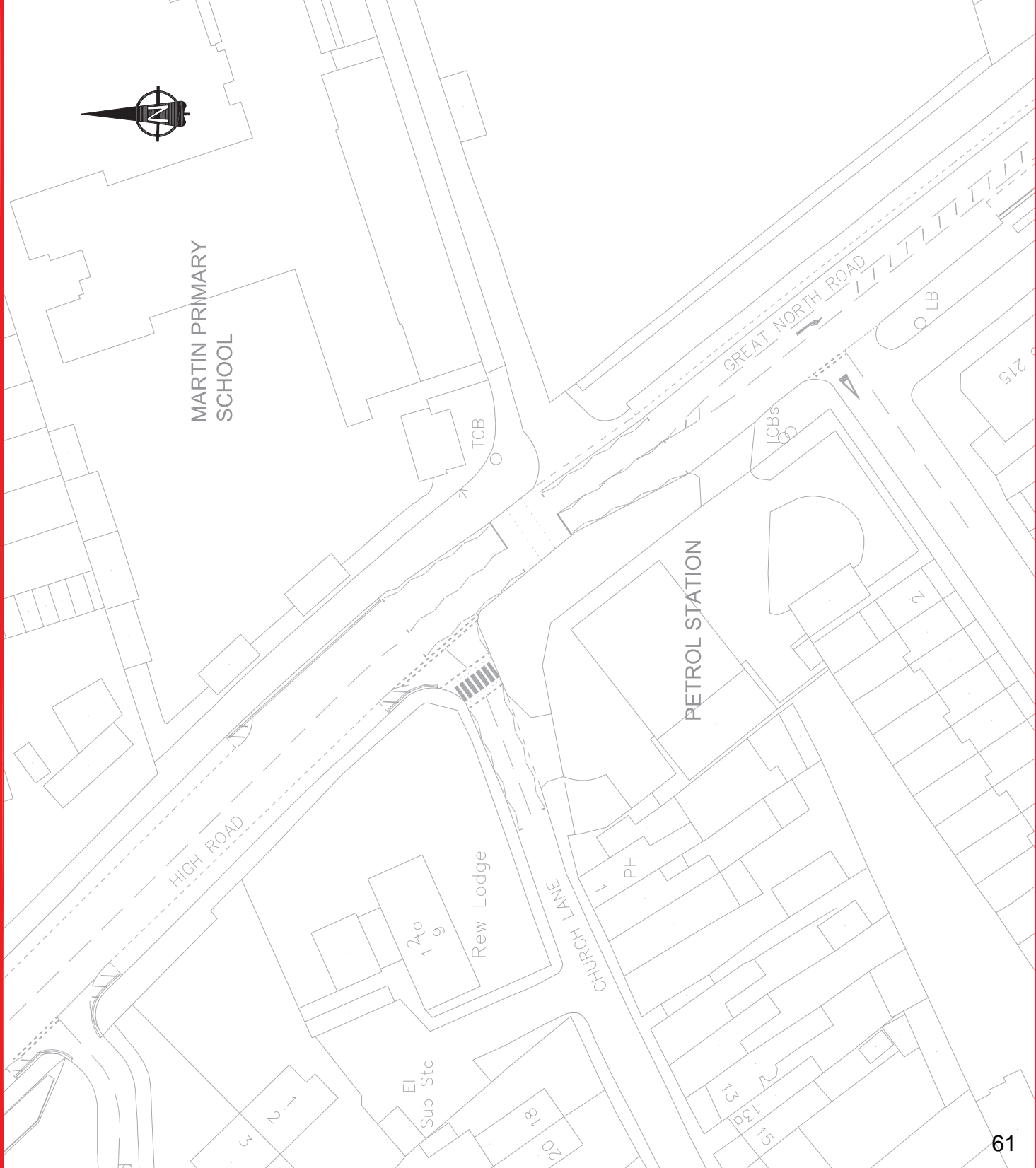
SCHEME:  
 High Road / Church Lane  
 Junction Review

TITLE:  
 Existing Layout

Scales: 1:500 Date: May 2012  
 Initiated: NR Drawn: AA Checked: LW

DRAWING NO:  
 60664\_F\_EX\_01

Acad Ref.  
 60664\_F\_001



## Appendix B: Personal Injury Accident Record

Accidents between dates 01/01/2009 and 31/12/2011 (36) months

Selection: Notes:

Selected using Build Query :

0109SX20058 30/01/2009 Thursday Time 1900 Vehicles 2 Casualties 1 Slight  
 Fine with high winds Road surface Dry Darkness: street lights present and lit  
 Special Conditions None Road Type Single carriageway  
 V2 HIT V1 FROM BEHIND AND THEN DROVE OFF  
 Occurred on CHURCH RD 28M W OF HIGH RD

Vehicle Reference 1 Car Slowing or Stopping  
 Not in restricted lane No skidding, jack-knifing or overturning  
 First point of impact Back Age of Driver 60 Breath test Driver not contacted  
 Vehicle direction NE to SW Driver Postcode HA1  
 FRV Not foreign registered vehicle Journey Other/Not known  
 Casualty Reference: 1 Age: 60 Female Driver/rider Severity: Slight

Vehicle Reference 2 Car Slowing or Stopping  
 Not in restricted lane No skidding, jack-knifing or overturning  
 First point of impact Front Age of Driver Breath test Driver not contacted  
 Vehicle direction NE to SW Driver Postcode Unknown  
 FRV Not foreign registered vehicle Journey Other/Not known

0110SX20341 27/03/2010 Friday Time 1901 Vehicles 3 Casualties 1 Slight  
 Fine with high winds Road surface Dry Darkness: street lights present and lit  
 Special Conditions None Road Type Single carriageway  
 V1 STRUCK ON N/S BY V2 MOVING FWD OUT OF SIDE ROAD  
 Occurred on HIGH ROAD J/W CHURCH LANE

Vehicle Reference 1 Car Slowing or Stopping  
 Not in restricted lane No skidding, jack-knifing or overturning  
 First point of impact Nearside Age of Driver 22 Breath test Negative  
 Vehicle direction NW to SE Driver Postcode EN5  
 FRV Not foreign registered vehicle Journey Commuting to/from work  
 Casualty Reference: 1 Age: 22 Male Driver/rider Severity: Slight

Vehicle Reference 2 Car Moving off  
 Not in restricted lane No skidding, jack-knifing or overturning  
 First point of impact Front Age of Driver 26 Breath test Negative  
 Vehicle direction NE to SW Driver Postcode N2  
 FRV Not foreign registered vehicle Journey Commuting to/from work  
 Vehicle Reference 3 Goods <= 3.5 tonnes mgw Parked  
 Not in restricted lane No skidding, jack-knifing or overturning  
 First point of impact Offside Age of Driver Breath test Driver not contacted  
 Vehicle direction Park to Parked Driver Postcode Unknown  
 FRV Not foreign registered vehicle Journey Other/Not known

0111SX20196 15/01/2011 Friday Time 1230 Vehicles 2 Casualties 1 Slight  
 Fine with high winds Road surface Dry Daylight:street lights present  
 Special Conditions None Road Type Single carriageway  
 V2 HAS TURNED RIGHT ACROSS PATH OF ONCOMING V1 CAUSING COLLISION.  
 Occurred on HIGH ROAD J/W CHURCH LANE

Vehicle Reference 1 Motorcycle over 125cc and up to 500cc Going ahead  
 Not in restricted lane No skidding, jack-knifing or overturning

Accidents between dates 01/01/2009 and 31/12/2011 (36) months

Selection: Notes:

Selected using Build Query :

First point of impact Front Age of Driver 30 Breath test Driver not contacted  
Vehicle direction NW to SE Driver Postcode EN8  
FRV Not foreign registered vehicle Journey Other/Not known

Casualty Reference: 1 Age: 30 Male Driver/rider Severity: Slight

Vehicle Reference 2 Car Turning right  
Not in restricted lane No skidding, jack-knifing or overturning  
First point of impact Offside Age of Driver 26 Breath test Driver not contacted  
Vehicle direction SE to SW Driver Postcode N10  
FRV Not foreign registered vehicle Journey Other/Not known

0111SX20567 04/07/2011 Sunday Time 0951 Vehicles 1 Casualties 1 Slight  
Fine with high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
PASSENGER HAS FALLEN AS V1 HAS MOVED OFF FROM STATIONARY POSITION. - [PASS FALLS AS V1 MOVES OFF (C001)]  
Occurred on HIGH ROAD J/W CHURCH LANE

Vehicle Reference 1 Bus or coach Moving off  
Not in restricted lane No skidding, jack-knifing or overturning  
First point of impact Did not impact Age of Driver 48 Breath test Driver not contacted  
Vehicle direction NW to SE Driver Postcode Unknown  
FRV Not foreign registered vehicle Journey Other/Not known

Casualty Reference: 1 Age: 82 Female Passenger Severity: Slight

Accidents involving:

Casualties:

|  | Fatal | Serious | Slight | Total |                  | Fatal | Serious | Slight | Total |
|--|-------|---------|--------|-------|------------------|-------|---------|--------|-------|
| Motor vehicles only (excluding 2-wheels) | 0     | 0       | 3      | 3     | Vehicle driver   | 0     | 0       | 2      | 2     |
| 2-wheeled motor vehicles                 | 0     | 0       | 1      | 1     | Passenger        | 0     | 0       | 1      | 1     |
| Pedal cycles                             | 0     | 0       | 0      | 0     | Motorcycle rider | 0     | 0       | 1      | 1     |
| Horses & other                           | 0     | 0       | 0      | 0     | Cyclist          | 0     | 0       | 0      | 0     |
| Total                                    | 0     | 0       | 4      | 4     | Pedestrian       | 0     | 0       | 0      | 0     |
|  |       |         |        |       | Other            | 0     | 0       | 0      | 0     |
|  |       |         |        |       | Total            | 0     | 0       | 4      | 4     |

## Appendix C: Proposed Layouts

NOTES:-

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|-------------------|-------------|---------|
|                   |             |         |
|                   |             |         |
|                   |             |         |

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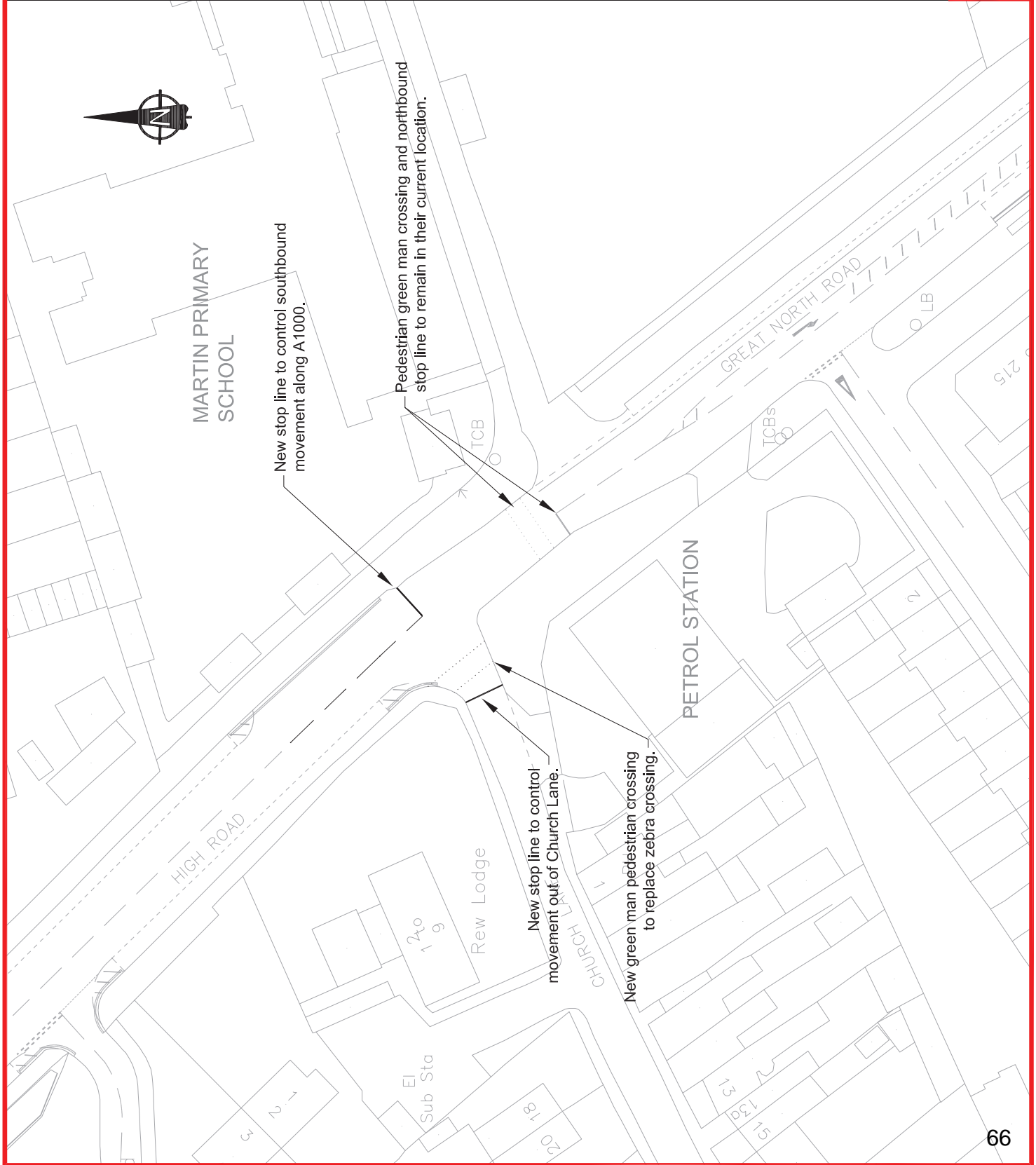
SCHEME:  
High Road / Church Lane  
Junction Review

TITLE:  
Proposed Layout  
Option 1

|              |                 |        |          |
|--------------|-----------------|--------|----------|
| Scales:      | 1:500           | Date:  | May 2012 |
| Initiated:   | NR              | Drawn: | AA       |
| DRAWING NO.: | 60664_F_OPT1_01 |        |          |

Checked: LW

Acad Ref. 60664\_F\_001



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| Revision and Date | Description | Initial |
|-------------------|-------------|---------|
|                   |             |         |
|                   |             |         |
|                   |             |         |

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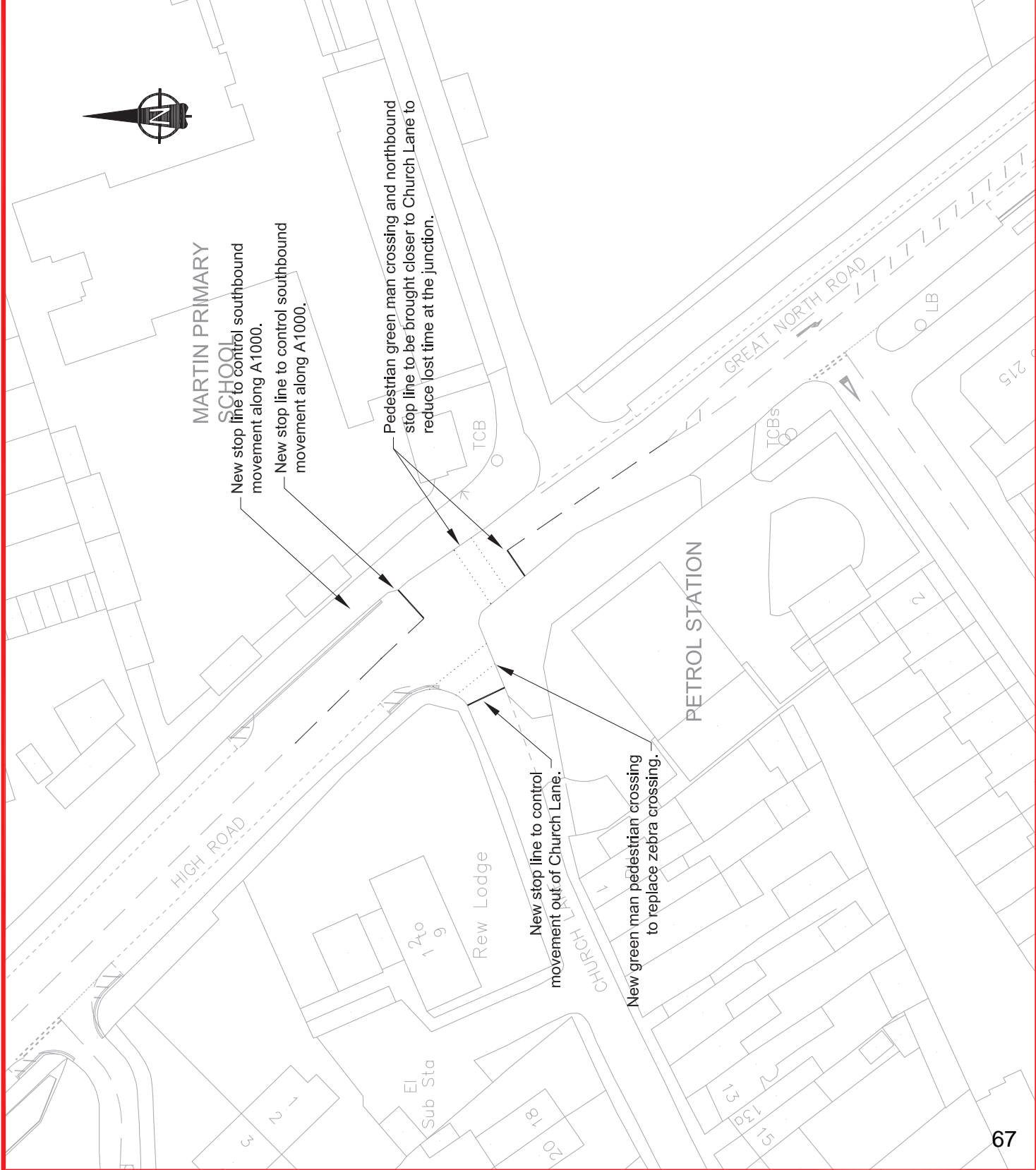
SCHEME:  
High Road / Church Lane  
Junction Review

TITLE:  
Proposed Layout  
Option 2

Scales: 1:500 Date: May 2012  
Initiated: NR Drawn: AA Checked: LW

DRAWING NO:  
**60664\_F\_OPT2\_01**

Acad Ref. 60664\_F\_001



NOTES:-

Footway area to be converted to carriageway to enable road widening.



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| Revision and Date | Description | Initial |
|-------------------|-------------|---------|
|                   |             |         |
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SCHEME:

High Road / Church Lane  
Junction Review

TITLE:

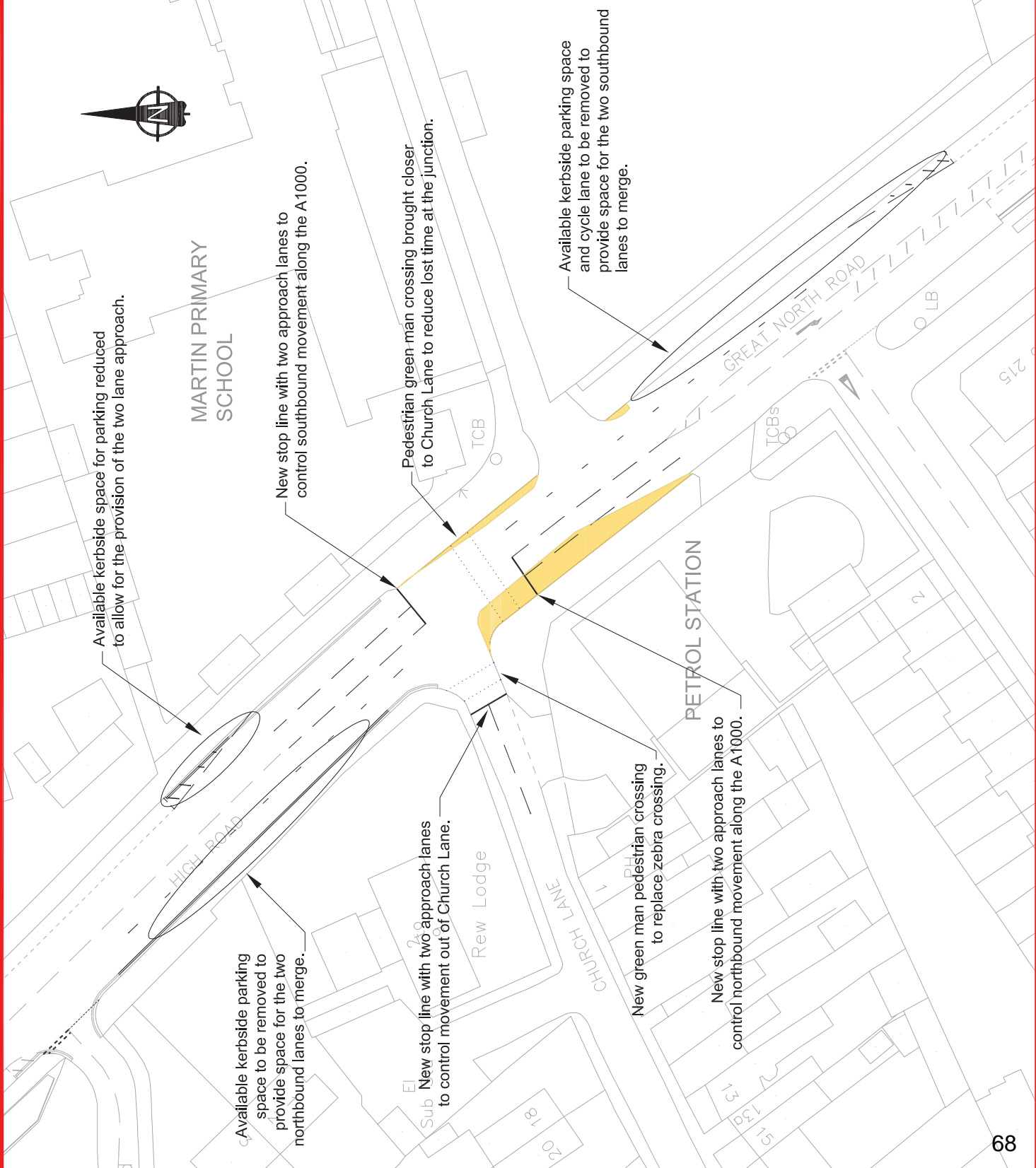
Proposed Layout  
Option 3

Scales: 1:500 Date: May 2012

Initiated: NR Drawn: AA Checked: LW

DRAWING NO: 60664\_F\_OPT3\_01

Acad Ref. 60664\_F\_001





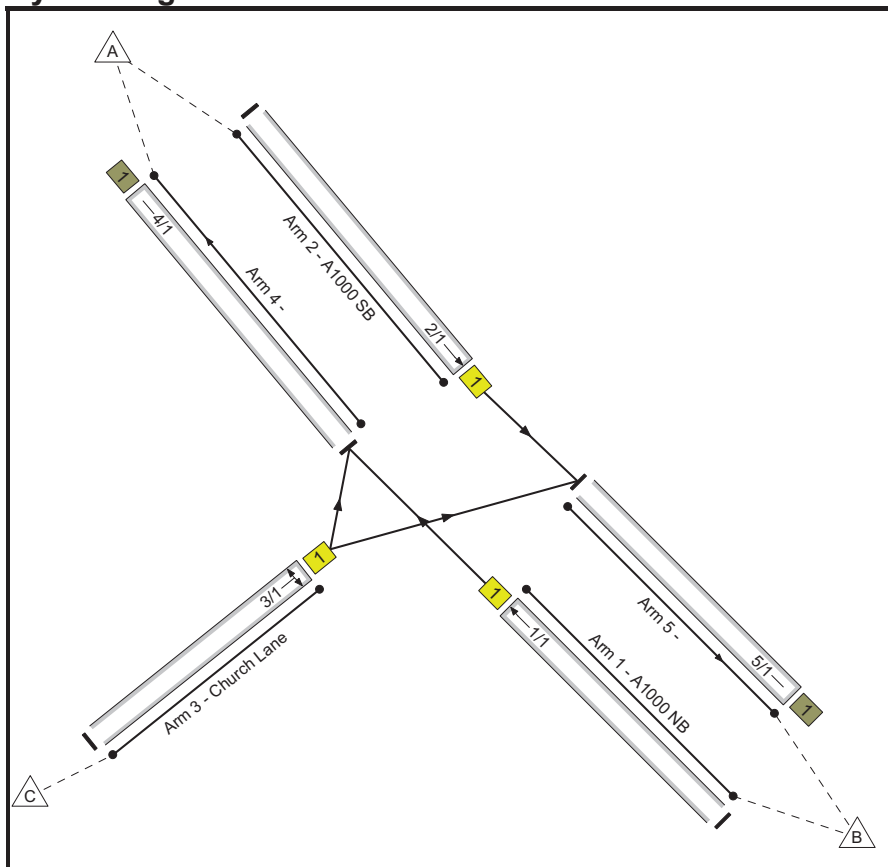
## Appendix D: Modelling outputs

## Full Input Data And Results

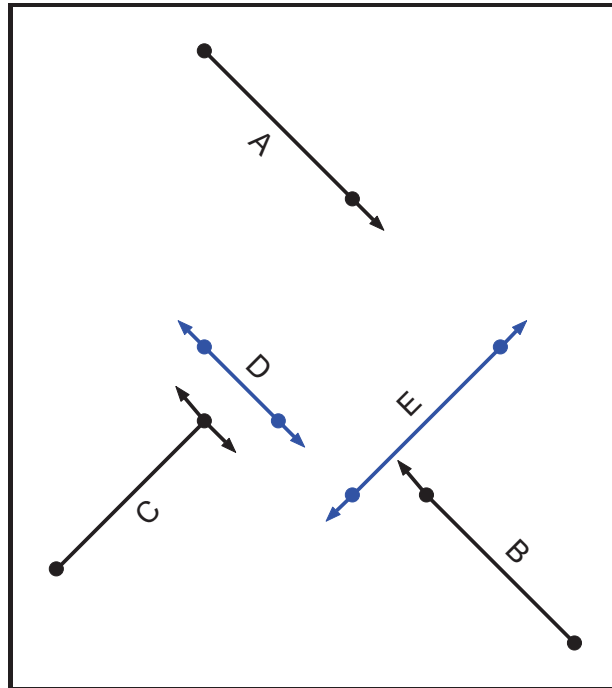
### User and Project Details

|                    |                                  |
|--------------------|----------------------------------|
| <b>Project:</b>    | <b>Signalisation Feasibility</b> |
| <b>Title:</b>      |                                  |
| <b>Location:</b>   | A1000 High Road / Church Lane    |
| <b>File name:</b>  | A1000 Church La Opt1 wide.lsgx   |
| <b>Author:</b>     | Antoine Aubert                   |
| <b>Company:</b>    | LBBarnet                         |
| <b>Address:</b>    |                                  |
| <b>Controller:</b> | Generic                          |
| <b>SCN:</b>        |                                  |
| <b>Notes:</b>      |                                  |

### Junction Layout Diagram



### Phase Diagram



### Phase Input Data

| Phase Name | Phase type | Assoc Phase | Street Min | Cont Min |
|------------|------------|-------------|------------|----------|
| A          | Traffic    |             | 7          | 7        |
| B          | Traffic    |             | 7          | 5        |
| C          | Traffic    |             | 7          | 7        |
| D          | Pedestrian |             | 6          | 6        |
| E          | Pedestrian |             | 6          | 6        |

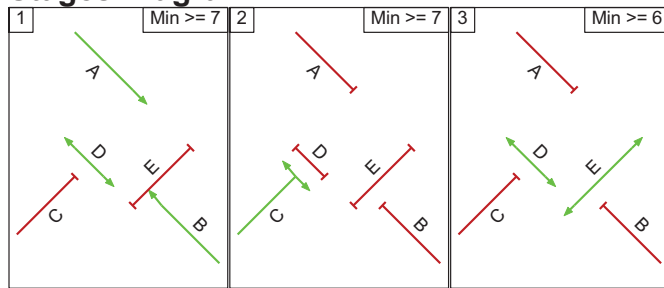
### Phase Intergreens Matrix

|                   |   | Starting Phase |   |   |   |   |
|-------------------|---|----------------|---|---|---|---|
|                   |   | A              | B | C | D | E |
| Terminating Phase | A | -              | - | 5 | - | 7 |
|                   | B | -              | - | 6 | - | 5 |
|                   | C | 6              | 5 | - | 5 | 8 |
|                   | D | -              | - | 9 | - | - |
|                   | E | 9              | 9 | 9 | - | - |

### Phases in Stage

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A B D           |
| 2         | C               |
| 3         | D E             |

### Stages Diagram



### Phase Delays

| Term. Stage | Start Stage | Phase | Type   | Value | Cont value |
|-------------|-------------|-------|--------|-------|------------|
| 1           | 2           | A     | Losing | 4     | 4          |
| 1           | 2           | B     | Losing | 3     | 3          |
| 1           | 3           | B     | Losing | 2     | 2          |

### Prohibited Stage Changes

| From Stage | To Stage |   |   |
|------------|----------|---|---|
|            | 1        | 2 | 3 |
| 1          |          | 9 | 7 |
| 2          | 6        |   | 8 |
| 3          | 9        | 9 |   |

### Link Input Data

| Arm/ Link | Link Name              | Link Type | Num Lanes | Phases | Start Disp. | End Disp. |
|-----------|------------------------|-----------|-----------|--------|-------------|-----------|
| 1/1       | A1000 NB Ahead         | U         | 1         | B      | 2           | 3         |
| 2/1       | A1000 SB Ahead         | U         | 1         | A      | 2           | 3         |
| 3/1       | Church Lane Left Right | U         | 1         | C      | 2           | 3         |
| 4/1       |                        | U         | 1         |        | 2           | 3         |
| 5/1       |                        | U         | 1         |        | 2           | 3         |

**Lane Input Data**

| Arm/<br>Lane                      | Link<br>Num                                 | Physical<br>Length<br>(PCU) | Expected<br>Usage<br>(PCU) | Sat<br>Flow<br>Type | User<br>Saturation<br>Flow<br>(PCU/Hr) | Lane<br>Width<br>(m) | Gradient | Nearside<br>Lane | Allowed<br>Turns | Turning<br>Radius<br>(m) |
|-----------------------------------|---|-----------------------------|----------------------------|---------------------|--|----------------------|----------|------------------|------------------|--------------------------|
| 1/1<br>(A1000<br>NB<br>Lane 1)    | Link 1<br>(A1000<br>NB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Ahead   | Inf                      |
| 2/1<br>(A1000<br>SB<br>Lane 1)    | Link 1<br>(A1000<br>SB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 5<br>Ahead   | Inf                      |
| 3/1<br>(Church<br>Lane<br>Lane 1) | Link 1<br>(Church<br>Lane<br>Left<br>Right) | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Left    | Inf                      |
|                                   |   |                             |                            |                     |  |                      |          |                  | Arm 5<br>Right   | Inf                      |
| 4/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |
| 5/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |

**Traffic Flow Groups**

| Flow Group        | Start Time | End Time | Duration | Formula |
|-------------------|------------|----------|----------|---------|
| 1: 'Flow Group 1' | 08:30      | 09:30    | 01:00    |         |
| 2: 'Flow Group 2' | 15:30      | 16:30    | 01:00    |         |

**Flow Group 1: 'Flow Group 1'**

**Traffic Flow Matrix**

Desired Flow :

|        | Destination |     |      |   |      |
|--------|-------------|-----|------|---|------|
|        |             | A   | B    | C | Tot. |
| Origin | A           | 0   | 945  | - | 945  |
|        | B           | 734 | 0    | - | 734  |
|        | C           | 172 | 208  | - | 380  |
|        | Tot.        | 906 | 1153 | - | 2059 |

**Link Traffic Flows**

| Arm/Link | Flow Group 1: Flow Group 1 |
|----------|----------------------------|
| 1/1      | 734                        |
| 2/1      | 945                        |
| 3/1      | 380                        |
| 4/1      | 906                        |
| 5/1      | 1153                       |

**Lane Saturation Flows**

| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr)   |
|-----------------------------|----------------|----------|---------------|---------------|--------------------|---------------|---|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 3/1<br>(Church Lane Lane 1) |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 4/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |
| 5/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |

**Flow Group 2: 'Flow Group 2'**

**Traffic Flow Matrix**

Desired Flow :

|        |      | Destination |     |   |      |
|--------|------|-------------|-----|---|------|
|        |      | A           | B   | C | Tot. |
| Origin | A    | 0           | 809 | - | 809  |
|        | B    | 1011        | 0   | - | 1011 |
|        | C    | 203         | 172 | - | 375  |
|        | Tot. | 1214        | 981 | - | 2195 |

**Link Traffic Flows**

| Arm/Link | Flow Group 2: Flow Group 2 |
|----------|----------------------------|
| 1/1      | 1011                       |
| 2/1      | 809                        |
| 3/1      | 375                        |
| 4/1      | 1214                       |
| 5/1      | 981                        |

**Lane Saturation Flows**

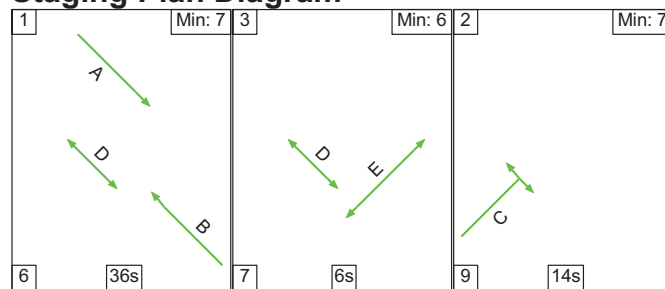
| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr)   |
|-----------------------------|----------------|----------|---------------|---------------|--------------------|---------------|---|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 3/1<br>(Church Lane Lane 1) |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 4/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |
| 5/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |

**Scenario 3: 'Morning Drop Off Plan 2'**

Staging Plan 2: 'Staging Plan No. 2'

Flow Group 1: 'Flow Group 1'

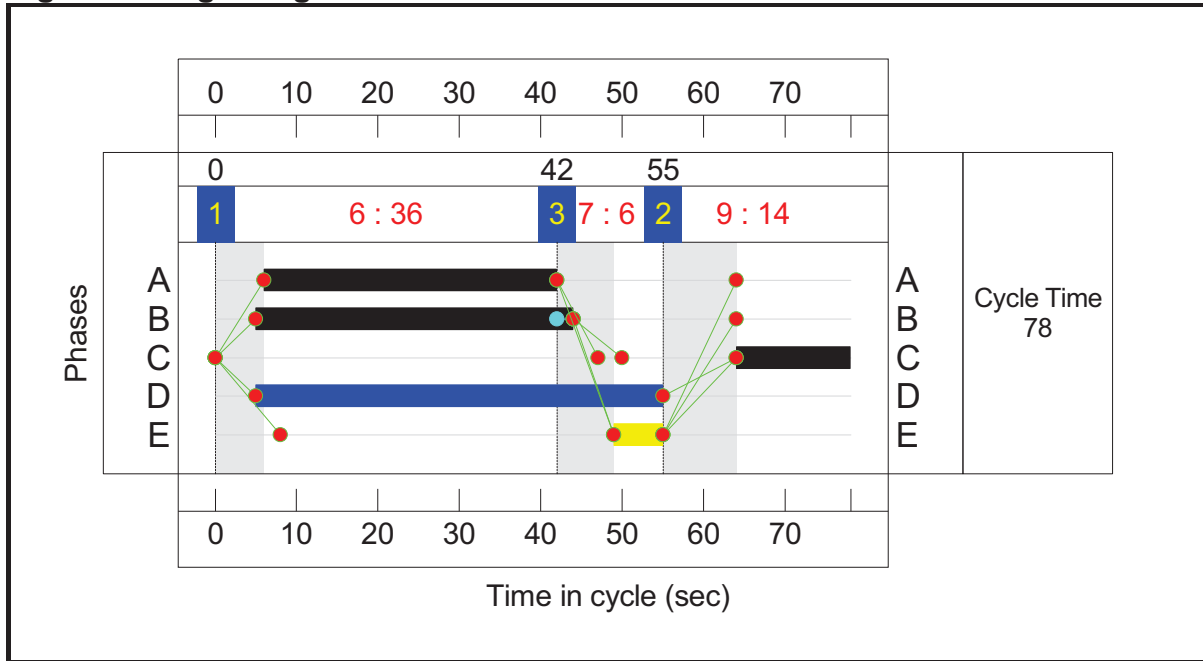
**Staging Plan Diagram**



**Stage Timings**

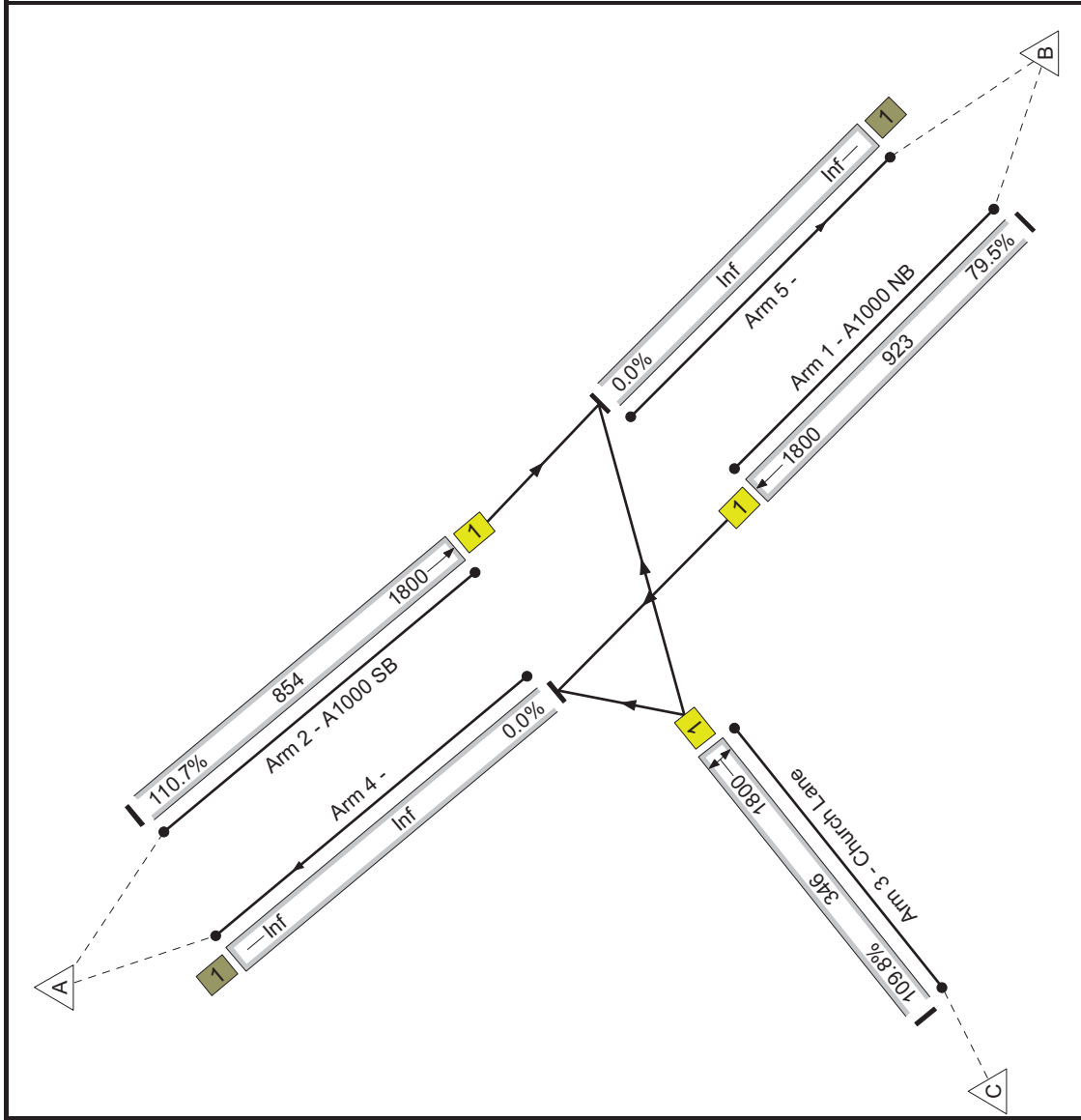
| Stage        | 1  | 3  | 2  |
|--------------|----|----|----|
| Duration     | 36 | 6  | 14 |
| Change Point | 0  | 42 | 55 |

### Signal Timings Diagram





### Junction Layout Diagram



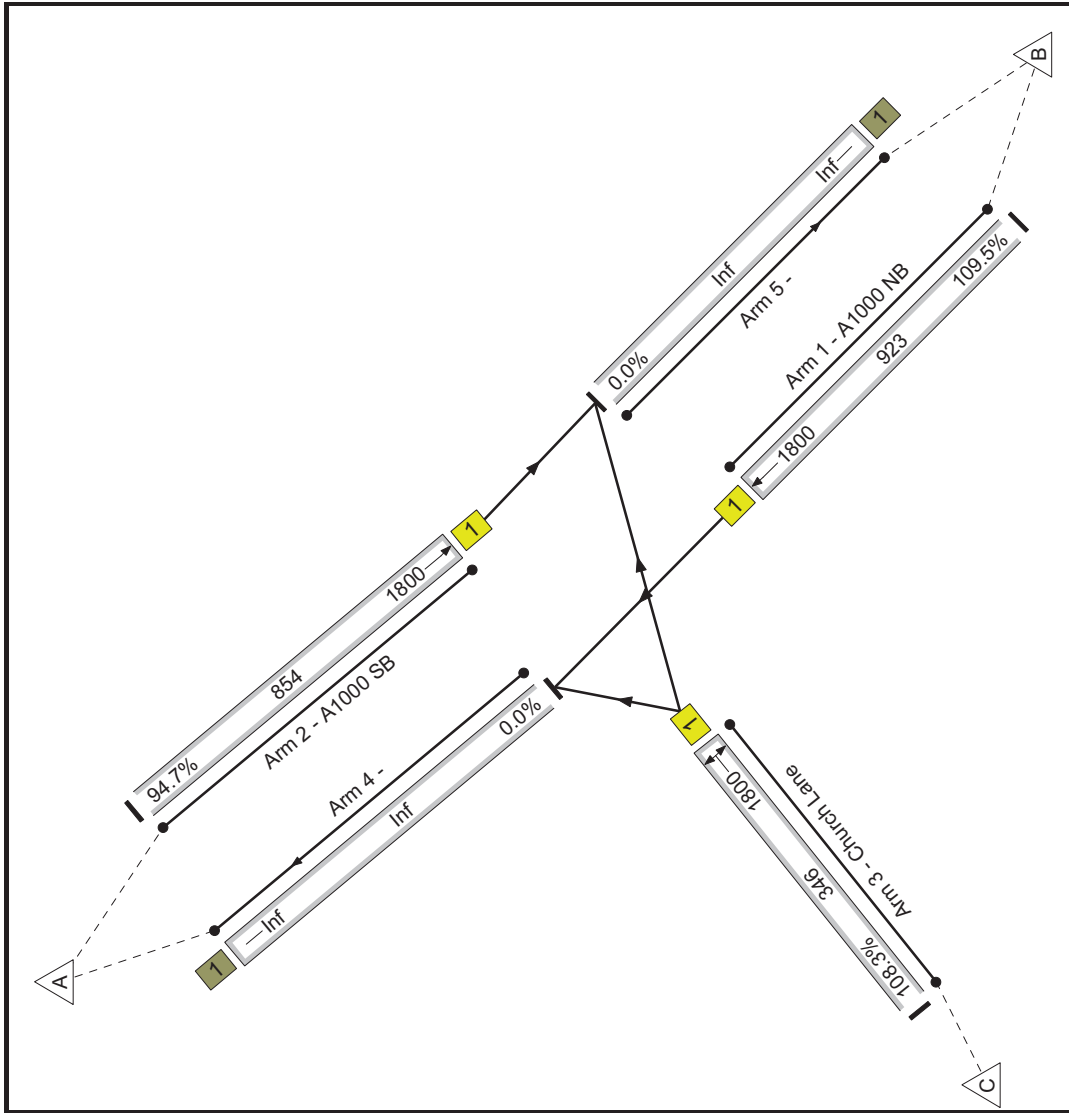
Full Input Data And Results

**Link Results**

| Link Num  | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase           | Num Greens                   | Total Green (s)                    | Arrow Green (s)     | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)      | Capacity (pcu)       | Deg Sat (%) |
|---|------------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|-------------|
| 1/1   | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                       | 1                            | 39                                 | -                   | 734                       | 1800                             | 1800                       | 923                  | 79.5        |
| 2/1   | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                       | 1                            | 36                                 | -                   | 945                       | 1800                             | 1800                       | 854                  | 110.7       |
| 3/1   | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                       | 1                            | 14                                 | -                   | 380                       | 1800                             | 1800                       | 346                  | 109.8       |
| 4/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 906                       | Inf                              | Inf                        | Inf                  | 0.0         |
| 5/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 1153                      | Inf                              | Inf                        | Inf                  | 0.0         |
| Link Num  | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |             |
| 1/1   | 734                    | 734           | -                     | -                            | -                           | 3.2                   | 1.9                          | -                                  | 5.1                 | 25.0                      | 13.0                             | 1.9                        | 15.0                 |             |
| 2/1   | 945                    | 854           | -                     | -                            | -                           | 8.7                   | 50.3                         | -                                  | 58.9                | 224.6                     | 22.4                             | 50.3                       | 72.7                 |             |
| 3/1   | 380                    | 346           | -                     | -                            | -                           | 4.8                   | 21.4                         | -                                  | 26.2                | 248.3                     | 9.4                              | 21.4                       | 30.8                 |             |
| 4/1   | 891                    | 891           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| 5/1   | 1043                   | 1043          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| PRC for Signalled Links (%): -23.0      Total Delay for Signalled Links (pcuHr): 90.25<br>PRC Over All Links (%): -23.0      Total Delay Over All Links(pcuHr): 90.25      Cycle Time (s): 78 |                        |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |             |



### Junction Layout Diagram



Full Input Data And Results

**Link Results**

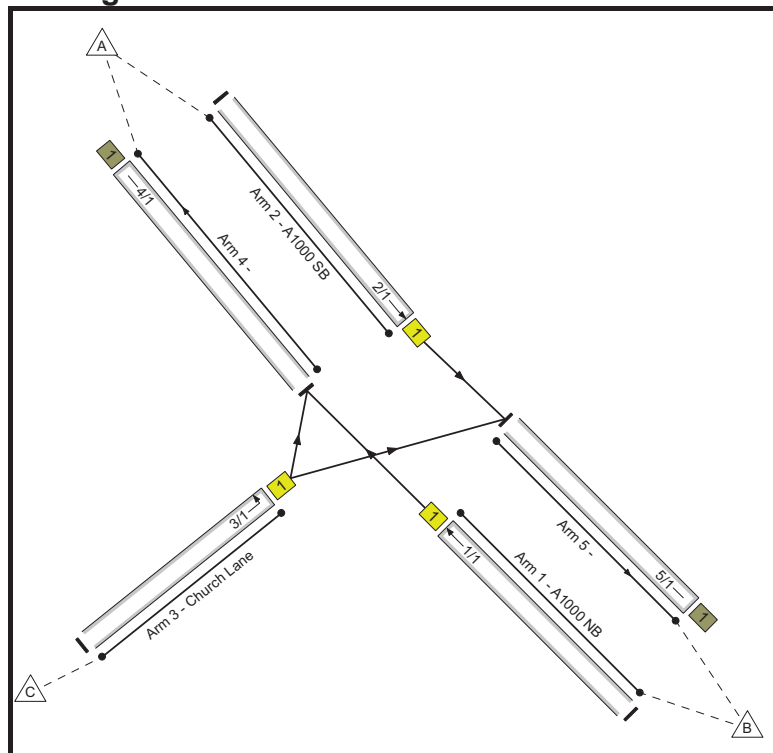
| Link Num   | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase            | Num Greens                    | Total Green (s)                     | Arrow Green (s)      | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)      | Capacity (pcu)       | Deg Sat (%) |
|--|------------------------|---------------|-----------------------|------------------------------|-----------------------------|------------------------|-------------------------------|-------------------------------------|----------------------|---------------------------|----------------------------------|----------------------------|----------------------|-------------|
| 1/1  | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                        | 1                             | 39                                  | -                    | 1011                      | 1800                             | 1800                       | 923                  | 109.5       |
| 2/1  | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                        | 1                             | 36                                  | -                    | 809                       | 1800                             | 1800                       | 854                  | 94.7        |
| 3/1  | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                        | 1                             | 14                                  | -                    | 375                       | 1800                             | 1800                       | 346                  | 108.3       |
| 4/1  |                        | U             | N/A                   | N/A                          | -                           |                        | -                             | -                                   | -                    | 1214                      | Inf                              | Inf                        | Inf                  | 0.0         |
| 5/1  |                        | U             | N/A                   | N/A                          | -                           |                        | -                             | -                                   | -                    | 981                       | Inf                              | Inf                        | Inf                  | 0.0         |
| Link Num   | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcu/Hr) | Rand + Oversat Delay (pcu/Hr) | Storage Area Uniform Delay (pcu/Hr) | Total Delay (pcu/Hr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |             |
| 1/1  | 1011                   | 923           | -                     | -                            | -                           | 8.5                    | 49.1                          | -                                   | 57.6                 | 205.1                     | 23.8                             | 49.1                       | 72.9                 |             |
| 2/1  | 809                    | 809           | -                     | -                            | -                           | 4.4                    | 6.9                           | -                                   | 11.3                 | 50.3                      | 16.6                             | 6.9                        | 23.5                 |             |
| 3/1  | 375                    | 346           | -                     | -                            | -                           | 4.6                    | 19.3                          | -                                   | 23.9                 | 229.0                     | 9.1                              | 19.3                       | 28.3                 |             |
| 4/1  | 1110                   | 1110          | -                     | -                            | -                           | 0.0                    | 0.0                           | -                                   | 0.0                  | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| 5/1  | 968                    | 968           | -                     | -                            | -                           | 0.0                    | 0.0                           | -                                   | 0.0                  | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| PRC for Signalled Links (%): -21.7      Total Delay for Signalled Links (pcu/Hr): 92.76<br>PRC Over All Links (%): -21.7      Total Delay Over All Links (pcu/Hr): 92.76      Cycle Time (s): 78 |                        |               |                       |                              |                             |                        |                               |                                     |                      |                           |                                  |                            |                      |             |

## Full Input Data And Results

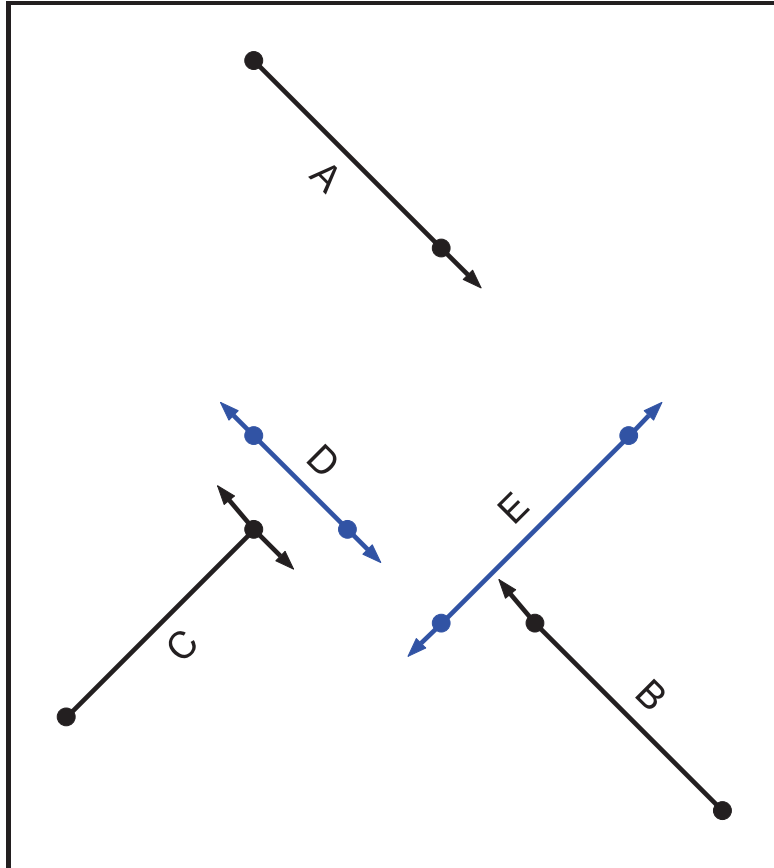
### User and Project Details

|                    |                                   |
|--------------------|-----------------------------------|
| <b>Project:</b>    | <b>Signalisation Feasibility</b>  |
| <b>Title:</b>      |                                   |
| <b>Location:</b>   | A1000 High Road / Church Lane     |
| <b>File name:</b>  | A1000 Church La Opt2 compact.lsgx |
| <b>Author:</b>     | Antoine Aubert                    |
| <b>Company:</b>    | LBBarnet                          |
| <b>Address:</b>    |                                   |
| <b>Controller:</b> | Generic                           |
| <b>SCN:</b>        |                                   |
| <b>Notes:</b>      |                                   |

### Junction Layout Diagram



**Phase Diagram**



**Phase Input Data**

| Phase Name | Phase type | Assoc Phase | Street Min | Cont Min |
|------------|------------|-------------|------------|----------|
| A          | Traffic    |             | 7          | 7        |
| B          | Traffic    |             | 7          | 6        |
| C          | Traffic    |             | 7          | 7        |
| D          | Pedestrian |             | 6          | 6        |
| E          | Pedestrian |             | 6          | 6        |

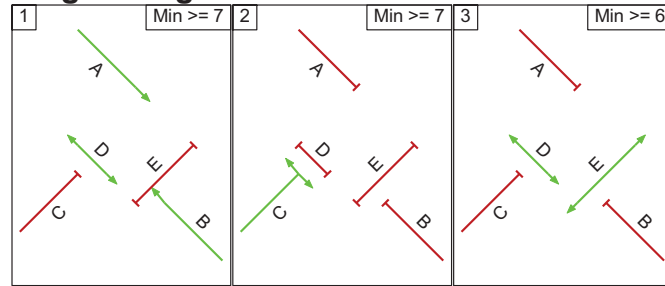
**Phase Intergreens Matrix**

|                   |   | Starting Phase |   |   |   |   |
|-------------------|---|----------------|---|---|---|---|
|                   |   | A              | B | C | D | E |
| Terminating Phase | A | -              | - | 5 | - | 6 |
|                   | B | -              | - | 5 | - | 5 |
|                   | C | 6              | 5 | - | 5 | 7 |
|                   | D | -              | - | 9 | - | - |
|                   | E | 9              | 9 | 9 | - | - |

### Phases in Stage

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A B D           |
| 2         | C               |
| 3         | D E             |

### Stages Diagram



### Phase Delays

| Term. Stage | Start Stage | Phase | Type   | Value | Cont value |
|-------------|-------------|-------|--------|-------|------------|
| 1           | 2           | A     | Losing | 4     | 4          |
| 1           | 2           | B     | Losing | 3     | 3          |
| 1           | 3           | B     | Losing | 1     | 1          |

### Prohibited Stage Changes

|            |   | To Stage |   |   |
|------------|---|----------|---|---|
|            |   | 1        | 2 | 3 |
| From Stage | 1 |          | 9 | 6 |
|            | 2 | 6        |   | 7 |
|            | 3 | 9        | 9 |   |

### Link Input Data

| Arm/ Link | Link Name              | Link Type | Num Lanes | Phases | Start Disp. | End Disp. |
|-----------|------------------------|-----------|-----------|--------|-------------|-----------|
| 1/1       | A1000 NB Ahead         | U         | 1         | B      | 2           | 3         |
| 2/1       | A1000 SB Ahead         | U         | 1         | A      | 2           | 3         |
| 3/1       | Church Lane Left Right | U         | 1         | C      | 2           | 3         |
| 4/1       |                        | U         | 1         |        | 2           | 3         |
| 5/1       |                        | U         | 1         |        | 2           | 3         |



**Lane Input Data**

| Arm/<br>Lane                      | Link<br>Num                                 | Physical<br>Length<br>(PCU) | Expected<br>Usage<br>(PCU) | Sat<br>Flow<br>Type | User<br>Saturation<br>Flow<br>(PCU/Hr) | Lane<br>Width<br>(m) | Gradient | Nearside<br>Lane | Allowed<br>Turns | Turning<br>Radius<br>(m) |
|-----------------------------------|---|-----------------------------|----------------------------|---------------------|--|----------------------|----------|------------------|------------------|--------------------------|
| 1/1<br>(A1000<br>NB<br>Lane 1)    | Link 1<br>(A1000<br>NB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Ahead   | Inf                      |
| 2/1<br>(A1000<br>SB<br>Lane 1)    | Link 1<br>(A1000<br>SB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 5<br>Ahead   | Inf                      |
| 3/1<br>(Church<br>Lane<br>Lane 1) | Link 1<br>(Church<br>Lane<br>Left<br>Right) | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Left    | Inf                      |
| 4/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |
| 5/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |

**Traffic Flow Groups**

| Flow Group        | Start Time | End Time | Duration | Formula |
|-------------------|------------|----------|----------|---------|
| 1: 'Flow Group 1' | 08:30      | 09:30    | 01:00    |         |
| 2: 'Flow Group 2' | 15:30      | 16:30    | 01:00    |         |

**Flow Group 1: 'Flow Group 1'**

**Traffic Flow Matrix**

**Desired Flow :**

|        | Destination |     |      |   |      |
|--------|-------------|-----|------|---|------|
|        |             | A   | B    | C | Tot. |
| Origin | A           | 0   | 945  | - | 945  |
|        | B           | 734 | 0    | - | 734  |
|        | C           | 172 | 208  | - | 380  |
|        | Tot.        | 906 | 1153 | - | 2059 |

**Link Traffic Flows**

| Arm/Link | Flow Group 1: Flow Group 1 |
|----------|----------------------------|
| 1/1      | 734                        |
| 2/1      | 945                        |
| 3/1      | 380                        |
| 4/1      | 906                        |
| 5/1      | 1153                       |

**Lane Saturation Flows**

| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr)   |
|-----------------------------|----------------|----------|---------------|---------------|--------------------|---------------|---|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 3/1<br>(Church Lane Lane 1) |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 4/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |
| 5/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |

**Flow Group 2: 'Flow Group 2'**

**Traffic Flow Matrix**

Desired Flow :

|        |      | Destination |     |   |      |
|--------|------|-------------|-----|---|------|
|        |      | A           | B   | C | Tot. |
| Origin | A    | 0           | 809 | - | 809  |
|        | B    | 1011        | 0   | - | 1011 |
|        | C    | 203         | 172 | - | 375  |
|        | Tot. | 1214        | 981 | - | 2195 |

**Link Traffic Flows**

| Arm/Link | Flow Group 2: Flow Group 2 |
|----------|----------------------------|
| 1/1      | 1011                       |
| 2/1      | 809                        |
| 3/1      | 375                        |
| 4/1      | 1214                       |
| 5/1      | 981                        |

**Lane Saturation Flows**

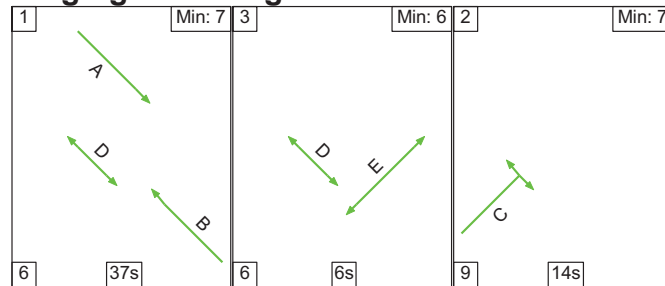
| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns                           | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr) |
|-----------------------------|----------------|----------|---------------|---|--------------------|---------------|-------------------|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |   |                    |               | 1800              |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |   |                    |               | 1800              |
| 3/1<br>(Church Lane Lane 1) |                |          |               |   |                    |               | 1800              |
| 4/1                         |                |          |               | Infinite Saturation Flow (on Exit Link) |                    |               | Inf               |
| 5/1                         |                |          |               | Infinite Saturation Flow (on Exit Link) |                    |               | Inf               |

**Scenario 3: 'Morning Drop Off Plan 2'**

Staging Plan 2: 'Staging Plan No. 2'

Flow Group 1: 'Flow Group 1'

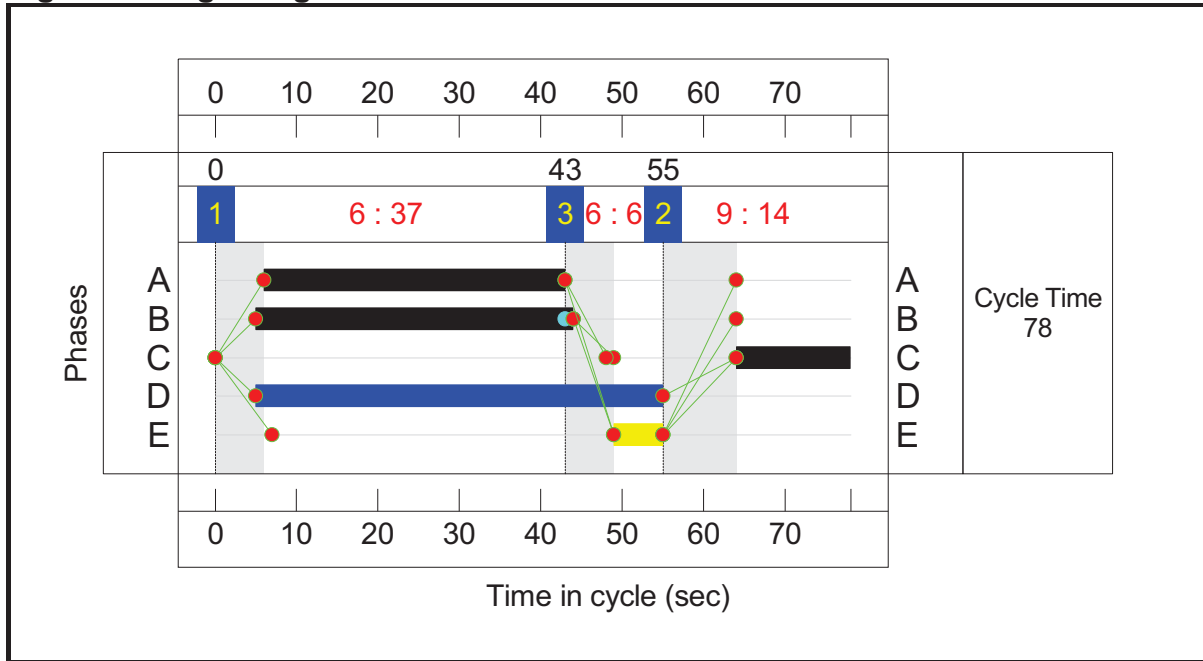
**Staging Plan Diagram**



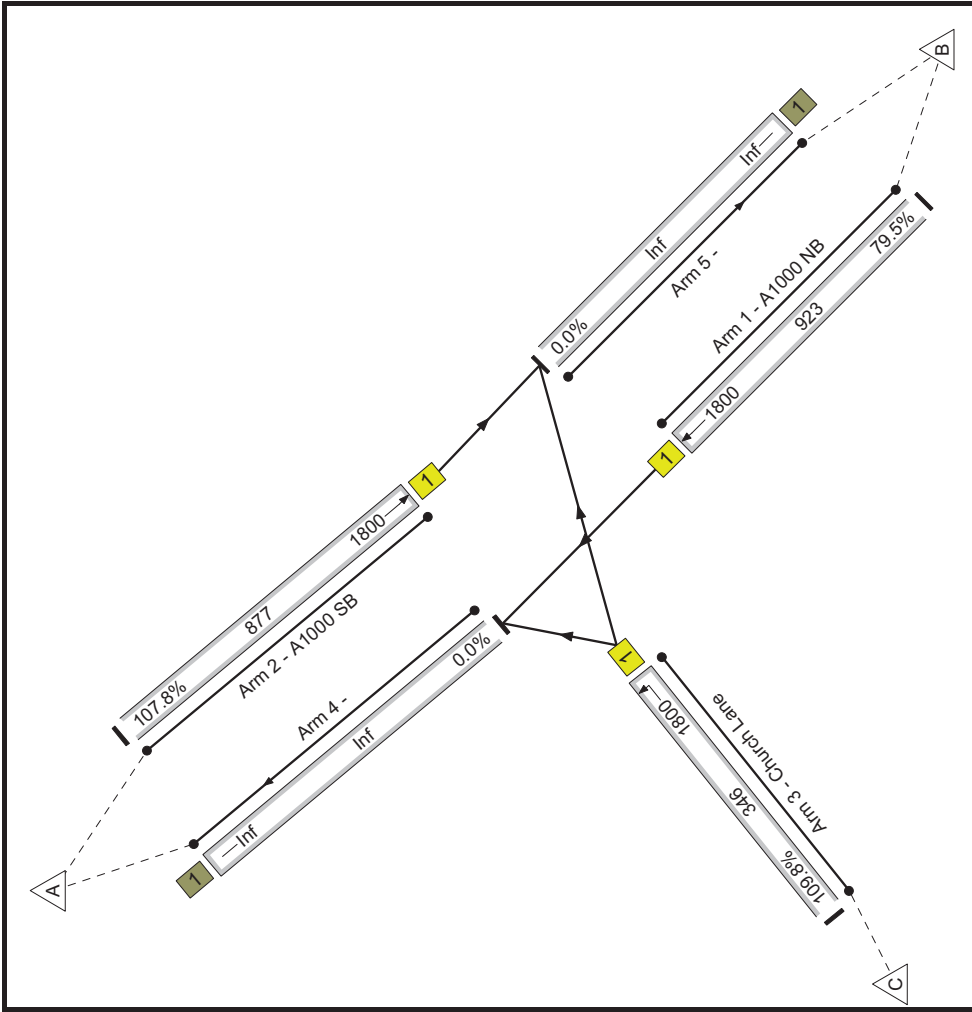
**Stage Timings**

| Stage        | 1  | 3  | 2  |
|--------------|----|----|----|
| Duration     | 37 | 6  | 14 |
| Change Point | 0  | 43 | 55 |

### Signal Timings Diagram



### Junction Layout Diagram



Full Input Data And Results

**Link Results**

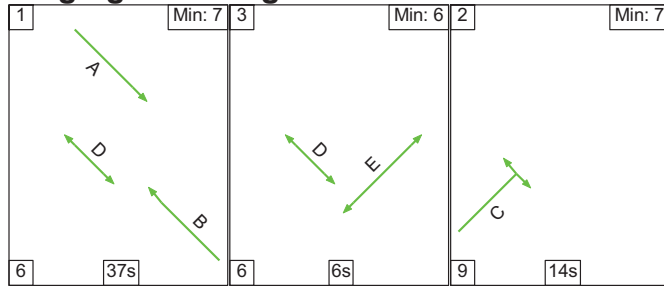
| Link Num  | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase           | Num Greens                   | Total Green (s)                    | Arrow Green (s)     | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)      | Capacity (pcu)       | Deg Sat (%) |
|---|------------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|-------------|
| 1/1   | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                       | 1                            | 39                                 | -                   | 734                       | 1800                             | 1800                       | 923                  | 79.5        |
| 2/1   | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                       | 1                            | 37                                 | -                   | 945                       | 1800                             | 1800                       | 877                  | 107.8       |
| 3/1   | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                       | 1                            | 14                                 | -                   | 380                       | 1800                             | 1800                       | 346                  | 109.8       |
| 4/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 906                       | Inf                              | Inf                        | Inf                  | 0.0         |
| 5/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 1153                      | Inf                              | Inf                        | Inf                  | 0.0         |
| Link Num  | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |             |
| 1/1   | 734                    | 734           | -                     | -                            | -                           | 3.2                   | 1.9                          | -                                  | 5.1                 | 25.0                      | 13.0                             | 1.9                        | 15.0                 |             |
| 2/1   | 945                    | 877           | -                     | -                            | -                           | 7.7                   | 40.0                         | -                                  | 47.7                | 181.5                     | 21.9                             | 40.0                       | 61.9                 |             |
| 3/1   | 380                    | 346           | -                     | -                            | -                           | 4.8                   | 21.4                         | -                                  | 26.2                | 248.3                     | 9.4                              | 21.4                       | 30.8                 |             |
| 4/1   | 891                    | 891           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| 5/1   | 1066                   | 1066          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| PRC for Signalled Links (%): -22.0      Total Delay for Signalled Links (pcuHr): 78.95<br>PRC Over All Links (%): -22.0      Total Delay Over All Links(pcuHr): 78.95      Cycle Time (s): 78 |                        |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |             |

**Scenario 4: 'Afternoon Pick Up Plan 2'**

Staging Plan 2: 'Staging Plan No. 2'

Flow Group 2: 'Flow Group 2'

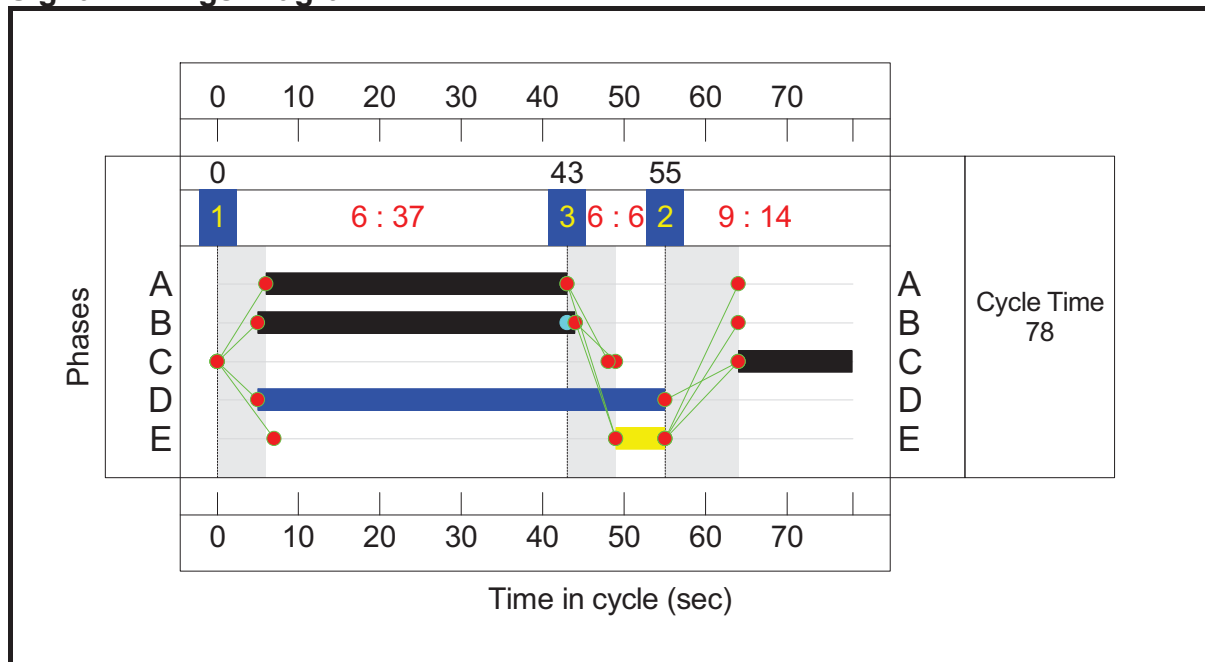
**Staging Plan Diagram**



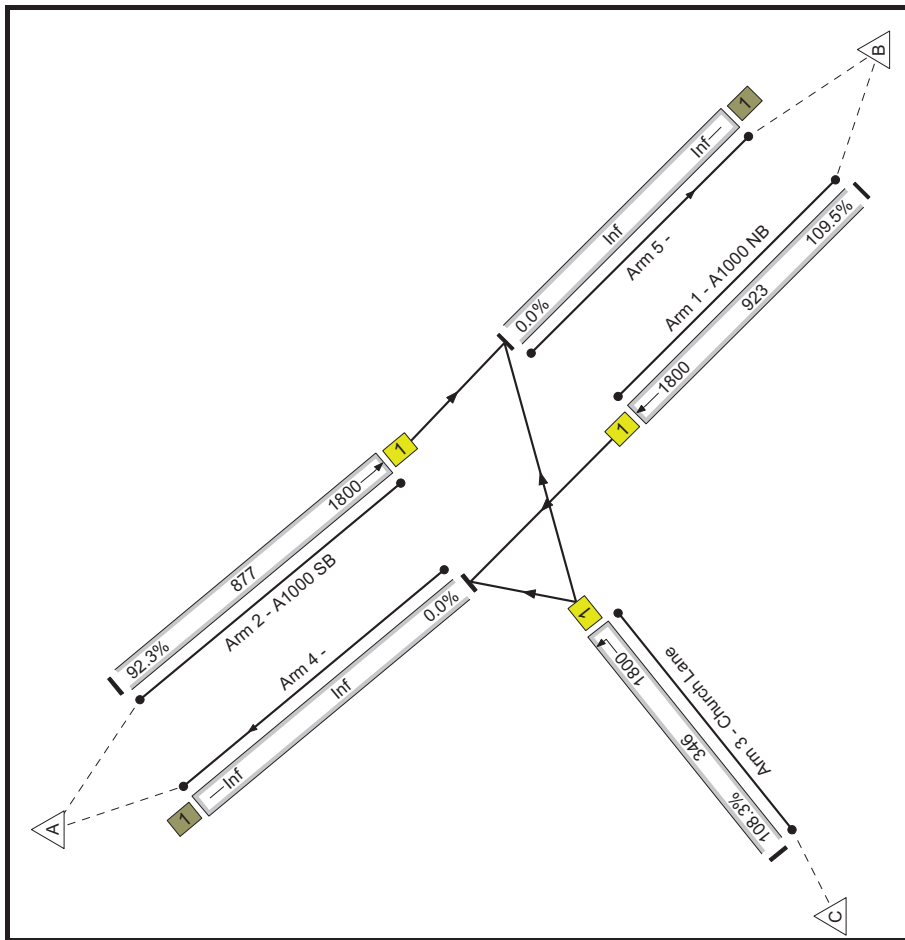
**Stage Timings**

| Stage        | 1  | 3  | 2  |
|--------------|----|----|----|
| Duration     | 37 | 6  | 14 |
| Change Point | 0  | 43 | 55 |

**Signal Timings Diagram**



### Junction Layout Diagram





Full Input Data And Results

**Link Results**

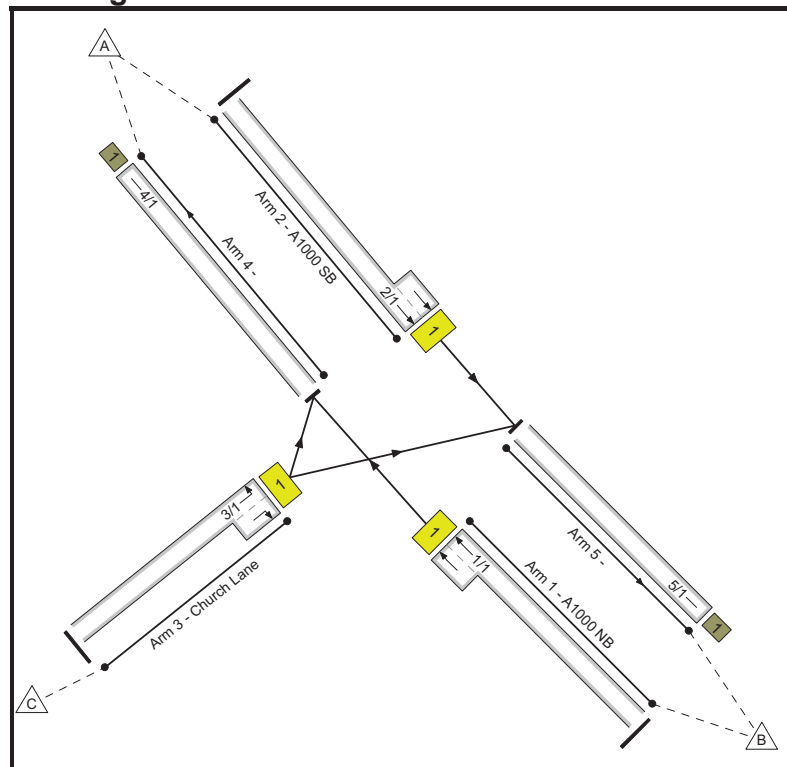
| Link Num                     | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase           | Num Greens                   | Total Green (s)                    | Arrow Green (s)     | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)                    | Capacity (pcu)       | Deg Sat (%) |
|------------------------------|------------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|--|----------------------|-------------|
| 1/1                          | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                       | 1                            | 39                                 | -                   | 1011                      | 1800                             | 1800                                     | 923                  | 109.5       |
| 2/1                          | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                       | 1                            | 37                                 | -                   | 809                       | 1800                             | 1800                                     | 877                  | 92.3        |
| 3/1                          | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                       | 1                            | 14                                 | -                   | 375                       | 1800                             | 1800                                     | 346                  | 108.3       |
| 4/1                          |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 1214                      | Inf                              | Inf                                      | Inf                  | 0.0         |
| 5/1                          |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 981                       | Inf                              | Inf                                      | Inf                  | 0.0         |
| Link Num                     | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu)               | Mean Max Queue (pcu) |             |
| 1/1                          | 1011                   | 923           | -                     | -                            | -                           | 8.5                   | 49.1                         | -                                  | 57.6                | 205.1                     | 23.8                             | 49.1                                     | 72.9                 |             |
| 2/1                          | 809                    | 809           | -                     | -                            | -                           | 4.2                   | 5.2                          | -                                  | 9.4                 | 41.6                      | 16.2                             | 5.2                                      | 21.3                 |             |
| 3/1                          | 375                    | 346           | -                     | -                            | -                           | 4.6                   | 19.3                         | -                                  | 23.9                | 229.0                     | 9.1                              | 19.3                                     | 28.3                 |             |
| 4/1                          | 1110                   | 1110          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                                      | 0.0                  |             |
| 5/1                          | 968                    | 968           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                                      | 0.0                  |             |
| PRC for Signalled Links (%): |                        |               |                       |                              |                             |                       |                              |                                    |                     | -21.7                     |                                  | Total Delay for Signalled Links (pcuHr): |                      | 90.82       |
| PRC Over All Links (%):      |                        |               |                       |                              |                             |                       |                              |                                    |                     | -21.7                     |                                  | Total Delay Over All Links(pcuHr):       |                      | 90.82       |
|                              |                        |               |                       |                              |                             |                       |                              |                                    |                     | Cycle Time (s):           |                                  | 78                                       |                      |             |

## Full Input Data And Results

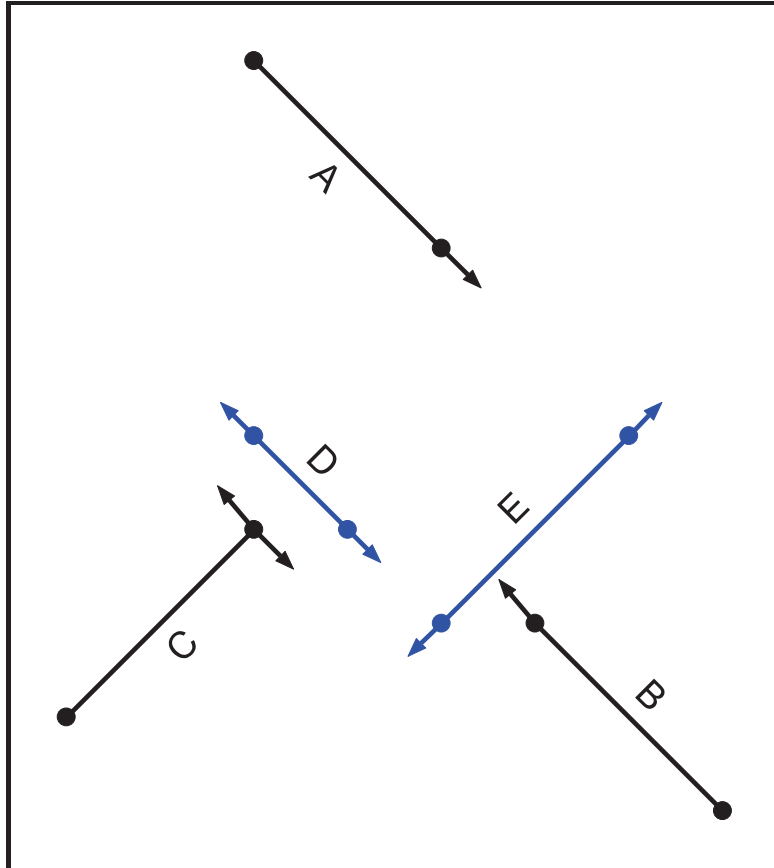
### User and Project Details

|                    |   |
|--------------------|---|
| <b>Project:</b>    | <b>Signalisation Feasibility</b>          |
| <b>Title:</b>      |   |
| <b>Location:</b>   | A1000 High Road / Church Lane             |
| <b>File name:</b>  | A1000 Church La Opt3 compact 2la app.lsgx |
| <b>Author:</b>     | Antoine Aubert                            |
| <b>Company:</b>    | LBBarnet                                  |
| <b>Address:</b>    |   |
| <b>Controller:</b> | Generic                                   |
| <b>SCN:</b>        |   |
| <b>Notes:</b>      |   |

### Junction Layout Diagram



**Phase Diagram**



**Phase Input Data**

| Phase Name | Phase type | Assoc Phase | Street Min | Cont Min |
|------------|------------|-------------|------------|----------|
| A          | Traffic    |             | 7          | 7        |
| B          | Traffic    |             | 7          | 6        |
| C          | Traffic    |             | 7          | 7        |
| D          | Pedestrian |             | 6          | 6        |
| E          | Pedestrian |             | 6          | 6        |

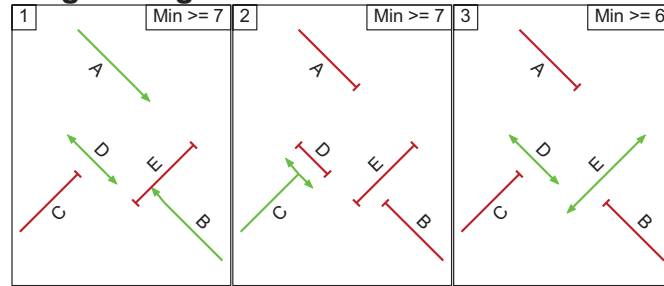
**Phase Intergreens Matrix**

|                   |   | Starting Phase |    |    |   |   |
|-------------------|---|----------------|----|----|---|---|
|                   |   | A              | B  | C  | D | E |
| Terminating Phase | A | -              | 5  | -  | 6 |   |
|                   | B | -              | 5  | -  | 5 |   |
|                   | C | 6              | 5  | 5  | 7 |   |
|                   | D | -              | -  | 9  | - |   |
|                   | E | 12             | 12 | 12 | - |   |

### Phases in Stage

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A B D           |
| 2         | C               |
| 3         | D E             |

### Stages Diagram



### Phase Delays

| Term. Stage | Start Stage | Phase | Type   | Value | Cont value |
|-------------|-------------|-------|--------|-------|------------|
| 1           | 2           | A     | Losing | 4     | 4          |
| 1           | 2           | B     | Losing | 3     | 3          |
| 1           | 3           | B     | Losing | 1     | 1          |

### Prohibited Stage Changes

|            |   | To Stage |    |   |
|------------|---|----------|----|---|
|            |   | 1        | 2  | 3 |
| From Stage | 1 |          | 9  | 6 |
|            | 2 | 6        |    | 7 |
|            | 3 | 12       | 12 |   |

### Link Input Data

| Arm/ Link | Link Name              | Link Type | Num Lanes | Phases | Start Disp. | End Disp. |
|-----------|------------------------|-----------|-----------|--------|-------------|-----------|
| 1/1       | A1000 NB Ahead         | U         | 2         | B      | 2           | 3         |
| 2/1       | A1000 SB Ahead         | U         | 2         | A      | 2           | 3         |
| 3/1       | Church Lane Left Right | U         | 2         | C      | 2           | 3         |
| 4/1       |                        | U         | 1         |        | 2           | 3         |
| 5/1       |                        | U         | 1         |        | 2           | 3         |

### Lane Input Data

| Arm/<br>Lane                      | Link<br>Num                                 | Physical<br>Length<br>(PCU) | Expected<br>Usage<br>(PCU) | Sat<br>Flow<br>Type | User<br>Saturation<br>Flow<br>(PCU/Hr) | Lane<br>Width<br>(m) | Gradient | Nearside<br>Lane | Allowed<br>Turns | Turning<br>Radius<br>(m) |
|-----------------------------------|---|-----------------------------|----------------------------|---------------------|--|----------------------|----------|------------------|------------------|--------------------------|
| 1/1<br>(A1000<br>NB<br>Lane 1)    | Link 1<br>(A1000<br>NB<br>Ahead)            | 5.0                         | See below                  | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Ahead   | Inf                      |
| 1/2<br>(A1000<br>NB<br>Lane 2)    | Link 1<br>(A1000<br>NB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Ahead   | Inf                      |
| 2/1<br>(A1000<br>SB<br>Lane 1)    | Link 1<br>(A1000<br>SB<br>Ahead)            | 5.0                         | See below                  | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 5<br>Ahead   | Inf                      |
| 2/2<br>(A1000<br>SB<br>Lane 2)    | Link 1<br>(A1000<br>SB<br>Ahead)            | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 5<br>Ahead   | Inf                      |
| 3/1<br>(Church<br>Lane<br>Lane 1) | Link 1<br>(Church<br>Lane<br>Left<br>Right) | Inf                         | Inf                        | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 4<br>Left    | Inf                      |
| 3/2<br>(Church<br>Lane<br>Lane 2) | Link 1<br>(Church<br>Lane<br>Left<br>Right) | 3.0                         | See below                  | User                | 1800                                   | 3.25                 | 0.00     | Y                | Arm 5<br>Right   | Inf                      |
| 4/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |
| 5/1                               | Link 1                                      | Inf                         | Inf                        | Inf<br>(Exit)       | 1800                                   | 3.25                 | 0.00     | Y                |                  |                          |
| Arm/<br>Lane                      | Link<br>Num                                 | Expected Usage (PCU)        |                            |                     |  |                      |          |                  |                  |                          |
|                                   |   | Flow Group 1                | Flow Group 2               |                     |  |                      |          |                  |                  |                          |
| 1/1<br>(A1000 NB Lane 1)          | Link 1 (A1000 NB Ahead)                     | 3.0                         | 3.0                        |                     |  |                      |          |                  |                  |                          |
| 2/1<br>(A1000 SB Lane 1)          | Link 1 (A1000 SB Ahead)                     | 3.0                         | 3.0                        |                     |  |                      |          |                  |                  |                          |
| 3/2<br>(Church Lane Lane 2)       | Link 1 (Church Lane Left Right)             | 3.0                         | 3.0                        |                     |  |                      |          |                  |                  |                          |

### Traffic Flow Groups

| Flow Group        | Start Time | End Time | Duration | Formula |
|-------------------|------------|----------|----------|---------|
| 1: 'Flow Group 1' | 08:30      | 09:30    | 01:00    |         |
| 2: 'Flow Group 2' | 15:30      | 16:30    | 01:00    |         |

**Flow Group 1: 'Flow Group 1'**

**Traffic Flow Matrix**

**Desired Flow :**

|        | Destination |     |      |   |      |
|--------|-------------|-----|------|---|------|
|        |             | A   | B    | C | Tot. |
| Origin | A           | 0   | 945  | - | 945  |
|        | B           | 734 | 0    | - | 734  |
|        | C           | 172 | 208  | - | 380  |
|        | Tot.        | 906 | 1153 | - | 2059 |

**Link Traffic Flows**

| Arm/Link | Flow Group 1: Flow Group 1 |
|----------|----------------------------|
| 1/1      | 734                        |
| 2/1      | 945                        |
| 3/1      | 380                        |
| 4/1      | 906                        |
| 5/1      | 1153                       |

**Lane Saturation Flows**

| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr) |
|-----------------------------|----------------|----------|---------------|---------------|--------------------|---------------|-------------------|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |               |                    |               | 1800              |
| 1/2<br>(A1000 NB Lane 2)    |                |          |               |               |                    |               | 1800              |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |               |                    |               | 1800              |
| 2/2<br>(A1000 SB Lane 2)    |                |          |               |               |                    |               | 1800              |
| 3/1<br>(Church Lane Lane 1) |                |          |               |               |                    |               | 1800              |
| 3/2<br>(Church Lane Lane 2) |                |          |               |               |                    |               | 1800              |
| 4/1                         |                |          |               |               |                    |               | Inf               |
| 5/1                         |                |          |               |               |                    |               | Inf               |

**Flow Group 2: 'Flow Group 2'**

**Traffic Flow Matrix**

**Desired Flow :**

|        | Destination |      |     |   |      |
|--------|-------------|------|-----|---|------|
|        |             | A    | B   | C | Tot. |
| Origin | A           | 0    | 809 | - | 809  |
|        | B           | 1011 | 0   | - | 1011 |
|        | C           | 203  | 172 | - | 375  |
|        | Tot.        | 1214 | 981 | - | 2195 |

**Link Traffic Flows**

| Arm/Link | Flow Group 2: Flow Group 2 |
|----------|----------------------------|
| 1/1      | 1011                       |
| 2/1      | 809                        |
| 3/1      | 375                        |
| 4/1      | 1214                       |
| 5/1      | 981                        |

**Lane Saturation Flows**

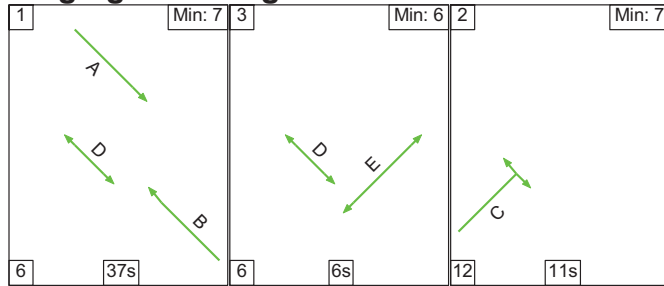
| Arm/Lane                    | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat flow (PCU/Hr)   |
|-----------------------------|----------------|----------|---------------|---------------|--------------------|---------------|---|
| 1/1<br>(A1000 NB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 1/2<br>(A1000 NB Lane 2)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 2/1<br>(A1000 SB Lane 1)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 2/2<br>(A1000 SB Lane 2)    |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 3/1<br>(Church Lane Lane 1) |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 3/2<br>(Church Lane Lane 2) |                |          |               |               |                    |               | This lane uses a directly entered Saturation Flow<br>1800 |
| 4/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |
| 5/1                         |                |          |               |               |                    |               | Infinite Saturation Flow (on Exit Link)<br>Inf            |

### Scenario 3: 'Morning Drop Off Plan 2'

Staging Plan 2: 'Staging Plan No. 2'

Flow Group 1: 'Flow Group 1'

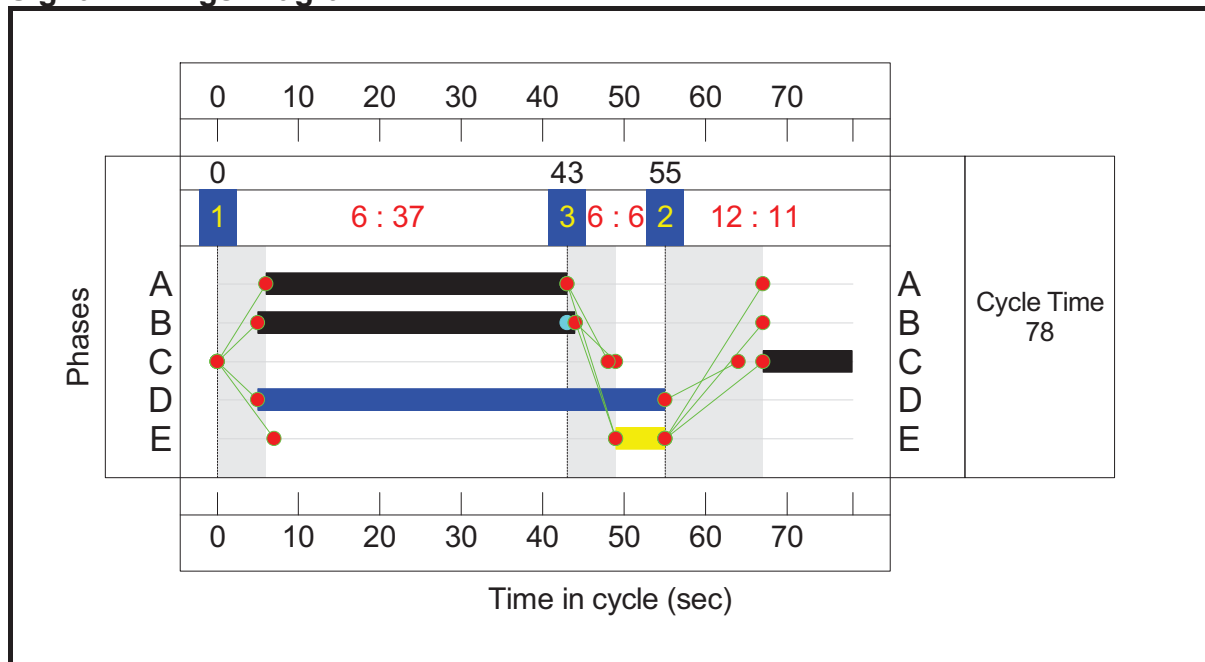
#### Staging Plan Diagram



#### Stage Timings

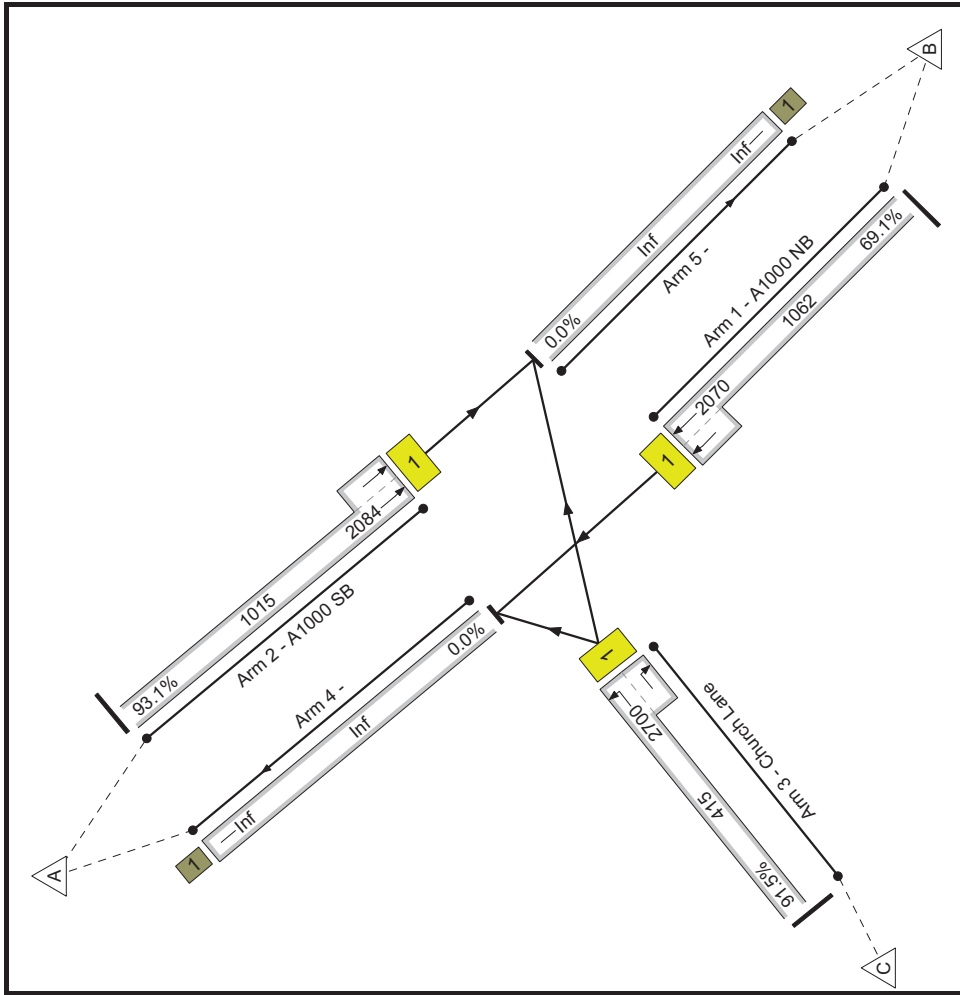
| Stage        | 1  | 3  | 2  |
|--------------|----|----|----|
| Duration     | 37 | 6  | 11 |
| Change Point | 0  | 43 | 55 |

#### Signal Timings Diagram





### Junction Layout Diagram



Full Input Data And Results

**Link Results**

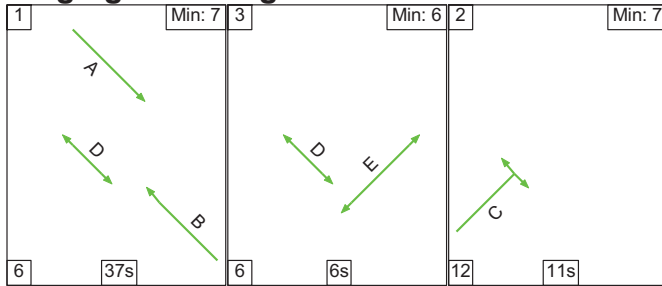
| Link Num  | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase           | Num Greens                   | Total Green (s)                    | Arrow Green (s)     | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)      | Capacity (pcu)       | Deg Sat (%) |
|---|------------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|-------------|
| 1/1   | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                       | 1                            | 39                                 | -                   | 734                       | 3600                             | 2070                       | 1062                 | 69.1        |
| 2/1   | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                       | 1                            | 37                                 | -                   | 945                       | 3600                             | 2084                       | 1015                 | 93.1        |
| 3/1   | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                       | 1                            | 11                                 | -                   | 380                       | 3600                             | 2700                       | 415                  | 91.5        |
| 4/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 906                       | Inf                              | Inf                        | Inf                  | 0.0         |
| 5/1   |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -                                  | -                   | 1153                      | Inf                              | Inf                        | Inf                  | 0.0         |
| Link Num  | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |             |
| 1/1   | 734                    | 734           | -                     | -                            | -                           | 2.5                   | 1.1                          | -                                  | 3.6                 | 17.7                      | 11.0                             | 1.1                        | 12.1                 |             |
| 2/1   | 945                    | 945           | -                     | -                            | -                           | 4.3                   | 5.8                          | -                                  | 10.1                | 38.5                      | 18.6                             | 5.8                        | 24.4                 |             |
| 3/1   | 380                    | 380           | -                     | -                            | -                           | 3.3                   | 4.3                          | -                                  | 7.6                 | 72.3                      | 8.0                              | 4.3                        | 12.3                 |             |
| 4/1   | 906                    | 906           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| 5/1   | 1153                   | 1153          | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |
| PRC for Signalled Links (%): -3.4      Total Delay for Signalled Links (pcuHr): 21.33<br>PRC Over All Links (%): -3.4      Total Delay Over All Links(pcuHr): 21.33      Cycle Time (s): 78 |                        |               |                       |                              |                             |                       |                              |                                    |                     |                           |                                  |                            |                      |             |

**Scenario 4: 'Afternoon Pick Up Plan 2'**

Staging Plan 2: 'Staging Plan No. 2'

Flow Group 2: 'Flow Group 2'

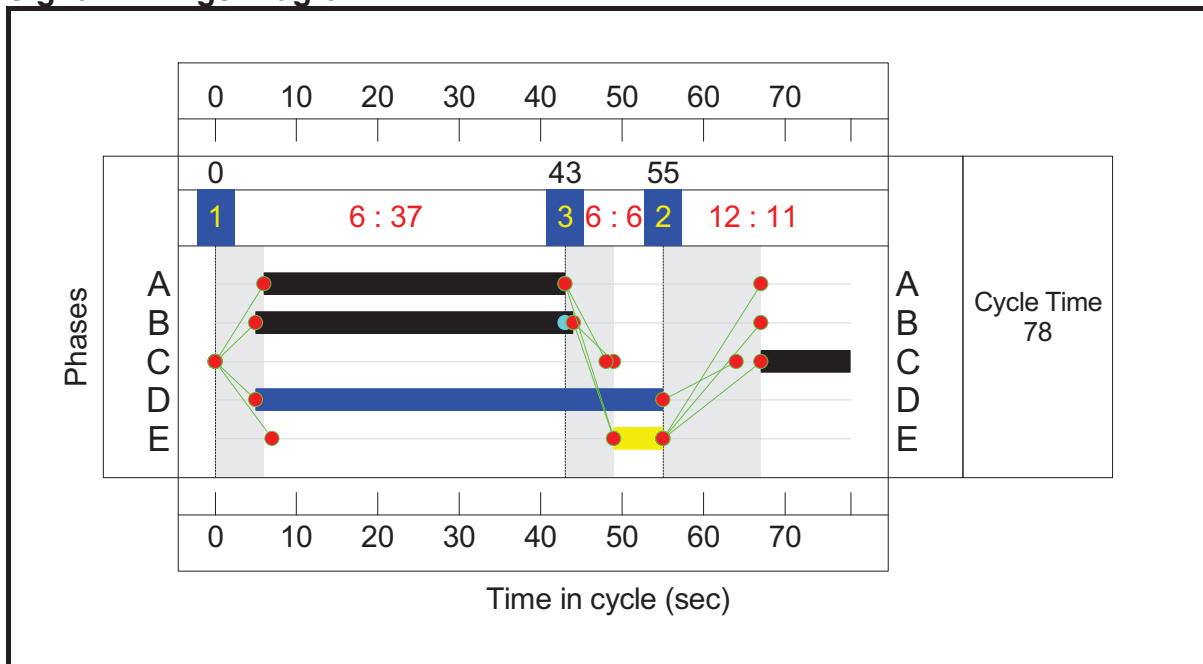
**Staging Plan Diagram**



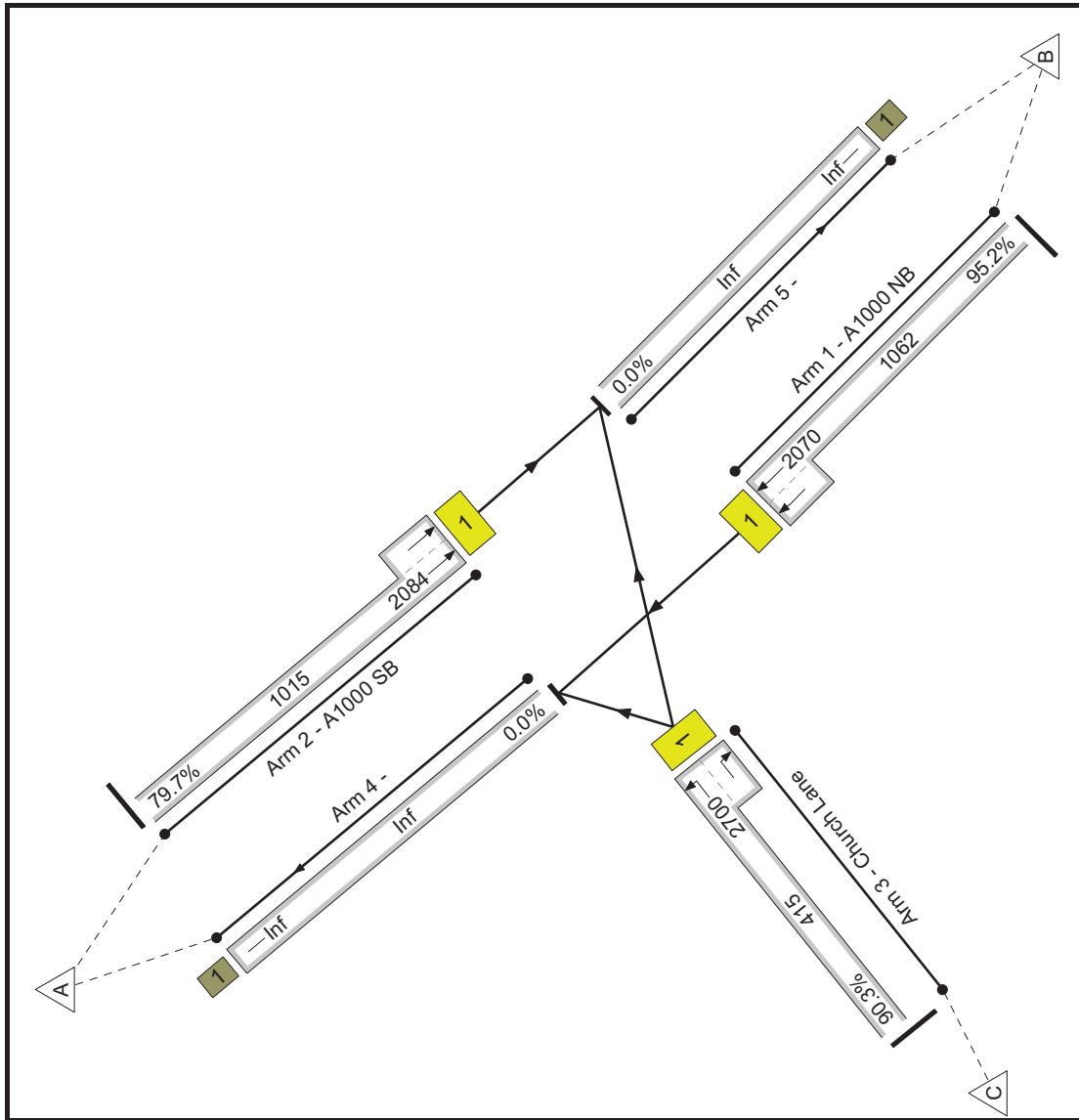
**Stage Timings**

| Stage        | 1  | 3  | 2  |
|--------------|----|----|----|
| Duration     | 37 | 6  | 11 |
| Change Point | 0  | 43 | 55 |

**Signal Timings Diagram**



### Junction Layout Diagram

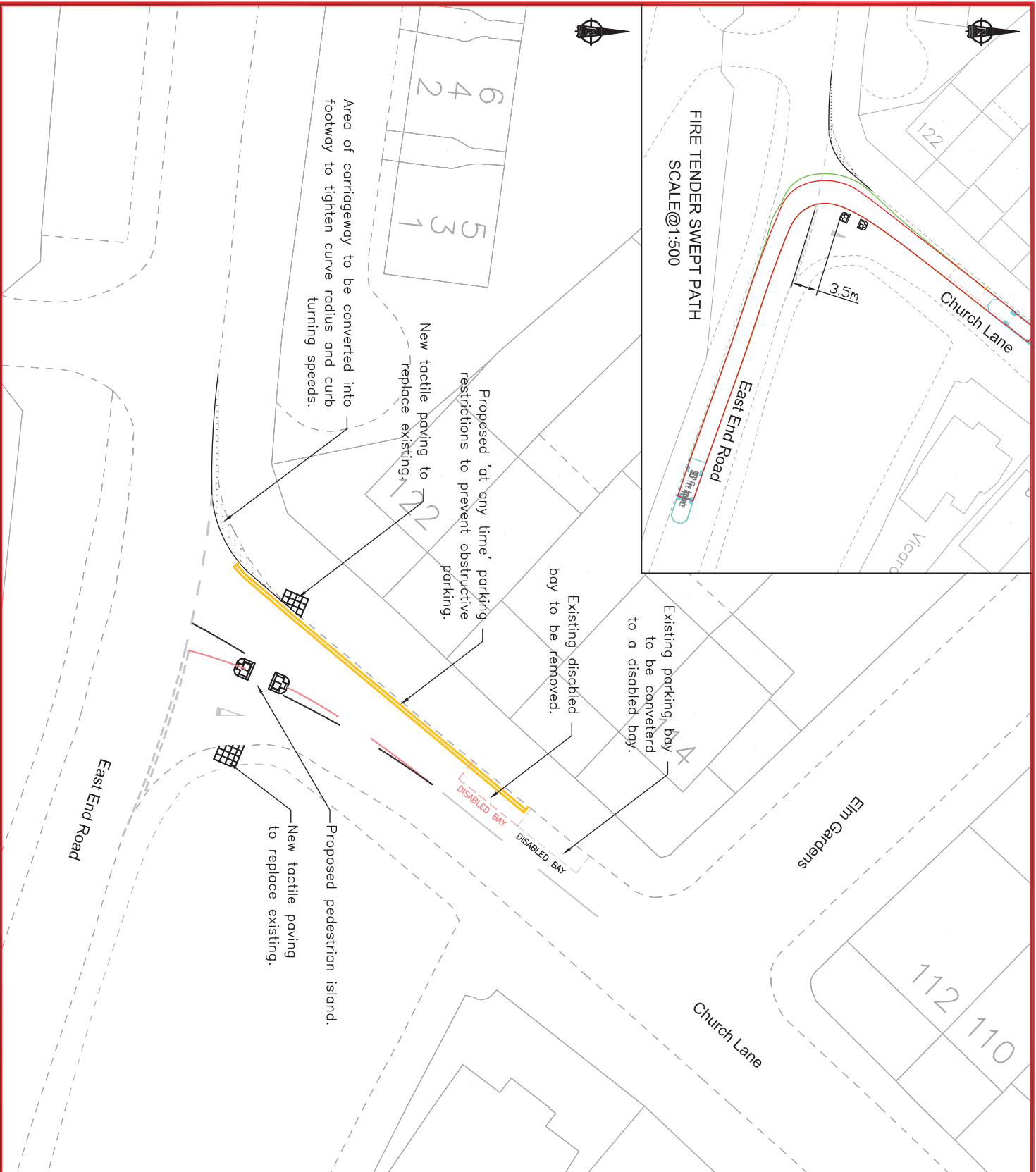


Full Input Data And Results

**Link Results**

| Link Num                     | Link Desc              | Link Type     | Stage Stream          | Position In Filtered Route   | Full Phase                  | Arrow Phase           | Num Greens                   | Total Green (s)                          | Arrow Green (s)     | Demand Flow (pcu)         | Max Sat Flow (pcu/Hr)            | Ave Sat Flow (pcu/Hr)      | Capacity (pcu)       | Deg Sat (%) |    |
|------------------------------|------------------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|--|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|-------------|----|
| 1/1                          | A1000 NB Ahead         | U             | N/A                   | N/A                          | B                           |                       | 1                            | 39                                       | -                   | 1011                      | 3600                             | 2070                       | 1062                 | 95.2        |    |
| 2/1                          | A1000 SB Ahead         | U             | N/A                   | N/A                          | A                           |                       | 1                            | 37                                       | -                   | 809                       | 3600                             | 2084                       | 1015                 | 79.7        |    |
| 3/1                          | Church Lane Left Right | U             | N/A                   | N/A                          | C                           |                       | 1                            | 11                                       | -                   | 375                       | 3600                             | 2700                       | 415                  | 90.3        |    |
| 4/1                          |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -  | -                   | 1214                      | Inf                              | Inf                        | Inf                  | 0.0         |    |
| 5/1                          |                        | U             | N/A                   | N/A                          | -                           |                       | -                            | -  | -                   | 981                       | Inf                              | Inf                        | Inf                  | 0.0         |    |
| Link Num                     | Entering (pcu)         | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr)       | Total Delay (pcuHr) | Av. Delay Per Veh (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |             |    |
| 1/1                          | 1011                   | 1011          | -                     | -                            | -                           | 4.4                   | 7.7                          | -  | 12.1                | 43.1                      | 20.5                             | 7.7                        | 28.2                 |             |    |
| 2/1                          | 809                    | 809           | -                     | -                            | -                           | 3.3                   | 1.9                          | -  | 5.2                 | 23.0                      | 13.7                             | 1.9                        | 15.6                 |             |    |
| 3/1                          | 375                    | 375           | -                     | -                            | -                           | 3.3                   | 3.9                          | -  | 7.2                 | 68.7                      | 7.8                              | 3.9                        | 11.7                 |             |    |
| 4/1                          | 1214                   | 1214          | -                     | -                            | -                           | 0.0                   | 0.0                          | -  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |    |
| 5/1                          | 981                    | 981           | -                     | -                            | -                           | 0.0                   | 0.0                          | -  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |             |    |
| PRC for Signalled Links (%): |                        |               |                       |                              |                             |                       | -5.8                         | Total Delay for Signalled Links (pcuHr): | 24.45               |                           |                                  |                            |                      |             |    |
| PRC Over All Links (%):      |                        |               |                       |                              |                             |                       | -5.8                         | Total Delay Over All Links(pcuHr):       | 24.45               | Cycle Time (s):           |                                  |                            |                      |             | 78 |

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NOTES:-

Proposed Highway Features ———

New kerb alignment and footway [dotted line symbol]

Markings to be removed - - -

107

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| Revision and Date | Description | Initial |
|-------------------|-------------|---------|
|                   |             |         |
|                   |             |         |
|                   |             |         |
|                   |             |         |

Pam Wharfe  
 Interim Director Environment, Planning & Regeneration

North London Business Park  
 Oakleigh Road South  
 New Southgate N11 1NP  
 Tel. 020 8359 2000



SCHEME:  
 East Finchley Pedestrian Safety  
 Pedestrian Facilities  
 Conceptual Design

TITLE:  
 Proposed Pedestrian Island  
 East End Road & Church Lane Junction  
 N2

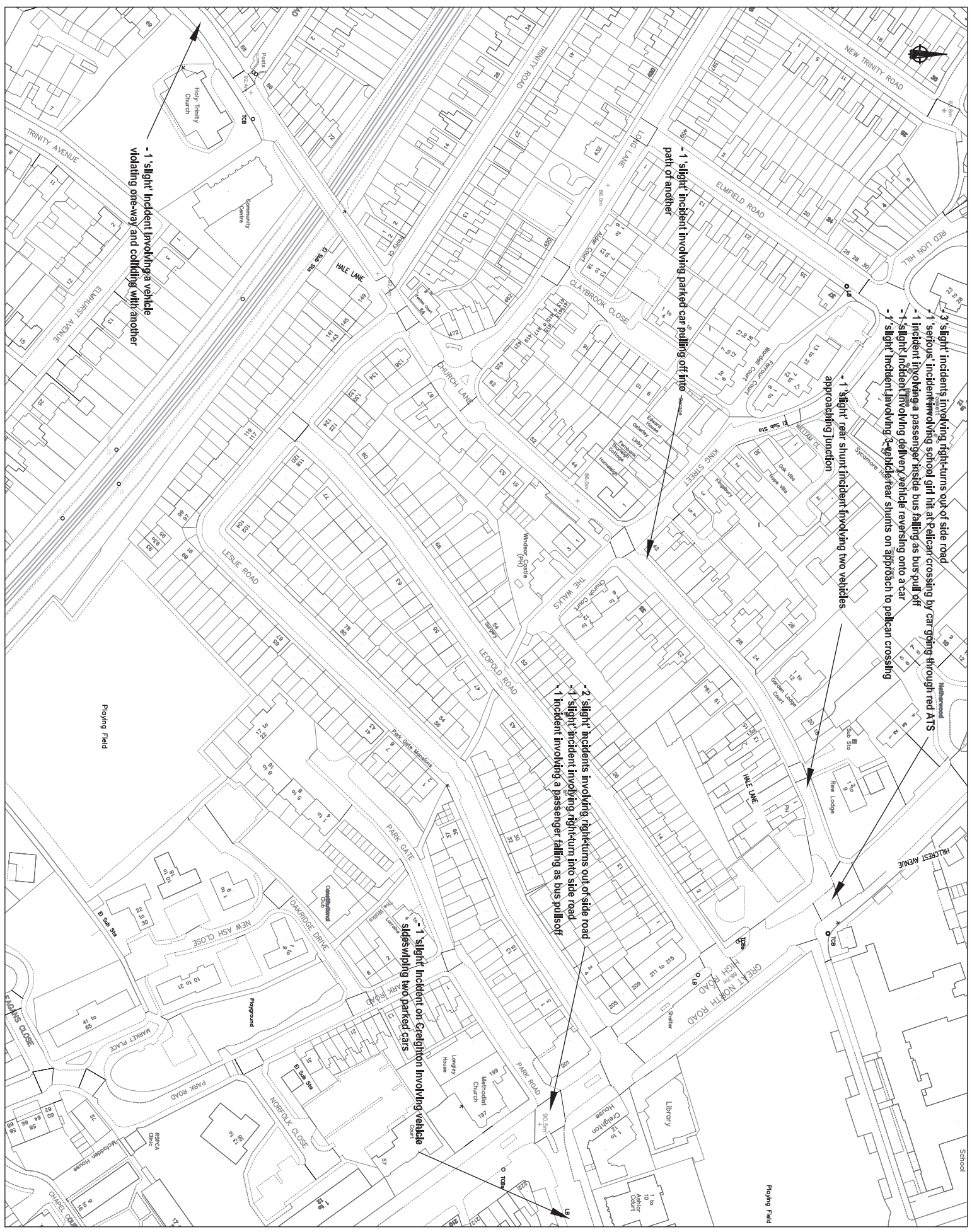
|            |          |          |         |
|------------|----------|----------|---------|
| Scales:    | 1:250@A3 | Date:    | Sept 12 |
| Initiated: | NR       | Drawn:   | TN      |
| Checked:   | -        | Checked: | -       |

DRAWING NO: 60671 P03

Acad Ref: -

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- 1 slight incident involving a vehicle violating one-way and colliding with another

- 1 slight incident involving parked car pulling off into path of another

- 1 slight rear shunt incident involving two vehicles approaching junction

- 3 slight incidents involving right-turns out of side road  
- 1 serious incident involving school girl hit at pelican crossing by car going through red ATIS  
- 1 incident involving a passenger inside bus falling as bus pull off  
- 1 slight incident involving delivery vehicle reversing onto a car  
- 1 slight incident involving 2 vehicles rear shunt on approach to pelican crossing

- 2 slight incidents involving right-turns out of side road  
- 1 slight incident involving right-turn into side road  
- 1 incident involving a passenger falling as bus pull off

- 1 slight incident on Creighton involving vehicle sideswiping two parked cars



Accidents between dates 01/11/2008 and 31/10/2011 (36) months

Selection: Notes:

Selected using Pre-defined Query :

0109SX21039 23/10/2009 Thursday Time 1412 Vehicles 2 Casualties 1 Slight  
Fine with high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
V1 TOOK THE CORNER TO WIDE COLLIDING WITH ONCOMING V2.  
Occurred on EAST END ROAD J/W CHURCH LANE

|                        |                                |             |                 |  |
|------------------------|--------------------------------|-------------|-----------------|--|
| Vehicle Reference      | 1                              | Car         |                 | Turning left                             |
|                        |                                |             |                 | No skidding, jack-knifing or overturning |
| Not in restricted lane |                                |             |                 |  |
| First point of impact  | Front                          |             | Age of Driver   | 29                                       |
| Vehicle direction      | NE to W                        |             | Breath test     | Negative                                 |
| FRV                    | Not foreign registered vehicle |             | Driver Postcode | RM1                                      |
|                        |                                |             | Journey         | Other/Not known                          |
| Vehicle Reference      | 2                              | Pedal cycle |                 | Going ahead                              |
|                        |                                |             |                 | No skidding, jack-knifing or overturning |
| Not in restricted lane |                                |             |                 |  |
| First point of impact  | Front                          |             | Age of Driver   | 37                                       |
| Vehicle direction      | SW to NE                       |             | Breath test     | Not applicable                           |
| FRV                    | Not foreign registered vehicle |             | Driver Postcode | N2                                       |
|                        |                                |             | Journey         | Other/Not known                          |
| Casualty Reference:    | 1                              | Age: 37     | Male            | Driver/rider                             |
|                        |                                |             |                 | Severity: Slight                         |

---

0111SX20511 14/06/2011 Monday Time 1538 Vehicles 1 Casualties 1 Slight  
Fine with high winds Road surface Dry Daylight:street lights present  
Special Conditions None Road Type Single carriageway  
PED HAS CROSSED THE ROAD AS V1 ATTEMPTED TO TURN LEFT. V1 HAS SPED UP AND COLLIDED WITH PED.  
Occurred on CHURCH LANE J/W EAST END ROAD

|                        |                                |                     |                 |  |
|------------------------|--------------------------------|---------------------|-----------------|--|
| Vehicle Reference      | 1                              | Other motor vehicle |                 | Turning left                             |
|                        |                                |                     |                 | No skidding, jack-knifing or overturning |
| Not in restricted lane |                                |                     |                 |  |
| First point of impact  | Nearside                       |                     | Age of Driver   |  |
| Vehicle direction      | NE to W                        |                     | Breath test     | Driver not contacted                     |
| FRV                    | Not foreign registered vehicle |                     | Driver Postcode | Unknown                                  |
|                        |                                |                     | Journey         | Other/Not known                          |
| Casualty Reference:    | 1                              | Age: 17             | Male            | Pedestrian                               |
|                        |                                |                     |                 | Severity: Slight                         |
|                        |                                |                     |                 | Pedestrian Direction: E                  |

Accidents between dates 01/11/2008 and 31/10/2011 (36) months

Selection:

Notes:

Selected using Pre-defined Query :

Accidents involving:

|                          | Fatal | Serious | Slight | Total |
|--------------------------|-------|---------|--------|-------|
| Motor vehicles           | 0     | 0       | 1      | 1     |
| 2-wheeled motor vehicles | 0     | 0       | 0      | 0     |
| Pedal cycles             | 0     | 0       | 1      | 1     |
| Horses & other           | 0     | 0       | 0      | 0     |
| Total                    | 0     | 0       | 2      | 2     |

Casualties:

|                  | Fatal | Serious | Slight | Total |
|------------------|-------|---------|--------|-------|
| Vehicle driver   | 0     | 0       | 0      | 0     |
| Passenger        | 0     | 0       | 0      | 0     |
| Motorcycle rider | 0     | 0       | 0      | 0     |
| Cyclist          | 0     | 0       | 1      | 1     |
| Pedestrian       | 0     | 0       | 1      | 1     |
| Other            | 0     | 0       | 0      | 0     |
| Total            | 0     | 0       | 2      | 2     |

## Speed Survey Summaries

| <b>Table 1: Church Lane (One-Way) - Eastbound</b> |  |                             |                |                             |
|---|--|-----------------------------|----------------|-----------------------------|
| Date  | Highest Daily Recorded 85%ile Speeds (mph) |                             |                |                             |
|   | East of Bridge                             |                             | West of Bridge |                             |
|   | <b>6am-6pm</b>                             | <b>7am-10 &amp; 2pm-5pm</b> | <b>6am-6pm</b> | <b>7am-10 &amp; 2pm-5pm</b> |
| 20/2/12   | 28.3                                       | 28.2                        | 30.2           | 30.1                        |
| 21/2/12   | 30.1                                       | 29.0                        | 30.8           | 30.7                        |
| 22/2/12   | 29.5                                       | 28.4                        | 31.1           | 30.9                        |
| 23/2/12   | 29.9                                       | 28.7                        | 30.7           | 30.7                        |
| 24/2/12   | 30.2                                       | 28.9                        | 31.6           | 31.6                        |
| 25/2/12   | 30.4                                       | 29.4                        | 33.7           | 33.7                        |
| <b>Average</b>                                    | <b>29.7</b>                                | <b>28.8</b>                 | <b>31.3</b>    | <b>31.3</b>                 |

| <b>Table 2: A1000 Finchley High Road (North of Chandos Avenue)</b> |  |                             |                |                             |
|--|--|-----------------------------|----------------|-----------------------------|
| Date   | Highest Daily Recorded 85%ile Speeds (mph) |                             |                |                             |
|  | Northbound                                 |                             | Southbound     |                             |
|  | <b>6am-6pm</b>                             | <b>7am-10 &amp; 2pm-5pm</b> | <b>6am-6pm</b> | <b>7am-10 &amp; 2pm-5pm</b> |
| 20/2/12  | 27.5                                       | 27.1                        | 28.4           | 28.4                        |
| 21/2/12  | 31.7                                       | 28.6                        | 33.6           | 28.9                        |
| 22/2/12  | 30.8                                       | 29.0                        | 33.7           | 28.9                        |
| 23/2/12  | 30.6                                       | 29.9                        | 34.2           | 28.4                        |
| 24/2/12  | 32.5                                       | 29.4                        | 34.1           | 28.8                        |
| 25/2/12  | 32.3                                       | 32.3                        | 37.0           | 35.1                        |
| <b>Average</b>   | <b>30.8</b>                                | <b>29.2</b>                 | <b>33.4</b>    | <b>31.0</b>                 |

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|                  |  |
|------------------|--|
| <b>Meeting</b>   | Finchley & Golders Green Area<br>Environment Sub-Committee   |
| <b>Date</b>      | 16 October 2012  |
| <b>Subject</b>   | Bus stop on the 382 route towards<br>Finchley Central in Summers Lane N12  |
| <b>Report of</b> | Interim Director of Environment,<br>Planning and Regeneration  |
| <b>Summary</b>   | The report seeks approval to implement the provision of a new fixed bus stop in Summers Lane by Sunny Way pending successful consultation. |

---

|  |   |
|--|---|
| <b>Officer Contributors</b>                        | Gurdeep Ahdhi, Engineer and Antoine Aubert, Senior Engineer   |
| <b>Status (public or exempt)</b>                   | Public  |
| <b>Wards Affected</b>                              | Woodhouse Ward  |
| <b>Key Decision</b>                                | No  |
| <b>Reason for urgency / exemption from call-in</b> | Not Applicable  |
| <b>Function of</b>                                 | Executive   |
| <b>Enclosures</b>                                  | Enclosure A - 60635_P_003<br>Enclosure B - 60635-RLD-001<br>Enclosure C - Consultation documents sent to residents and ward councillors |
| <b>Contact for Further Information:</b>            | Gurdeep Ahdhi 0208 359 7260   |





## **1. RECOMMENDATIONS**

- 1.1 That the scheme's details, background and rationale presented in the report be noted.**
- 1.2 That the Director of Environment, Planning and Regeneration be authorised to carry out the necessary statutory consultation for the proposed waiting restrictions associated with the scheme.**
- 1.3 That any objection from the statutory consultation be considered by the Director of Environment, Planning and Regeneration in consultation with the Cabinet Member for Environment.**
- 1.4 That based on the consultation results the Director of Environment, Planning and Regeneration be allowed to decide whether or not to implement the measures.**

## **2. RELEVANT PREVIOUS DECISIONS**

- 2.1 Finchley & Golders Green Area Environment Sub-Committee 23rd November 2011. The proposal was discussed at the meeting leading to the following items being agreed:

Item 7 (1): The Sub-Committee notes the outcome of the investigations into the possibility of a Hail and Ride Scheme and possible resurrection of the original bus stop scheme in Summers Lane.

Item 7 (2): Subject to the overall costs being contained within available budgets, the original bus stop scheme in Summers Lane be considered for inclusion in the 2012/2013 budget.

Item 7 (3): A report on the outcome be brought to the next appropriate meeting of the Sub-Committee.

- 2.2 Finchley & Golders Green Area Environment Sub-Committee for 23rd January, 14th March and 26<sup>th</sup> June 2012. The scheme was discussed and agreed to be included in the Local Implementation Plan for 2012/2013.

## **3. CORPORATE PRIORITIES AND POLICY CONSIDERATIONS**

- 3.1 Introducing traffic management measures in the borough will contribute to the Sustainable Community Strategy and Corporate Plan priority "A Successful London Suburb" by enhancing Barnet's reputation as a good place to work and live.
- 3.2 The London Mayor's Transport Strategy also addresses these areas through: "Proposal 30: The Mayor, through Transport for London (TFL), and working with the London boroughs and other stakeholders, will introduce measures to smooth traffic flow to manage congestion (delay, reliability and network resilience) for all people and freight movements on the road network, and maximise the efficiency of the network. These measures will include ...c) "... keep traffic moving ..." , e) Planning and implementing ... improvements to the

existing road network, ... to improve traffic flow on the most congested sections of the network, and to improve conditions for all road users

#### **4. RISK MANAGEMENT ISSUES**

- 4.1 It is not considered that the issues involved are likely to give rise to policy considerations as the proposed measures would provide pedestrians with a new bus stop without having a major impact on traffic flow.
- 4.2 There would be some minor disruption whilst the work is being completed but this would be minimised through traffic management in discussion with contractor undertaking the work.

#### **5. EQUALITIES AND DIVERSITY ISSUES**

- 5.1 The introduction of the westbound bus stop on Summers Lane would provide bus users with improved facilities by decreasing the long distance between existing westbound bus stops on the 382 Bus Service. The new bus stop would also benefit mobility impaired passengers and passengers with prams and pushchairs.

#### **6. USE OF RESOURCES IMPLICATIONS (Finance, Procurement, Performance & Value for Money, Staffing, IT, Property, Sustainability)**

- 6.1 **Finance** The scheme is to be funded by TfL via the Local Implementation Plan's 2012/13 Traffic Management and Road Safety allocation. The total estimated cost for the scheme is £30,000.
- 6.2 Any financial implications will be contained within the Environment, Planning and Regeneration budgets.
- 6.3 **Procurement** The highway works would be procured through the borough's highway term contracts.
- 6.4 There are no **Staffing, IT or Property** implications arising out of this report.

#### **7. LEGAL ISSUES**

- 7.1 The Traffic Management Act 2004 places an obligation on authorities to ensure the safe and expeditious movement of traffic on their road network.
- 7.2 The Council as Highway Authority has the necessary legal powers to introduce or amend Traffic Management Orders through the Road Traffic Regulation Act 1984.

#### **8. CONSTITUTIONAL POWERS (Relevant section from the Constitution, Key/Non-Key Decision)**

- 8.1 Constitution Part 3 – Responsibility for functions, section 6, item 6.1. Chief Officers can take decisions, in consultation with the Cabinet Member concerned (or without consultation where it is a decision authorised to be taken by the Chief Officer under the Contract Procedure Rules or it involves the implementation of policy or earlier decision of the Council or Cabinet or

Committee or it is in respect of operational matters within the Chief Officer's sphere of managerial or professional responsibility and is not significant in terms of budget or policy) to discharge the functions allocated to them or dealt by them or their staff.

## **9. BACKGROUND INFORMATION**

- 9.1 The proposed scheme on Summers Lane was investigated due to concerns raised by local residents and ward members.
- 9.2 The main issue identified is the long distance between two existing westbound bus stops on Summers Lane which results in a substandard service for bus users in the area.
- 9.3 Investigation revealed that the distance between two existing westbound bus stops was found to be in excess of 640m. The recommended guidelines set by London buses suggest a maximum of 400m.
- 9.4 Council officers assessed the situation with representatives from London Buses and the Metropolitan police and arrived at the proposals shown on attached plan 60635-P-003.
- 9.5 The proposed scheme includes the introduction of a fixed bus stop adjacent to Sunny Way which would bring the distance between bus stops in line with the guidelines with 370m to the bus stop east of Sunny Way and 225m to the bus stop west of Sunny Way. To maintain a clear access into the new bus stop, 'At Any Time' waiting restrictions would be required at Sunny Way junction.
- 9.6 Three unrestricted kerbside spaces would be lost in Summers Lane to accommodate the bus stop. While on street parking is limited in the area parking surveys have indicated that sufficient space would remain in the area to meet current demand.
- 9.7 Local ward members and emergency services were consulted in October 2010 and no objections were received.
- 9.8 Resident consultation was undertaken in January 2011 including 83 private dwellings within the surrounding area as shown on the attached drawing 60635-RLD-001. Two responses were received. One resident replied in favour as both himself and his elderly partner find the existing arrangement a struggle to walk to the existing stops. One resident objected on the grounds of safety stating that whilst stopped the buses would affect visibility and increase difficulty for motorists exiting Sunny Way.
- 9.9 The proposals and results of the consultation were presented to the Cabinet Member for Environment, Councillor Coleman in May 2011 and did not receive approval due to insufficient funding being available.
- 9.10 A subsequent resident opinion survey undertaken by Councillor Cooke received 31 responses in favour of the scheme and 3 against.
- 9.11 Based on these results a decision was taken by the Finchley & Golders Green Area Environment Sub-Committee on 23rd January to include the scheme in

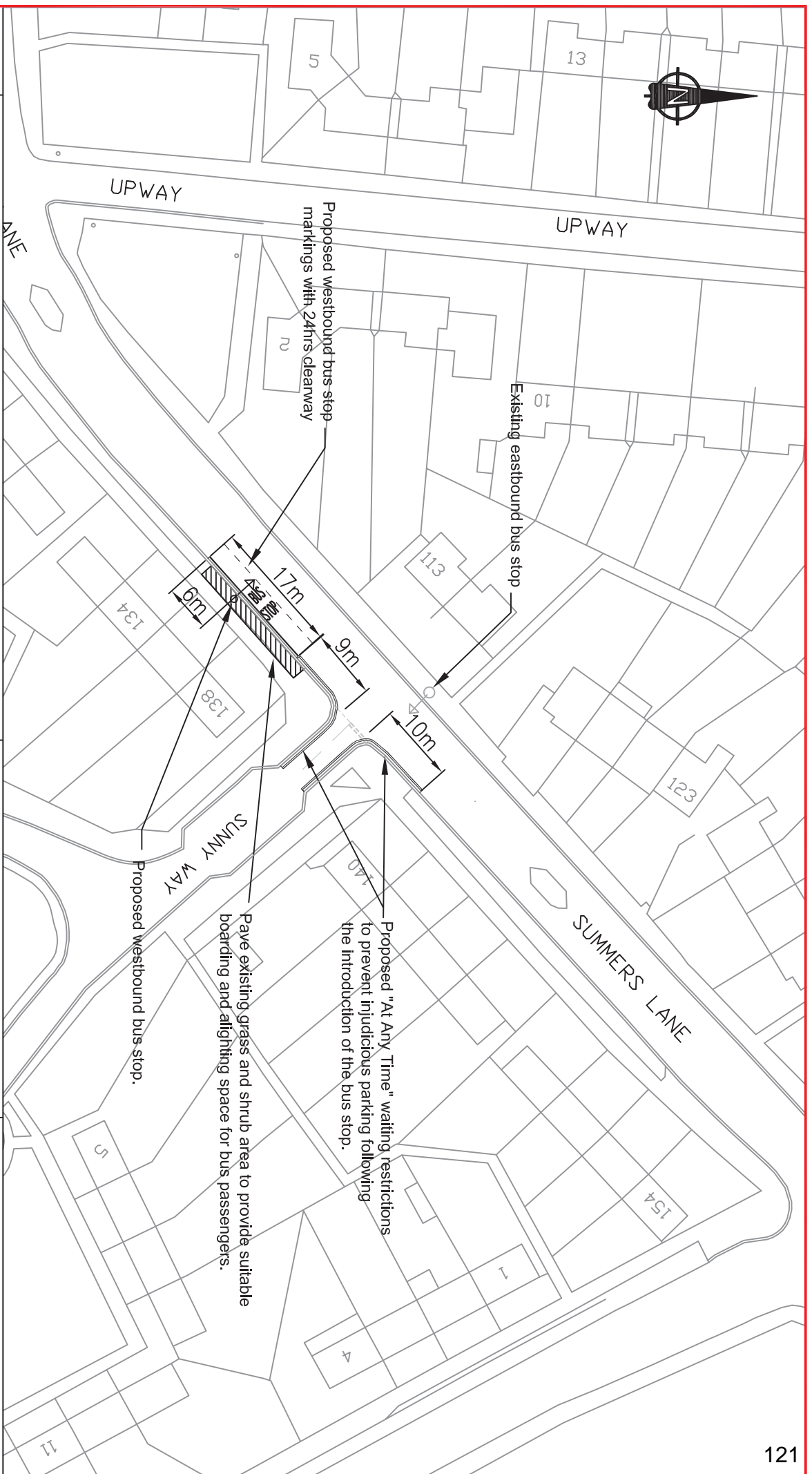
the 2012/2013 Local Implementation Plan work programme. The decision was repeated at the subsequent meetings held 14th March and 26<sup>th</sup> June 2012.

- 9.12 This report seeks approval to undertake statutory consultation for the proposed waiting restrictions and based on the consultation results the Director of Environment, Planning and Regeneration be allowed to decide whether or not to implement the measures.

## **10. LIST OF BACKGROUND PAPERS**

- 10.1 None.

|  |           |
|--|-----------|
| <b>Cleared by Finance (Officer's initials)</b> | <b>JH</b> |
| <b>Cleared by Legal (Officer's initials)</b>   | <b>SS</b> |



|              |              |   |
|--------------|--------------|---|
| Initiated by | PB           | SCHEME:<br>Summers Lane by Sunny Way<br>Proposed Westbound Bus Stop |
| Drawn by     | AA           |   |
| Checked by   | NR           | TITLE:<br>Proposed layout   |
| Date         | October 2010 | Scales  |

Pam Wharfe  
Interim Director of Environment, Planning & Regeneration

North London Business Park  
Oakleigh Road South  
New Southgate N11 1NP  
Tel. 020 8359 2000

|                |             |
|----------------|-------------|
| DRAWINGING No. | 60635_P_003 |
|                |             |



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NOTES:-



Catchment Area

Approx 92 properties

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| Revision and Date | Description | Initial |
|-------------------|-------------|---------|
|                   |             |         |
|                   |             |         |
|                   |             |         |

Pam Wharfe  
Interim Director of Environment and Operations

North London Business Park  
Oakleigh Road South  
New Southgate N11 1NP  
Tel. 020 8359 2000



SCHEME:

Traffic management & road safety  
Summers Lane  
Bus Stop Proposal

TITLE:

Resident Letter Drop  
Catchment Area

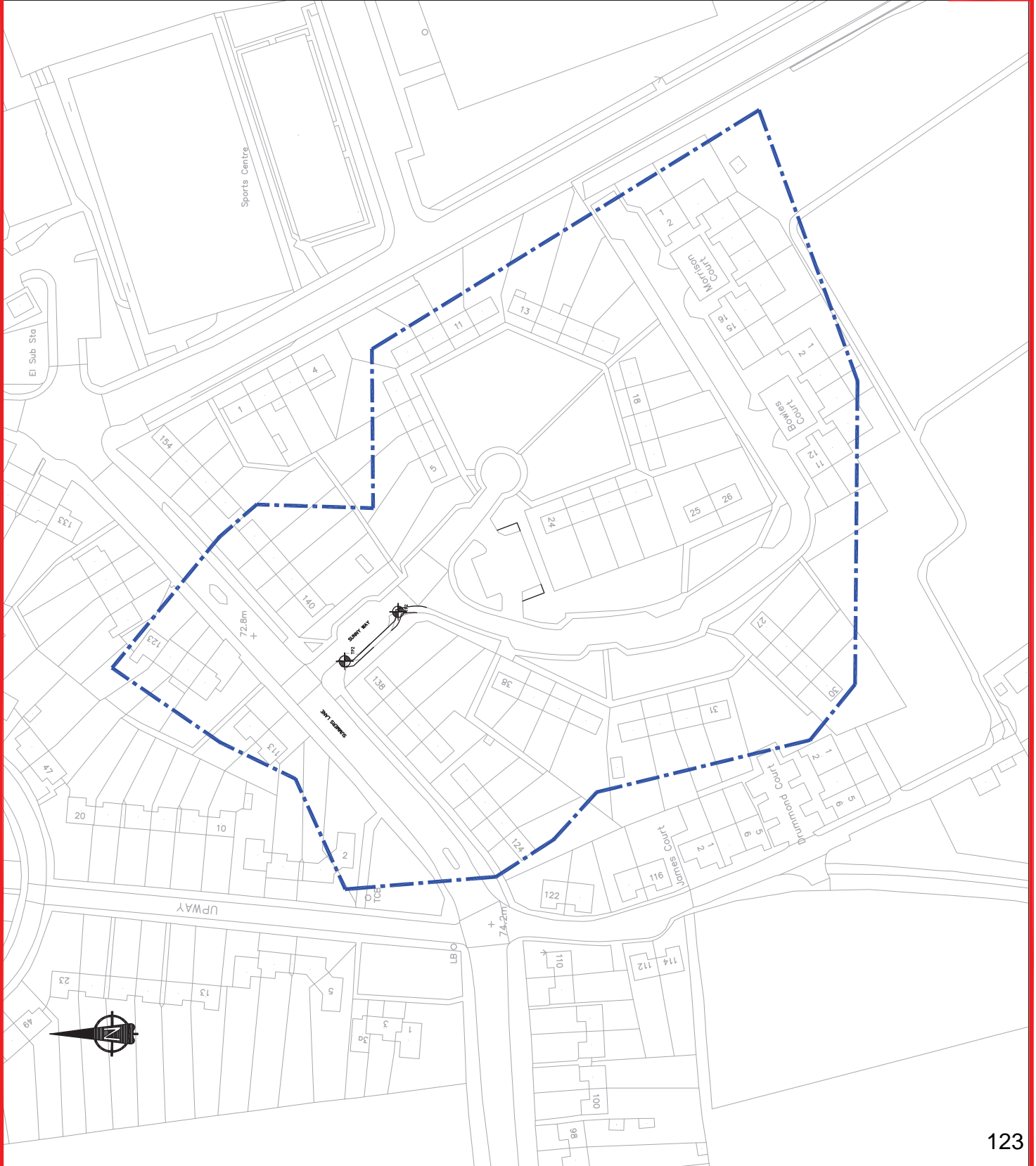
Scales: 1:500@A3 Date: Nov '11

Initiated: PB Drawn: RY Checked:

DRAWING NO:

60635-RLD-001

Acad Ref.



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Director of Environment & Operations  
London Borough of Barnet  
North London Business Park  
Oakleigh Road South  
London, N11 1NP

Councillor Anne Hutton  
Members room

Contact: Ron Yuen  
Tel: 020 8359 6124  
E-mail: ronald.yuen@barnet.gov.uk  
Date: 11.10.10  
Our reference: TRS/10.11/SW  
Your reference:

Dear Councillor Hutton,

**Bus Stop Proposal 10/11 – Summers Lane by Sunny Way, N12**

This letter is to inform you my intention to introduce a westbound bus stop in Summers Lane by Sunny Way to improve accessibility for local users. It has been highlighted by local residents and ward members that at present, the long distance between the consecutive westbound stops in Summers Lane results in a substandard service for bus users in this area. Council officers have assessed the situation with representatives from London Buses and the Metropolitan police and arrived at the proposals shown on attached plan 60635-C-001.

In order to maintain a clear access to the stop, 'At Any Time' waiting restrictions are proposed at the junction of Sunny Way. Note that a bus stop clear-way marking will also be provided within the stop area indicating that no vehicles other than buses and emergency vehicles will be allowed to park or load within the delineated bus stop. This clearway will ensure that buses can access the kerbside at all times and comply with the requirements of the Disability Discrimination Act 2005.

Three unrestricted kerbside spaces would be lost in Summers Lane to accommodate the bus stop. While on street parking is limited in the area parking surveys have indicated that sufficient space will remain in the area to meet current demand.

I would be grateful if you could let me know of any observations you may have on the proposals by 25 October.

Yours sincerely,



**NEIL RICHARDSON**  
**ACTING HIGHWAYS MANAGER**  
**ENVIRONMENT AND OPERATIONS**

Director of Environment & Operations  
London Borough of Barnet  
North London Business Park  
Oakleigh Road South  
London, N11 1NP

Councillor Geof Cooke  
Members room

Contact: Ron Yuen  
Tel: 020 8359 6124  
E-mail: ronald.yuen@barnet.gov.uk  
Date: 11.10.10  
Our reference: TRS/10.11/SW  
Your reference:

Dear Councillor Cooke,

**Bus Stop Proposal 10/11 – Summers Lane by Sunny Way, N12**

This letter is to inform you my intention to introduce a westbound bus stop in Summers Lane by Sunny Way to improve accessibility for local users. It has been highlighted by local residents and ward members that at present, the long distance between the consecutive westbound stops in Summers Lane results in a substandard service for bus users in this area. Council officers have assessed the situation with representatives from London Buses and the Metropolitan police and arrived at the proposals shown on attached plan 60635-C-001.

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Yours sincerely,



**NEIL RICHARDSON**  
**ACTING HIGHWAYS MANAGER**  
**ENVIRONMENT AND OPERATIONS**

Director of Environment & Operations  
London Borough of Barnet  
North London Business Park  
Oakleigh Road South  
London, N11 1NP

Councillor Alan Schneiderman  
Members room

Contact: Ron Yuen  
Tel: 020 8359 6124  
E-mail: ronald.yuen@barnet.gov.uk  
Date: 11.10.10  
Our reference: TRS/10.11/SW  
Your reference:

Dear Councillor Schneiderman,

**Bus Stop Proposal 10/11 – Summers Lane by Sunny Way, N12**

This letter is to inform you my intention to introduce a westbound bus stop in Summers Lane by Sunny Way to improve accessibility for local users. It has been highlighted by local residents and ward members that at present, the long distance between the consecutive westbound stops in Summers Lane results in a substandard service for bus users in this area. Council officers have assessed the situation with representatives from London Buses and the Metropolitan police and arrived at the proposals shown on attached plan 60635-C-001.

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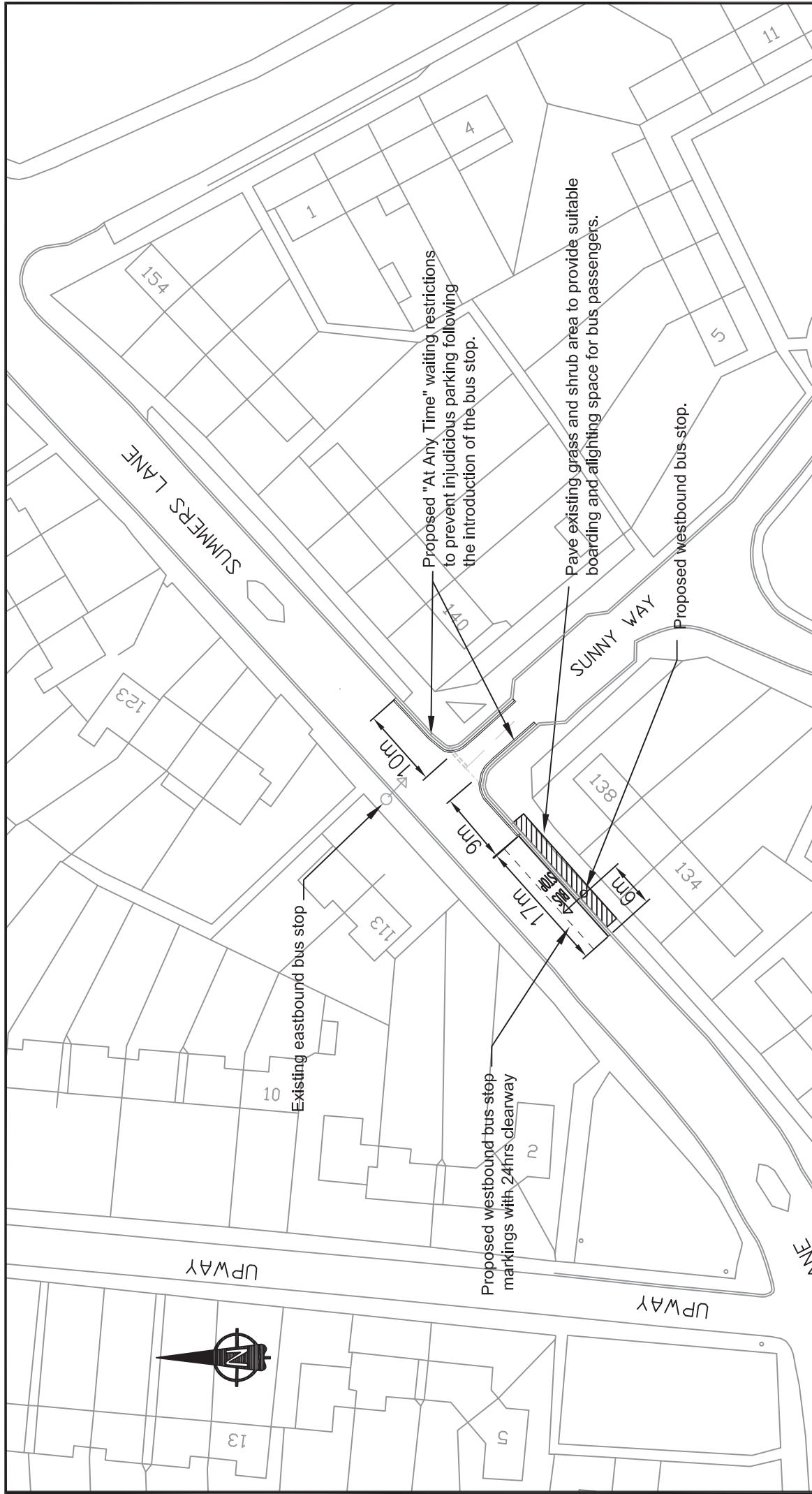
Three unrestricted kerbside spaces would be lost in Summers Lane to accommodate the bus stop. While on street parking is limited in the area parking surveys have indicated that sufficient space will remain in the area to meet current demand.

I would be grateful if you could let me know of any observations you may have on the proposals by 25 October.

Yours sincerely,



**NEIL RICHARDSON**  
**ACTING HIGHWAYS MANAGER**  
**ENVIRONMENT AND OPERATIONS**



|  |              |  |  |
|--|--------------|--|--|
| Initiated by   | PB           | <b>SCHEME:</b><br>Summers Lane by Sunny Way<br>Proposed Westbound Bus Stop                       | <b>BARNET</b><br>LONDON BOROUGH<br>DESIGN TEAM |
| Drawn by   | AA           |  |  |
| Checked by   | NR           | <b>TITLE:</b><br>Consultation Drawing  | DRAWING No.<br>60635_C_001                     |
| Date   | October 2010 |  |  |
| Scales   |              | NTS  | Acad Ref.                                      |
| Pam Wharfe<br>Interim Director of Environment and Operations |              | North London Business Park<br>Oakleigh Road South<br>New Southgate N11 1NP<br>Tel. 020 8359 2000 |  |

Director of Environment & Operations  
London Borough of Barnet  
North London Business Park  
Oakleigh Road South  
London, N11 1NP

To the occupier / homeowner

Contact: Ron Yuen  
Tel: 020 8359 6124  
E-mail: ronald.yuen@barnet.gov.uk  
Date: 18.01.11  
Our reference: TRS/10.11/SW  
Your reference:

Dear Resident,

**Bus Stop Proposal 10/11 – Summers Lane by Sunny Way, N12**

This letter is to inform you of the council's proposal to introduce a westbound bus stop in Summers Lane by Sunny Way to improve accessibility for local users. It has been highlighted by local residents and ward members that at present, the long distance between the consecutive westbound stops in Summers Lane results in a substandard service for bus users in this area. Council officers have assessed the situation with representatives from London Buses and the Metropolitan police and arrived at the proposals shown on attached plan 60635-C-001.

In order to maintain a clear access to the stop, 'At Any Time' waiting restrictions are proposed at the junction of Sunny Way. Note that a bus stop clear-way marking will also be provided within the stop area indicating that no vehicles other than buses and emergency vehicles will be allowed to park or load within the delineated bus stop. This clearway will ensure that buses can access the kerbside at all times and comply with the requirements of the Disability Discrimination Act 2005.

Three unrestricted kerbside spaces would be lost in Summers Lane to accommodate the bus stop. While on street parking is limited in the area parking surveys have indicated that sufficient space will remain in the area to meet current demand. It is anticipated that the measures will be implemented mid March.

I would be grateful if you could let me know of any observations you may have on the proposals by 8 February 2011.

Yours faithfully,



**RON YUEN**  
**DESIGN TEAM**  
**ENVIRONMENT AND OPERATIONS**

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AGENDA ITEM 14

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