APPLICATION NO:
CON/2002/8012

LOCATION:
Wykery Copse Peacock Lane, Bracknell.

APPLICANT:
Wykery Copse Ltd C/O The Bell Cornwell P/Ship

PROPOSAL:
Consultation from Bracknell Forest B C on an outline application for residential development and associated infrastructure.

EARLIEST DATE FOR DECISION: **05/12/2002**

APPLICATION WILL HAVE EXPIRED ON:
12/12/2002

CASE OFFICER: **Elaine Vashi**

WOKINGHAM WITHOUT PARISH COUNCIL

The Clerk, The Lodge
Pinewood Centre
Old Wokingham Road, Wokingham, Berks RG40 3AQ.

Tel: Crowthorne (01344) 771425
Fax: (01344) 762283
email wwpc.gov@btinternet.com

PLANNING
FOR
ACT
CS
10 DEC 2002
COPIES TO
FILE

FAX MESSAGE

TO: WDC Dev.Control. **ATTENTION:** Elaine Vashi.

FROM: John Grant. **DATE:** 10 December 2002

Your ref. CON/2002/8012.

My Council's committee discussed this application last night, and seem resigned to the fact that the development round Peacock Lane is going to happen, despite the objections that have been raised over a long while.

However, the committee did instruct me to write and ask you/your Council to do all you can to insist that the necessary improvements to the infrastructure are undertaken first, especially the road heading to and from this Parish, which depending on the time of day, is either a dangerously fast road at the increasing number of entrances/exits along it most especially at the junction with Easthampstead Road, where there have been a number of accidents lately, or is a bottle neck with traffic stationary for a mile or more of its length.

Regards,

John Grant.
Clerk to the Council.

01344762283

WOKINGHAM WITHOUT PARISH COUNCIL

The Clerk, The Lodge
Pinewood Centre
Old Wokingham Road, Wokingham, Berks RG40 3AQ.
Tel: Crowthorne (01344) 771425
Fax: (01344) 762283
email wwpc.gov@btinternet.com

PLANNING DEVELOPMENT CONTROL
CS
20 NOV 2002
ACK:
R.E:

FAX MESSAGE

TO: WDC Development Control. **DATE:** 20 November 2002.

FROM: John Grant. **ATTENTION** Elaine Vashi.

Re **CON/2002/8012 - Wykery Copse**

Deadline for comments 9th December.

The next meeting of this Council's Plans committee is not until the evening Monday 9th and I will fax any comments on Tuesday 10th.

Please can you let me know if this is not acceptable?

Regards and thanks,

John Grant.
Clerk to the Council.

WORK SHEET FOR : Elaine Vashi

Application Number : CON/2002/8012

Applicant : Wykery Copse Ltd C/O The Bell Cornwell P/Ship.

Location : Wykery Copse, Peacock Lane, , Bracknell.
Proposal : Consultation from Bracknell Forest B C on an outline application for residential development and associated infrastructure.

Site Notice Displayed ? : YES ☐ NO ☐ DATE ☐

Date of Neighbour Notifications : .....

Date of Site Visit : .....

Date Registered : 14/11/2002

Earliest Date for Decision : 05/12/2002

Latest Consultation Date/Site Notice Expiry Date : 05/12/2002

This application will have expired on: 12/12/2002. You need to make a decision 1 day prior to this date for this application to count as determined in less than 8 weeks.

Consultation Responses :

Planning Issues :

RECORD OF SITE VISIT

SITE ADDRESS: Wykery Copse
Peacock Lane Bracknell.

APPLICATION NUMBER:
CON/2002/8012

OFFICER: Elaine Vashi

DATE OF SITE VISIT:.....

1 SITE/STATUTORY NOTICE DISPLAYED ?

2. DESCRIPTION OF SURROUNDINGS

3. DESCRIPTION OF SITE/BUILDING

4. RELATIONSHIP TO ADJOINING PROPERTIES

5. SITE CONSTRAINTS

TREES

ACCESS/PARKING

LEVELS

BOUNDARY TREATMENT

OTHERS

Application Number : CON/2002/8012	Map No :
Case Officer : EV	Site Area :
Valid Date :	Received Date: 14/11/2002

Level : Delegated Application

Description : Consultation from Bracknell Forest B C on an outline application for residential development and associated infrastructure.

Location : Wykery Copse, Peacock Lane, , Bracknell.

Parish : Ward :

Applicant : Wykery Copse Ltd C/O The Bell Cornwell P/Ship.

Fee Required: £0 Fee Received: £0

Additional: ..... or Refund: .....

Enforcement Section to be notified ☐ (tick if required)

Additional information required for validation;

REASON	NOTES	DATE REQ	DATE RECD
LOCATION PLANS			
BLOCK PLANS			
FORMS UNSIGNED			
S.66 MISSING/INCORRECT/ UNSIGNED			
ELEVATION PLANS			
FLOOR PLANS			
NO SCALE OR SCALE IS IMPERIAL			
ENCROACHMENT LETTER REQUIRED			
OTHER			

Is the site in a Conservation Area: ☐ Yes ☐ No If "Yes" which one _____

Is the site a Listed Building: ☐ Yes ☐ No

Is a Statutory Advertisement required: ☐ Yes ☐ No

INTERNAL CONSULTATIONS

Building Control

Heritage (Harold Sanders)

Landscape

Trees

Environmental Health

Housing

Leisure & Cultural Services

Public Rights of Way Officer

Property

Policy & Plans

Joint Strategic Planning Unit

Archaeological Officer (BABTIE)

Education

Social Services

Highways

EXTERNAL CONSULTATIONS

Adjacent DPA : _____

Adjacent Parish : wdr & wdr w/out

SEB

British Gas

Oil pipeline

Transco

Environment Agency

Railtrack

Police Arch Officer

Alk Westcott & wdr w/out

HERITAGE BODIES

Victorian Society
The Georgian Group
Ancient Monuments Society
Council for British Arch
RCHME
NRPB (Telecommunications)
Sport England
Society for Proct' of Ancient Bldgs
English Heritage

OTHERS

.....

.....

.....

.....

.....

.....

NEIGHBOURS

.....

.....

.....

Environment Department

Director: John Osborne MSc BSc(Hons) MCIEH
Assistant Director: Steve Loudoun MCIEH

This matter is being dealt with by: Martin Bourne 01344 351129
martin.bourne@bracknell-forest.gov.uk

PLANNING SERVICES | HP 63235 | TLS | CAH | ENF | 14 NOV 2002 | COPIES TO

BRACKNELL FOREST BOROUGH COUNCIL

Time Square
Market Street
Bracknell
Berkshire RG12 1JD
☎ 01344 351400
Fax 01344 351104
DX 33611 Bracknell
Minicom 01344 352045
email:
environment@bracknell-forest.gov.uk
www.bracknell-forest.gov.uk

12th November 2002

Our Ref: 02/01041/OUT/CONS

Wokingham District Council
Planning Department
Shute End
Wokingham
Berkshire
RG40 1BN

CON/2002/8012

Dear Sir/Madam

DESCRIPTION: Outline application (including details of means of access) for residential development with associated infrastructure served by vehicular access onto Peacock Lane and Beehive Road.

LOCATION: Land At Wykery Copse Peacock Lane Bracknell

REFERENCE: 02/01041/OUT

CASE OFFICER: Martin Bourne 01344 351129

Town and Country Planning Act 1990

Please find enclosed a copy of the above planning application.

I shall be grateful if you would consider the proposal and advise me of any relevant views you may have. Any comments should be expressed in writing and received within 21 days of the date of this letter.

Please do not hesitate to contact the Case Officer, Martin Bourne, on direct line 01344 351129, should you have any queries on this matter.

Yours faithfully

M.C. Bourne

For Head of Planning & Building Control

Enc.

ISO 9002
Beacon Council
2001-2002
Maintaining a Quality Environment

Planning Application

Application for permission to carry out development
Town and Country Planning Acts

Head of Planning and Building Control
ENVIRONMENT DEPARTMENT
Time Square Market Street Bracknell Berkshire RG12 1JD
☎ 01344 351400 Minicom 01344 352045 DX 33611 Bracknell
Fax 01344 351104 e-mail environment@bracknell-forest.gov.uk

BRACKNELL FOREST BOROUGH COUNCIL

CONSULTATION COPY

- Please answer ALL QUESTIONS in BLOCK LETTERS.
- If a question is not applicable, answer N/A.
- Applicants Notes are available to assist completion of this form.
- Pease submit SIX copies of forms and plans to the address above.

PART 1

1		Applicants Name Address Post Code	Wykery Copse Ltd c/o Agent 02/01041 Phone :
2	If the applicant has an agent, all correspondence will be sent to the agent.	Agents Name Address Post Code	The Bell Cornwell Partnership Oakview House Station Road Hook Hampshire RG27 9IP Phone :01256 766673
3	On the plans show the site outlined in RED. Show also OTHER land in the applicant's ownership or control in BLUE. (see note 4)	Site Location/ Address	Land adjoining Wykery Copse, Peacock Lane, Bracknell
4	Description of Proposal : Give brief details and state for what purpose this site and any buildings will be used.		Residential development with associated infrastructure
5	Give the area in hectares or part of a hectare. (see note 2)	Area of site	11 ha.
6	State the applicant's interest in the land. eg. owner, prospective purchaser, lessee.	Ownership	prospective purchasers
7	List all the plans and drawings submitted with this application or provide a schedule.	Plans/ Drawings	see schedule
8	Does the application involve any of the following? Tick the relevant boxes.	Change of use ☐ Erection of a new building ☑	Redevelopment ☐ Alteration/Extension ☐ Demolition ☐

9 What type of application is this? (see note 2) Tick one box only.

Outline permission (see question 10 overleaf)	☑	State relevant outline permission number. Also complete Q.10	
Full permission	☐	State period required	
Approval of details/reserved matters	☐		
Temporary permission	☐	State relevant application No and Condition number(s) to be varied.	
Variation of conditions	☐		

10	If this is an outline application or an approval of reserved matters, which details, if any do you wish to be considered as part of this application?	External appearance ☐ Siting ☐ Means of access ☑ Design ☐ Landscaping ☐	
11	What is the existing use of the land and/or building(s)? eg. residential, industrial, etc. If the site is vacant say so, and also state its previous use and when that ceased.		Former borrow pitwith woodland and overhead lines crossing site.
12	Does a public right of way cross or abut the site or the proposed access?	(Yes)/No	If yes, show existing route(s) and any proposed alternatives on the plans.
13	Are there any existing trees on the site?	(Yes)/No	If yes, please show positions, spread and species on the plans indicating which, if any, are intended to be felled.
14	State external materials to be used (if known).		n/a
15	How will the site be enclosed? Say whether walls, fences, or hedges and give height, colour and materials. If the site is divided into plots, say how each is to be enclosed.		To be agreed with Local Planning Authority and English Nature.
16	How will surface water be disposed of?		To exisitn g watercourse
17	How will foul sewage be disposed of? Please indicate line of existing or proposed on the plans.	To existing system (Yes)/No	If no, please give details : /
18	What are access arrangements? Give details of pedestrian and vehicular access.	As existing	From Peacock Lane
		As proposed	From Peacock Lane
19	Has provision been made for the disabled? (see note 8)		n/a

20 If this proposal involves residential development or the loss of residential units, complete the following table. (see note 5)

	Number of Dwellings			Number of Habitable Rooms		
	Proposed	To be retained	To be lost	Proposed	To be retained	To be lost
House	30	/	/			
Bungalow	dpha					
Flat/ Maisonette	(net)					
Other						

21	Does the proposal involve any non-residential building or use?	Yes/(No)	If yes, complete part 2 of the form
22	State the fee enclosed with this application.	£5,500	NB. A separate fees schedule must be completed and enclosed with this application form.

I hereby apply for permission in respect of the particulars described above and enclose the attached plans and drawings.

Signed : The Bell Cornwell Partnership on behalf of : Wykerley Copse Ltd Date : 30 September 2002

Before submitting the application check that it is complete, that all questions have been answered and that the site boundary and the new work are clearly edged in RED and all new work is clearly distinguished on the plans (see note 4). Every application must be accompanied by the appropriate certificate and fee.

BIOSCAN
ENVIRONMENTAL CONSULTANCY

Peterley House, Peterley Road, Cowley, Oxford OX4 2TZ
Tel: (01865) 777343 Fax: (01865) 777189 Email: bioscan@bioscan.demon.co.uk

Graham Bell
The Bell Cornwell Partnership
Oakview House
Station Road
Hook
Hampshire
BH12 5AY

RECEIVED ON
10 OCT 2002
READ BY
FILE No.
3712
Copy to Client

ENVIRONMENT DEPT.
14 OCT 2002

Our ref: BIZIP04/E1118/CGGBWK02

7th October 2002

Dear Graham

02/01041

Wykery Copse SSSI – development and mitigation

The purpose of this letter is to comment on ecological aspects of the schematic site layout of September 2002 (Edwards Irish Partnership 1532 Drawing 03) in relation to the Wykery Copse SSSI. My comments are also based on my earlier site visit, and initial contacts with Samantha King who is the English Nature officer responsible for the SSSI. For clarity I also repeat in brief the site description and advice that I gave earlier concerning the layout and other aspects of any development proposal.

The SSSI

The SSSI is much as described in the "Descriptions and Reasons for Notification". Lack of management is now evident however in that the flora contains a number of species associated with the more open or coppiced parts of woodland (including indicator species of both ancient woodlands and unimproved grassland) that are now sparse or not locatable on my single visit. Such species are unlikely to have become locally extinct – they regularly persist as small scattered individuals that are virtually undetectable for many years, only to reappear when the canopy is opened again. The effects of lack of management are particularly evident in the wetter areas associated with the stream corridor.

Despite this, the wood still supports at least 32 indicator species of ancient woodland and a further 8 that indicate unimproved grassland but are not also ancient woodland indicators – the latter are typically ride or glade species in woodland. The wood is only 3.15ha in size – this is a large number of indicators for a woodland that small. There are however no nationally scarce or rare plants we have recorded or that are mentioned in the SSSI citation – the "rarities" of the citation are locally scarce, such as wild service tree.

On the basis of the above, the SSSI designation appears appropriate in that it is a good and diverse example of ancient woodland types typical of the area, although it has no outstanding rare species associated with it. There is incidentally no evidence that the current low level of access by horses is causing significant damage, although it would preferably be removed entirely.

Potential impacts of development

The SSSI is notified for its flora and vegetation – although invertebrates and birds are mentioned in passing there are no specific records of rarities. In particular there are not likely to be any highly sensitive breeding bird species (e.g. hobby) this close to existing development. Against this background, the potential impacts likely to be of most concern to English Nature are as follows.

Isolation – removal of habitat links between the wood and other similar habitats.

At present such links are lacking and the copse is isolated from other woodland by roads and fields. Development of your site does not affect this condition and there appears to be little ability to re-create links. I note however that your proposal has no effect on the main potential link to the closest woodland (Tanners Copse to the south). This link is addressed in the Design Brief for the main Peacocks Farm area.

The effect of the proposed development on this aspect would be neutral.

Fragmentation: survival of species in a small patch is less likely than in a large patch, made worse by isolation.

Your development does not diminish the size of the wood. The ecological communities found in ancient woods can only be made larger on a very long time scale. There is little that can be done to improve the situation other than by long-term management of the link to the south (above) and by suitable establishment and management of a buffer zone, which you have done.

The effect of the proposed development on this aspect would be neutral.

Hydrological disruption: changes in water supply could make existing specialist vegetation non-viable. Wet habitats are obviously sensitive to drying out or pollution: dry habitats could equally be sensitive to increases in water supply.

None of your development drains towards the woodland, which has important wet components in the small stream corridor in its centre. This area is supplied from areas to the south within the main Peacock Farm area. Maintenance of hydrology therefore depends on the Design Brief for those developments being properly implemented.

Downstream of the wood, towards the A329, the layout suggests that some of your development would drain towards the small stream. At present this is of little ecological interest and I note that the layout allows for sufficient room for a stream corridor to be managed sympathetically for wildlife. The quality of water supply is likely to need control by adoption of a suitable drainage strategy that is likely to be required by the Environment Agency irrespective of my comments. Details of such matters would commonly be secured by condition.

The proposed development has no effect on water-dependent areas of the SSSI. There is potential for improvement in the stream corridor outside the SSSI.

People pressure and associated indirect impacts

Wykery Copse already lies near the built up edge of Bracknell but although it is in effect relatively remote from residential areas. There is no obvious evidence of pressure at the moment. With the main Peacock Farm development however, Wykery Copse would be in the immediate neighbourhood of approximately 1250 new homes. Commercial development will also be present nearby, but this does not tend to generate the same pressures. This would cause a qualitative change in its situation to a wood effectively in an urban environment where special measures would be required to manage pressure as far as possible.

Since the owners of Peacock Farm apparently have no control over Wykery Copse, the only power the developers of that area have to remedy the situation would be to realign Peacock Lane and fence and buffer zone plant within the present highway land. Any further mitigation measures would require the agreement of the owners of Wykery Copse.

Without such mitigation and design (below) there are likely to be significant impacts on the SSSI from people pressure arising from the main Peacock Farm development.

The proposed development would only produce a small proportionate increase in housing over the LP development, but would place it closer to the SSSI than any of the LP housing. It would be likely to materially increase the pressure.

From numerous examples in southern England, it is possible to limit the damage to an extent that can be offset by good management, with some residual impacts on breeding birds and wider impacts immediately near paths. The list of measures that have been adopted on my advice in the schematic site layout, or that would be implemented as part of a detailed layout, is as follows.

1) Development design where possible to place roads, not back gardens, nearest the wood. Houses should however look towards the wood. This is achieved over approximately two-thirds of the perimeter, in practice a high total given the normal constraints of layout.

2) Buffer zone with no development. The schematic layout shows a buffer zone of 20m, ample to prevent physical damage but also enough to provide a habitat mosaic as well as for example a circular footpath. In detail, passing from the wood towards the development, one should encounter the following.

    i. Existing tall and usually open woodland edge.

    ii. Post-and-rail fence to demarcate the edge and direct access towards formal entry points to paths. In practice such fences are better than "security" type fences – the latter become vandalised anyway.

iii. Planting, allowed to be reinforced by natural colonisation, of native scrub of local origin using species present in the wood, on a band scalloping between 5m and 10m width.

iv. Open parts of scallops sown with a wildflower mix from Flora Locale approved source(s) and managed on an annual cut.

v. 1m width of footpath verge regularly mown.

vi. 2m wide footpath surface.

vii. 1m width of footpath verge regularly mown.

viii. Remainder to be as in (iv) above.

ix. Circulation road or garden fence.

3) There would be managed access around the buffer zone and on paths through the wood, rather than attempts to have no access. This maximises the chance of public access by those who feel stewardship for the wood, and helps to limit vandalism.

4) Habitat management around paths for full interface through bramble and / or scrub that is difficult to penetrate as well as better for fauna and flora.

5) Arrangement of access to include "seclusion zones" without easy access. As above, passive measures such as thicket encouragement are better than fences.

6) Adequate provision for wardening and management – here there is a possibility of being linked to Country Park management.

The schematic layout also preserves the network of existing hedgerows and allows for a substantial south-facing bank on the bund at the northern boundary. The bank face should be managed as a mosaic of scrub, grassland and open ground.

The net result of the above would be to ensure that all necessary measures are put in place to minimise pressure on the SSSI that might arise from the proposed development as well as the much larger committed development nearby.

Ecological management issues

Wykery Copse is at present unmanaged and has been for many years. While promoting the limited diversity of specialist flora and fauna that require deep shade and the greater variety that require mature timber and dead wood, this is to the detriment of a wide range of species that need more open conditions in woodland. Such species include many of the "ancient woodland" ground flora species.

The situation is typical of much of Britain where formerly coppiced woods have been abandoned, especially smaller woods where the ride network is not extensive or broad enough to allow persistence of open ground species in such fragments.

As Wykery Copse is a SSSI, there is a power under the Countryside and Rights of Way Act (CRoW Act 2000) to force good management, under agreement with English Nature or otherwise if this fails. However in practice development could be associated with a much better level and security of management than is likely under such an agreement. Details would have to be agreed with English Nature, but the proposed development could secure excellent management into the future that would offset any results of pressure from the larger Peacock Farm development as well as from that in the proposals.

Yours sincerely



CWD Gibson, MA, DPhil, MIEEM, Director

BP
- 3 OCT 2002
Passed To: 02/01041

LAND ADJOINING WYKERY COPSE

PEACOCK LANE, BRACKNELL.

RESIDENTIAL DEVELOPMENT

WITH ASSOCIATED

INFRASTUCTURE

BRACKNELL FOREST BOROUGH COUNCIL
ENVIRONMENT DEPARTMENT
RECEIVED
- 3 OCT 2002
Passed To:

PROPOSED DEVELOPMENT AT
WYKERY COPSE, PEACOCK LANE
by
WYKERY COPSE LTD
for
Residential Development with associated roads, public open space, retention of woodland and new access to Peacock Lane.

Screening Opinion by BCPEC Limited
under
The Town and Country Planning
(Environmental Impact Assessment)(England and Wales) Regulations 1999,
[the Regulations].

G.C. Bell BA, M.Sc.(EnvAss) FRGS, DipTp, MRTPI
Director
BCP Environmental Consultants Limited
Oakview House
Station Road
Hook
Hampshire
RG27 9TP

BCPEC Job No: **E1019/3712**

Date: **September 2002**

Telephone: **01256 766673**
Fax: **01256 768490**
E-Mail: **gbell@bell-cornwell.co.uk**

Contents

Page

1. INTRODUCTION 1

2. PROCEDURE 2

3. EXPLANATION 3

4. CONCLUSION 5

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1 INTRODUCTION

1.1 Wykery Copse Ltd is submitting an outline planning application on land off Peacock Lane, Bracknell for:

"Residential Development with associated roads, public open space, retention of woodland and new access to Peacock Lane".

1.2 The company does not consider the project to form an 'EIA Development' for the reasons set out below.

1.3 This report is a screening opinion on behalf of the applicant to confirm that the project is not an 'EIA Development' requiring an EIA application and therefore an Evnironmental Statement is to be prepared.

1.4 Regard has been had to the 'Regulations'; the accompanying Circular advice (DETR 02/99) and the DTLR Guide to Procedures Booklet (November 2000; the 'blue book').

2 PROCEDURE

2.1 The first consideration is to establish whether or not the proposed development is EIA Development requiring that the application be considered as an EIA Application (defined under Regulation 2).

2.2 To assist with the establishment of the above decision, the Circular 02/99 provides a flow chart on page 7. Adopting that procedure, the application for the development proposed by Wykery Copse Ltd may be seen as follows:

i)	Is it a Schedule 1 Development?	NO	EIA not automatic
ii)	Is it listed[1] in Schedule 2?	NO	EIA **not** required but see item (iii)
iii)	Is it listed in Schedule 2?	YES	10(b) Urban Project
iv)	Is it **in** a sensitive area?	NO	But see 3.4 below
v)	Does it meet a relevant threshold and criteria of Schedule 2?	YES	Exceeds 0.5ha but less than 1,000 units
vi)	Is the development likely to have significant effects on the environment?	NO	EIA not required

2.3 The reason for considering the second question twice is that, either the scheme does not fall within the description of Schedule 2 developments or, if it does fall under the Schedule 10(b) description, nevertheless by not being likely to have significant effects on the environment, an EIA is not required and the application does not need to be accompanied by an Environmental Statement.

---

1 **The Circular at para 30 makes clear that the proposed development should only be considered to fall in Schedule 2 if it falls within a description in Schedule 2. The only possible description would be under 10(b) of Column 1 of Schedule 2 - an urban development project. However, the Circular at A19 refers to an example of a significant urbanising effect in a non-urbanised area where, for example, more than 1,000 dwellings were proposed.**

3 EXPLANATION

3.1 The proposed development is in line with Policy H1 of the adopted Bracknell Forest Borough Local Plan. The development comprises:

a) the erection of residential units on about 4.9ha (net) at a density of 30 dpha;
b) the creation of one new and one improved means of access to the residential area; and
c) the creation of a landscape and noise attenuation bund.

3.2 The proposal is located to the north of Peacock Lane within the Bracknell settlement boundary and north of the recently approved Peacock Farm urban extension.

3.3 The proposed development is not **likely** to have significant effects on the environment having regard to its nature, size or location. Therefore, the main tests against which a scheme is assessed, would lead towards there being no need for an EIA process.

3.4 Having regard to the location of the site and the areas considered to be 'sensitive' under Regulation 2, the scheme can be considered only to possibly affect one of the named sensitive areas, viz:

a) there is a local SSSI adjoining the developable part of the site, but;
b) the site is not subject to any Nature Conservation Orders;
c) the site is not within a National Park or AONB or The Broads;
d) the site is not within or near to a World Heritage Site or contains any Scheduled Ancient Monuments; and
e) the site is not within, adjoining or within 2kms of any European Site.

3.5 Having regard to the location, nature and size of the proposed development, Schedule 3 of the Regulations show the selection criteria for determining possible significant effects. These may be amalgamated into 3 basic considerations of a project, namely;

a) Is the scheme a major development of more than local importance?

b) Is the scheme proposed for an environmentally sensitive or vulnerable location?

c) Is the development one with unusually complex and potentially hazardous environmental effects?

3.6 The project when set against the selection criteria in Schedule 3 does not lead to the conclusion that the site is significant with regard to its characteristics, location or potential impacts. The size and location of the scheme relates wholly to the local circumstances of the Borough; the site is not within or near to an environmentally sensitive or vulnerable location (other than a local SSSI) nor would the scheme create unusually complex or potentially hazardous environmental effects. The Wykery Copse SSSI is protected by planning policies which allow for its protection and an approved development brief indicates what is expected to protect the SSSI from major adjacent development at Peacock Farm.

3.7 Moreover, using the one criteria/threshold in Schedule 2 [10 (b)] referring to a residential project (see Paragraph A19 of Circular 02/99), the scheme for about 145 units is substantially less than 1,000 dwellings i.e. it is only 14.5% of the proposed threshold. Moreover, the land has been previously disturbed as a borrow pit and is part crossed by HV lines.

3.8 Preliminary surveys have been carried out by the applicant to consider the scheme in relation to:-

a) landscape;

b) ecology;

c) highways and transportation; and

d) road noise.

None of the surveys' conclusions suggest that there would be significant impact on the local area.

4 CONCLUSION

4.1 One conclusion is that the type of scheme being proposed is not referred to in the Schedule 2 developments and therefore is not EIA development requiring an Environmental Statement to be carried out.

4.2 Taking the alternative approach that the scheme falls within Schedule 2, [10 (b)] and exceeds the 0.5ha threshold, it may then be seen that the fundamental test of whether the development is **likely** to have a significant effect on the environment by virtue of its nature, size or location, also results in the development not requiring an Environmental Statement to be carried out.

4.3 This conclusion is enhanced when set against the fundamental test set out in Para 44 of Circular 02/99, viz:

"…. whether *that* particular type of development and its specific impacts are likely, in *that* particular location, to result in significant effects on the environment. **It follows that the thresholds should only be used in conjunction with the general guidance and particularly that relating to environmentally sensitive locations.**"

4.4 The site is not within, adjacent to or within a 2 km zone of any of the environmentally sensitive areas other than a local SSSI; it would not have unusual effects upon the environment and is purely local in its impact.

4.5 Accordingly, it is concluded that having regard to the 'Regulations', the nature of the development proposed is **not** EIA development and therefore the outline planning application is **not** an 'EIA application'. Therefore, an Environmental Statement does **not** need to be prepared and considered before making a planning decision.

REFERENCES:

1. SI 1999 No. 293 - The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, Stationery Office, London, 1999.
2. DETR Circular 02/99 - Environmental Impact Assessment, Stationery Office, London, 1999.
3. Environmental Impact Assessment, A Guide to Procedures, DTLR, Thomas Telford, London, 2000.
4. Outline Planning Application forms, plans and covering letter for Wykery Copse Ltd., [the project & the applicant].

Wykery Copse, Bracknell

Proposed Residential Development

Transport Assessment
Scoping Statement

September 2002

Draft

Mouchel Consulting Limited
West Hall, Parvis Road
West Byfleet
Surrey
KT14 6EZ

Mouchel

DOCUMENT CONTROL SHEET

PROJECT: Wykery Copse, Bracknell – proposed residential development

Transport Assessment - Scoping Statement

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1. Introduction

1.1 This Scoping Statement forms the basis for the preparation of a Transport Assessment in connection with a proposed planning application for residential development on land to the west, north and east of Wykery Copse, off Peacock Lane in Bracknell.

1.2 This Scoping Statement has been set out generally following the pattern suggested by the Institution of Highways and Transportation in paragraph 3.1.12 of their "Guidelines for Traffic Impact Assessment".

2. Size and description of the proposals

2.1 The site is located on land west of the Southern Industrial Area in Bracknell. It is bounded by Longshot Lane, a public footpath, to the east; Peacock Lane to the south; Beehive Road to the west; and, A329, Berkshire Way, to the north (see Figure 1).

2.2 The proposed development comprises around 150 dwellings located on land lying to the west, north and east of Wykery Copse, a Site of Special Scientific Interest. Access is proposed off Peacock Lane comprising a direct access at the east end of the site and an access via Beehive Road at the west end of the site.

3. Description of existing land uses

3.1 Current land uses are for agricultural purposes. The land has two high voltage overhead cables passing east-west through the site. At some stage in the past, the site has been used as a borrow-pit and land levels are reduced across the northern half of the site

4. Relocation of an existing use

4.1 There is no existing use to be relocated. The current agricultural use will cease.

5. Requirement for traffic surveys

5.1 Current traffic flows on Peacock Lane and A329 Berkshire Way have been obtained from Bracknell Forest BC. Additional traffic flow information has been obtained on the surrounding local highway network from the planning application file relating to the approved Peacock Farm development.

6. Potential modal split

6.1 The site is located adjacent to the Southern Industrial area, which has bus services to/from Bracknell town centre and the railway station, and to/from Reading. Nearest bus stops are at the north end of Lovelace Road, around 200 metres from the proposed east access. It is noted that bus services are planned be diverted through the Peacock Farm development emerging onto

Peacock Lane opposite Wykery Copse in due course. This will give the opportunity of a bus stop closer to the development.

6.2 Initial pedestrian links will be to the existing footway system at the Southern Industrial Area and to the existing footbridge over A329, Berkshire Way. Wider pedestrian/cycle links will be enabled in due course as a result of the Peacock Farm development.

7. Potential Traffic Generation from the site

7.1 The TRICS trip generation database gives vehicular trip rates for various land uses. Generally similarly located sites will be used as a basis for establishing the potential traffic generation for the site.

7.2 An initial assessment has been made, based on a notional 150 dwellings and using a similar traffic distribution to that used for the Peacock Farm development proposals. This suggests that additional peak hour traffic on Peacock Lane will be less than 5% of current flows and less still as a percentage of projected flows with Peacock Farm development traffic.

9. Critical time period of assessment

9.1 Based on the traffic flow information received for Peacock Lane it is anticipated that the critical hours for assessment will be the morning (08:00 to 09:00) and evening (17:00 to 18:00) weekday peak periods.

10. Proposed Highway access

10.1 Two accesses are proposed as follows:

- off Beehive Road on the west side of the site, with traffic joining Peacock Lane at the Beehive Road junction; and,
- directly off Peacock Lane, on the site frontage to the east of Wykery Copse.

An internal road connection is proposed through the site between the two accesses.

11. Area of impact of the proposal

11.1 In terms of traffic impact, it is anticipated that assessment will not need to extend beyond the immediate junctions with Peacock Lane. The wider local area will be considered in terms of the provision of appropriate links for pedestrians/cyclists and routes to bus services, including taking account of the Peacock Farm proposals.

12. Assessment Year and Traffic Growth

12.1 The assessment year will be 2005 in line with the currently anticipated completion date for the development.

12.2 Any necessary allowance for base traffic growth to assessment year will be based on appropriate National Road Traffic Forecast data unless otherwise advised by Bracknell Forest BC.

13. Level of car and cycle parking provision

13.1 Parking and cycle parking provision will be in accordance with Bracknell Forest BC standards.

14. Sustainability

14.1 A Travel Plan is not appropriate for a residential development, but the Transport Assessment will consider sustainable transport issues.

15. Special Circumstances

15.1 It is proposed that the transport aspects of the development are considered in the light of both the current local highway/transport situation, and any approved Peacock Farm proposals.

Mouchel

LAND AT WYKERY COPSE
PEACOCK LANE, BRACKNELL

PROPOSED RESIDENTIAL DEVELOPMENT

TRANSPORT ASSESSMENT

November 2002

BRACKNELL FOREST BOROUGH COUNCIL
ENVIRONMENT DEPARTMENT
RECEIVED
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Passed To:

Mouchel Consulting Limited
West Hall
Parvis Road
West Byfleet
Surrey
KT14 6EZ

Telephone: 01932 337000
Facsimile: 01932 353362

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EXECUTIVE SUMMARY

1. The proposal comprises development at 30 dwellings per hectare on 4.9 hectares (net) of land around Wykery Copse and between Peacock Lane and A329, Berkshire Way, Bracknell. A 4.5 metre earth bund is proposed along the A329 frontage to mitigate against traffic noise from that road.

2. Two vehicular accesses are proposed. One (the east access) directly from Peacock Lane to the east of Wykery Copse, and the other (the west access) off Beehive Road - with traffic joining Peacock Lane at the Beehive Road junction.

3. A footway link is proposed along the north side of Peacock Lane from the east access allowing safe access to the present footway network on the Southern Industrial Area and to the local bus stops on Lovelace Road. A footway link is also proposed along the east side of Beehive Road to connect the west access to the footbridge over the A329 and railway line to the north of the site.

4. Cyclists will be able to access the Southern Industrial Area from the east access via Peacock Lane and hence onto Bracknell's main cycle network. Cyclists will also be able to use the north end of the Beehive Road cul-de-sac to reach the footbridge.

5. The Peacock Farm development will give opportunities for wider pedestrian and cycle links to the south and west of the site.

6. The future traffic generation from the site has been assessed using data for housing sites from the TRICS traffic generation database. During the morning and evening peak hours the two-way trip generation is assessed to be 77 and 82 vehicles respectively.

7. In assessing the impact of the development related traffic on the local highway network, **two scenarios** have been tested as follows:

    1. The Wykery Copse development at opening year in 2005 in the absence of the Peacock Farm development and the associated new link road from Peacock Lane to A329, Berkshire Way.

    2. The completion of the Wykery Copse and Peacock Farm developments, including the new link road to A329, Berkshire Way, at the design year of 2010 assumed in the Transport Assessment for the Peacock Farm development.

8. For Scenario 1 above, the distribution of the development related traffic is assumed to be 15% to Peacock Lane (west) and 85% to the Peacock Lane (east). The operational performance of the east and west accesses has been assessed for the morning and evening peak hours in 2005 using the standard PICADY software for priority

junctions. The analyses indicate that both junctions will operate during both hours with significant spare capacity.

9. For Scenario 2 above, the distribution of the development related traffic is assumed to be 48% to Peacock Lane (west)/new link to A329 and 52% to the Peacock Lane (east), as assumed for the Peacock Farm development. development flows. The Transport assessment for the Peacock Farm development indicates an increase in peak hour traffic on Peacock Lane at the 2010 'design year' of around 35% compared to the assessed 2001 base situation. It is assessed that the addition of the Wykery Copse development flows at 2010 would increase average peak hour flows on Peacock Lane by 2.2% to the west of the site and by 2.3% to the east of the site.

10. The operational performance of the east and west accesses has been assessed for the morning and evening peak hours in 2010 using the standard PICADY software for priority junctions. The analyses again indicate that both junctions will operate during both hours with significant spare capacity.

11. Overall, it is concluded that the assessed additional development-related traffic flows will have no material impact on traffic conditions, or road safety, on the local highway network.

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F Scenario 2 – PICADY output for east and west access junctions.

1 INTRODUCTION

1.1 Mouchel Consulting Limited was appointed in June 2002 to undertake a Transport Assessment (TA) to support an outline planning application for residential development on land to the west, north and east of Wykery Copse, off Peacock Lane in Bracknell, Berkshire.

1.2 A Scoping Statement for the Transport Assessment was submitted to Bracknell Forest Borough Council for comment in September 2002 and a copy of the Scoping Statement is contained in **Appendix A**.

1.3 This report sets out the resultant Transport Assessment and is preceded by an Executive Summary. Section 2 describes the site; the local highway network, including traffic flows and personal-injury accident records; local cycling and pedestrian facilities; and, public transport services. Section 3 briefly reviews the planning context and transport policy and Section 4 describes the outline development proposals. Section 5 sets out the generation of vehicle trips associated with the potential development, whilst Section 6 assesses the local traffic impact both with and without the adjacent Peacock Farm development. Section 7 contains the conclusions.

2. EXISTING SITUATION

The Site

2.1 The location of the site and its relationship to the local highway network is indicated in **Figure 2.1**. The site is located between Peacock Lane and A329, Berkshire Way, immediately to the west of the Southern Industrial Area on the western edge of Bracknell. It is bounded by Longshot Lane (a public footpath) to the east; Peacock Lane to the south; Beehive Road to the west; and A329, Berkshire Way, to the north.

2.2 The site is former agricultural land, but has at some stage in the past been used as a 'borrow-pit' and land levels are reduced across the northern half of the site. There are two high voltage overhead cables passing east-west across the site. Current access to the site is solely via a gated access from Beehive Road. A detailed plan of the site is contained in **Figure 2.2**.

2.3 The Wykery Copse Site of Special Scientific Interest (SSSI) is located at the south side of the site and occupies the central section of the Peacock Lane frontage.

Local Highway Network

2.4 The highway network in the vicinity of the site is indicated in **Figure 2.1**. A329, Berkshire Way, is a dual-carriageway road linking Bracknell to the Coppid Beech A329/A329(M)/B3408 grade separated junction to the west of the site. The A329 continues west to Wokingham town centre and then to Reading. The A329(M) links to M4 Junction 10 and then Reading. Berkshire Way also forms part of the link route between M3 Junction 3 and M4 Junction 10. It therefore carries relatively high traffic volumes as discussed later in this section

2.5 Peacock Lane generally takes the form of a rural lane, providing strictly local access from Bracknell to the Wokingham and Crowthorne areas to the west and south-west of the site. To the east of the site Peacock Lane links to the Southern Industrial Area highway network at the western of the Ellesfield Avenue roundabouts. Doncastle Road provides a direct link from this roundabout to A329, Berkshire Way. Ellesfield Avenue links directly to A3095, Mill Lane, which connects Bracknell with Crowthorne and Sandhurst to the south.

2.6 Except for the final 100 metre approach to the Ellesfield Road roundabout, Peacock Lane has no footways, is unlit and is subject only to the national speed limit. The carriageway width is around 7.5 metres at the east end of the site, reducing to around 6 metres long the Wykery Copse frontage and then widening to around 8 metres on the approach to the Beehive Road junction.

2.7 Beehive Road joins the north side of Peacock Lane at a simple priority junction. Historically, the road linked Peacock Lane north to the B3408 (formerly A329) Bracknell

to Wokingham Road. Subsequent construction of the A329, Berkshire Way, resulted in the severance of Beehive Road, and it is now a cul-de-sac off Peacock Lane giving vehicular access only to the adjacent farm property. Pedestrian links along the former route are maintained via a footbridge over Berkshire Way. Beehive Road has no footways and is unlit. It has a carriageway width of around 6 metres, which widens on the approach to Peacock Lane.

Traffic Flows

2.8 Surveys were undertaken of the turning manoeuvres at the Peacock Lane/Ellesfield Road roundabout for the morning and evening peak periods in October 2001. The resultant traffic flow information is contained in **Appendix B** and is summarised diagrammatically on **Figure 2.3**.

2.9 The surveys indicate Peacock Lane flows past the site as follows:

- During the morning peak hour (08:00 to 09:00)
  - eastbound flows 1070 vehicles
  - westbound flows 334 vehicles
  - total two-way flow 1404 vehicles

- During the evening peak hour (17:00 to 18:00)
  - eastbound flows 315 vehicles
  - westbound flows 830 vehicles
  - total two-way flow 1145 vehicles

2.10 Additional 2002 whole week traffic flow information was also obtained from Bracknell Forest Borough Council for both A329, Berkshire Way, and Peacock Lane adjacent to the site. This information is summarised in **Appendix C** and was used to inform the noise assessment for the site. That assessment is contained in a separate report. Overall the surveys indicate that average 24-hour weekday flows are around 9000 vehicles/day on Peacock Lane and 52,500 vehicles/day on Berkshire Way.

Public Transport

2.11 The site is located adjacent to the Southern Industrial Area, which is served by bus routes to/from Bracknell town centre, railway station, residential nieghbourhoods; and, to/from Slough and Reading. Nearest bus stops are at the north end of Lovelace Road, about 200 metres from the proposed east access to the site. Bus services to the town centre are 4 per hour on weekdays and 2 per hour on Sundays. A plan of the bus routes in the Bracknell area is appended as **Figure 2.4**, and details of the bus routes currently available are indicated in **Table 2.1** below:

Service No.	Route	Daytime Service	Evening Service	Sunday Service
151 (circular)	Town Centre - Easthampstead - Great Hollands - Southern Industrial Area - Wildridings – Town Centre	½ hourly	Until 19:51	hourly
152 (circular)	Town Centre - Wildridings - Southern Industrial Area - Great Hollands - Easthampstead - Town Centre	½ hourly	-	hourly
191	Slough - Ascot - Bracknell - Wokingham - Reading	hourly each way	-	-

Table 2.1: Current bus services

Pedestrian and Cycle Facilities

Pedestrians

2.12 There are no current footways on Peacock lane adjacent to the site. All the roads on the Southern Industrial Area have footways on both sides, and there are footways along the east end of Peacock Lane that terminate within 100 metres of the Ellesfield Road roundabout, the limit of current development.

2.13 Beehive Road itself provides a pedestrian route from the site to the footbridge over Berkshire Way and the railway, giving access to the major sports/leisure complex and the employment areas at Amen Corner.

2.14 Longshot Lane, a public footpath, runs along the eastern boundary of the site north from Peacock Lane. It forms part of a footpath link via the Southern Industrial to the Western Industrial Area, giving access on towards the town centre.

Cyclists

2.15 Bracknell has an extensive network of cycle routes between the town centre and neighbourhood and industrial areas. This cycle network connects with the Southern Industrial Area at the eastern end of Ellesfield Avenue, with segregated cycle paths to/from the town centre and to/from the residential areas to the east; and, at the southern end of Lovelace Road with a segregated cycle path to the residential areas to the south. However, there are no cycle facilities in the immediate vicinity of the site. An extract from the Borough's cycle network plan is contained in **Figure 2.5**.

Personal-Injury Accidents

2.16 Details of all personal-injury accidents that have been recorded along Peacock Lane from Ellesfield Avenue to about 300 metres west of Beehive Road over the three years from

August 1999 to July 2002 inclusive have been inspected. During this period there were a total of 2 accidents (both slight) on Peacock Lane, plus one (serious) on the Ellesfield Road roundabout. The locations of the accidents are indicated on **Figure 2.6**.

2.17 The serious accident involved a lone motor cyclist during a late evening in April 2001, with no other vehicles. The only accident along the site frontage involved a collision between 2 cars travelling in opposite directions along Peacock Lane during the early evening in mid-December 2000. The third accident, to the west of Beehive Road, involved a lone motor scooter in early morning icy conditions in November 2001.

2.18 There is no evidence of any significant accident pattern on Peacock Lane in the vicinity of the site.

3. PLANNING CONTEXT AND TRANSPORT POLICY

General

3.1 There are a number of documents that contain planning policies relevant to transport matters. These range from Planning Policy Guidance Notes, setting out Government policies; through Regional Planning Guidance and County Council Structure Plan; to the more detailed Borough Council Local Plan, the highway authority's Local Transport Plan and other supplementary documents. This Section briefly reviews the current policy documents relevant to the site.

National, Regional and County Planning Documents

Planning Policy Guidance Note – PPG 13 Transport

3.2 PPG 13 (Transport), published in March 2001, identifies Central Government's objectives to reduce dependency on the use of the private car, and to integrate planning and transport at the national, strategic and local level to:

- Promote more sustainable transport choices for both people and for moving freight;
- Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling; and
- Reduce the need to travel, especially by car.

3.3 The planning guidance identifies the measures required to encourage the use of alternative modes such as public transport, cycling and walking; to reduce traffic flows and to control speeds in environmentally sensitive areas; and, to influence the location of different types of development relative to transport provision. Weight is given to the need for comprehensive Transport Assessments for development, together with the need to change from minimum to maximum parking standards.

Regional Planning Guidance, RPG9

3.4 Regional Planning Guidance for the South East (RPG9), published in March 2001, is provided by the Secretary of State for Transport, Local Government and the Regions (DTLR). The purpose of the Guidance is to establish a regional framework for the preparation of local authority development plans and to provide the spatial framework for other strategies and programmes. The current document supersedes the 1994 version and covers the period up to 2016, setting the framework for the longer term.

'A New Deal for Transport: Better for Everyone'

3.5 The Transport White Paper, published in July 1998, sets out the framework within which the Governments' transport policies will be taken forward. A series of supporting documents provide more detailed policy information on specific topics.

Berkshire Structure Plan

3.6 The Berkshire Structure Plan (BSP) 1991 - 2006 sets out strategic planning policies for Berkshire within the framework of the regional planning guidance. The guiding approach, which underpins national advice, is the need to enable development to take place whilst minimising its effect on the environment. Within this context, the local plan translates the principles of sustainability into practice at the local level by seeking to draw a balance between these two elements.

Local Planning and Transport Documents

Bracknell Forest Borough Local Plan

3.7 The Bracknell Forest Borough Local Plan (BFBLP) was formally adopted in January 2002 and sets out the Council's strategy for land use planning to 31 March 2006.

3.8 The strategy for the BFBLP comprises two parts relating to the policy and locational contexts of the Plan:

(i) The BFBLP seeks to control future development in the Borough, in accordance with strategic guidelines, in order to protect and enhance the environment, such that the needs of the Borough's residents are met without jeopardising the ability of future residents to meet their own needs.

(ii) The BFBLP seeks to concentrate development in existing settlements and neighbourhoods. Otherwise the Local Plan identifies land for development which is or will be well related to public transport routes and facilities, is readily accessible by foot and cycle, will reduce the need for travel, especially by private car, and will have the least damaging effect on the environment.

3.9 Chapter 6 'Movement' contains the following objectives:

(i) to realise the aims of sustainable development by reducing the need to travel through the integration of transport and land use planning;
(ii) to reduce the reliance on the private motor car by providing people with the choice of using viable and attractive alternatives;
(iii) to encourage an increase in safe cycle and pedestrian movement;
(iv) to facilitate and encourage greater use of public transport; and,
(v) to provide an integrated transport network.

3.10 Relevant policies include:

- Policy M4 – Highway measures expected in association with new development;
- Policy M6 – Cycling and walking;
- Policy M7 – Access for people with disabilities;

- Policy M8 – Public Transport; and,
- Policy M9 – Vehicle and cycle parking.

3.11 Chapter 9 'Development proposals' includes Proposal PH1.2 for new housing development at Peacock Farm, west of Bracknell Town. This covers an area of about 116 hectares to be developed for mixed purposes including:

- up to approximately 1250 dwellings;
- public open space;
- neighbourhood centre, including ancillary educational, youth and community facilities to support the residential development;
- land allocated for a Park and Ride site, to be used in association with the rail station which is being sought in connection with wider development proposals;
- business park: and,
- new access to A329, Berkshire Way, and improved Peacock Lane.

Bracknell Forest Borough Local Transport Plan 2001 – 2006

3.12 The Bracknell Forest Borough Local Transport Plan (LTP) 2001-2006, sets out the following core transport objectives:

- To protect and enhance the built and natural environment;
- To improve safety for all travellers;
- To contribute to an efficient economy, and to support sustainable economic growth in appropriate locations;
- To promote accessibility to everyday facilities for all, especially those without a car;
- To promote the integration of all forms of transport and land use planning, leading to a better, more efficient transport system.

3.13 The LTP contains a number of targets including road casualty reduction, road traffic reduction, improved conditions for pedestrians, increased cycle use and bus travel improvements. It also contains programmes for improvements to transport. No specific improvements are identified for the transport network in the vicinity of the site.

3.14 The LTP lists significant sites identified in the BFBLP as being suitable to locate new development, including;

(i) Peacock Farm. It notes that the proposed development would provide 1250 new houses and a number of support facilities located adjacent to existing and proposed employment areas. It also notes that pedestrian and cycle links to neighbouring employment and residential areas are to be incorporated; a bus link into the neighbouring residential area is proposed to facilitate access and journey time; and, a railway station is being sought on the Reading to Waterloo line, possibly with related 'Park and Ride'.

(ii) Mixed development at Amen Corner between the railway line and the B3408, to the north of the Peacock Farm development. It is anticipated that this could comprise educational, recreational, leisure, residential and employment uses. Improvements to the existing road network are anticipated together with the development of a local transport hub, involving the new railway station.

Proposed Peacock Farm Development

3.15 The Peacock Farm Planning and Design Brief was issued in June 2001. An outline planning application for the development was considered at the Borough's Planning and Highways Committee in July 2002 and was approved subject to completion of certain legal agreements and a referral to GOSE. The application was supported by a Transport Assessment that assesses the impact of the development of up to 1500 dwellings on the site. The Transport Assessment indicates an increase in traffic on Peacock Lane of around 35% during the weekday peak hours in the design year of 2010 compared to the base 2001 situation.

3.16 Reference to the report to the Committee indicates that transport requirements of the scheme in the vicinity of the proposed Wykery Copse development include:

- the widening of Peacock Lane;
- the provision of a cycleway and a footway on the south side of Peacock Lane;
- a controlled pedestrian crossing adjacent to the junction of Peacock Lane and Beehive Road (south);
- a footway along Beehive Road (south) between Beehive Road and the footbridge over Berkshire Way; and,
- a new link road between Peacock Lane and A329, Berkshire Way, to the west of Beehive Road.

4. DEVELOPMENT PROPOSALS

The Development

4.1 The proposed development comprises 30 dwellings per hectare on 4.9 hectares (net) of land to the west, north and east of Wykery Copse, on the north side of Peacock Lane. A copy of the schematic site layout drawing included with the planning application is appended as **Figure 4.1**.

4.2 The indicative internal access road arrangement shown on **Figure 4.1** comprises two main cul-de-sacs; each served by its own access from the local highway network, connected by an emergency vehicle/pedestrian/cycle link. The final internal arrangement will be the subject of discussion.

4.3 A 4.5 metre high landscaped earth bund is proposed along the whole of the site frontage with A329, Berkshire Way, to mitigate against traffic noise from that road. It is also proposed that the existing high voltage overhead cables be placed underground along a corridor on the south side of the proposed earth bund.

Access Arrangements

4.4 As also indicated on the planning application drawing, it is proposed to provide two vehicular accesses to the site as follows:

- off Beehive Road on the west side of the site, with traffic joining Peacock Lane at the Beehive Road junction; and,
- directly off Peacock Lane on the site frontage to the east of Wykery Copse.

4.5 Beehive Road currently gives vehicular access to only one property to the north of the proposed site access, together with pedestrian and cycle access to the footbridge over Berkshire Way. Current traffic is therefore negligible. It is proposed, in conjunction with the new site access, that future vehicle priority be direct from Beehive Road into the site, with the short northern end of Beehive Road joining at a simple priority junction.

4.6 The direct access from Peacock lane is indicated as a simple priority junction.

4.7 The general arrangement of the two accesses connecting to the present layout of Peacock Lane is contained on **Figure 4.2**. Details of the two accesses are shown on **Figure 4.3** (east access) and **Figure 4.4** (west access). It is appreciated that there may need to be discussion on the final detail of the accesses in the light of any agreed proposals for the improvement of Peacock Lane associated with the Peacock Farm development proposals.

4.8 It is proposed that Peacock Lane be widened to 7.3 metre width in the vicinity of the proposed east access. The widening is proposed from the approach to the Ellesfield

Avenue roundabout, where the width is already at least 7.3 metres, to a point west of the proposed access. Peacock Lane is already wider than 7.3 metres in the vicinity of Beehive Road (the west access).

4.9 At present a speed limit of 30 mph applies at the eastern end of Peacock Lane only on its approach to the Ellesfield Avenue roundabout. It is proposed that the 30 mph speed limit be extended west to cover Peacock Lane from around 90 to 100 metres west of Beehive Road to the Southern Industrial Area.

4.10 Sight lines of 4.5metres by 90 metres are appropriate at the accesses (with a 30 mph speed limit on the Peacock Lane) and such sight lines are indicated on **Figure 4.2** at both the east access and at Beehive Road junctions with Peacock Lane.

Pedestrians and Cyclists

4.11 There are no current footways along Peacock lane or Beehive Road in the immediate vicinity of the site. A footway link is proposed along the north side of Peacock Lane from the east access connecting with the present footway network on the Southern Industrial Estate (see **Figure 4.3**). This will allow safe pedestrian access to the industrial area and local bus stops, and beyond to the town centre via the existing trunk footpath system. Cyclists will be able to access the Southern Industrial Area from the east access via Peacock Lane and hence onto Bracknell's main cycle network via the Ellesfield Avenue and Lovelace Road links.

4.12 A footway link is also proposed along the east side of Beehive Road to connect the west access to the present footpath route to the pedestrian bridge over the A329, Berkshire Way, and railway line to the north of the site (see **Figure 4.4**). This route gives access to the major sports/leisure complex and the employment areas at Amen Corner. Cyclists will be able to use the relatively traffic-free north end of the Beehive Road cul-de-sac to reach the footbridge.

4.13 The Peacock Farm development will give opportunities for wider pedestrian and cycle links to the south and west of the site. It is proposed that additional pedestrian/cycle links be considered from the Wykery Copse site in due course, to accord with the wider Peacock Farm proposals as they develop. It is anticipated that this will include a link from the west access to proposed controlled pedestrian crossing over Peacock Lane near to Beehive Road. In addition, a further crossing facility over Peacock Lane may be feasible by means of a central pedestrian refuge situated between the Wykery Copse east access and the eastern of the Peacock Farm accesses. This would provide a route from the site to any new bus stops serving the proposed re-routed bus services through the Peacock Farm development.

Parking

4.14 Parking within the site for both cars and cycles will be provided in accordance with the Council's standards.

5 TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

Trip Generation

5.1 The weekday hourly trip rates for residential developments on the TRICS traffic generation database have been generated for all developments for mixed private housing in the south-east region with surveys on weekdays.

5.2 The detailed printouts are contained in **Appendix D.** The indicated trip rates per dwelling are as follows:

- AM peak hour: Arrivals - 0.09 / Departures - 0.42 / Total – 0.51
- PM peak hour: Arrivals - 0.39 / Departures - 0.16 / Total – 0.55
- Daily total trip rate 5.79

5.3 Examination of the Transport Assessment (WSP Development Limited – February 2002) produced in support of the planning application for the proposed Peacock Farm development indicates that the vehicle trip rates used per dwelling were as follows:

- AM peak hour - 0.51
- PM peak hour - 0.53

5.4 The marginally higher trip rates obtained from the TRICS database are used in this assessment. The resultant hourly vehicle arrival and departures trips and total trips are set out in **Table 5.1** below.

Hour Commencing	Trips based on a notional 150 dwellings		
	Arrivals	Departures	Total trips
00:00 to 06:00	9	21	30
07:00	10	52	62
08:00	**14**	**63**	**77**
09:00	16	27	43
10:00	15	20	35
11:00	18	18	36
12:00	24	20	44
13:00	21	22	43
14:00	21	20	41
15:00	30	24	54
16:00	39	22	61
17:00	**58**	**24**	**82**
18:00	51	30	81
19:00	38	28	66
20:00	24	18	42
21:00	20	9	29
22:00	14	8	22
23:00	12	6	18
Daily total	*434*	*432*	*866*

Table 5.1: Generated hourly trips for a weekday

Trip Distribution and Assignment

5.5 Two potential trip distribution models have been assumed.

5.6 The first assumes the completion of the new direct link from Peacock Lane to A329, Berkshire Way, some distance to the west of Beehive Road, that is associated with the approved Peacock Farm development. It is based on the trip distribution used for the Transport Assessment for the Peacock Farm development. That distribution is broadly:

- 10% to/from Peacock Lane (Wokingham and Crowthorne directions);
- 38% to/from A329, Berkshire Way West (Reading/M4direction) via new link;
- 27% to/from A329, Berkshire Way East (Bracknell/M3 direction) via Doncastle Road;
- 25% to from A3095, Mill Lane via Ellesfield Avenue.

The local assignment of generated traffic on this basis is indicated on **Figure 5.1**.

5.7 The second is based on the current highway network without the new link to A329, Berkshire Way. It assumes that the 38% allocated in the distribution above to the new link is split 5% to Peacock Lane (West) and the remainder to the Doncastle Road link to A329, Berkshire Way. The resultant distribution is:

- 15% to/from Peacock Lane (Wokingham and Crowthorne directions);
- 33% to/from A329, Berkshire Way West (Reading/M4direction) via Doncastle Road;
- 27% to/from A329, Berkshire Way East (Bracknell/M3 direction) via Doncastle Road;
- 25% to from A3095, Mill Lane via Ellesfield Avenue.

The local assignment of generated traffic on this basis is indicated on **Figure 5.2**.

6. LOCAL TRAFFIC IMPACT

6.1 Two scenarios are considered in this assessment:

1. The Wykery Copse development at opening year in 2005 in the absence of the Peacock Farm development and the associated new link road from Peacock Lane to A329, Berkshire Way (assuming the development-related trip assignment indicated on Figure 5.2).

2. The completion of the Wykery Copse and Peacock Farm developments, including the new link road to A329, Berkshire Way, at the design year of 2010 assumed in the Transport Assessment for the Peacock Farm development (assuming the development-related trip assignment indicated on Figure 5.1).

Scenario 1 Wykery Copse Development (2005)

Highway flows – Opening Year 2005

6.2 The existing (November 2001) morning and evening peak hour flows on Peacock Lane and at the Ellesfield Road roundabout junction are shown on **Figure 6.1**. National Road Traffic Forecasts (NRTF) of growth have been used to establish 2005 base flows on the highway network. For the period 2001 to 2005, the central growth rate is 1.69% per annum. The assessed 2005 morning and evening peak hour base traffic flows are shown on **Figure 6.2.**

6.3 The total traffic flows for the 2005 morning and evening peak hours, i.e. the base traffic flows (Figure 6.2) plus the development-related traffic flows (Figure 5.2), are shown on **Figure 6.3**.

6.4 The development is assessed to increase average peak hour flows on Peacock Lane in the vicinity of the site as follows:

- Peacock Lane to the west of the site - 0.8%
- Peacock Lane to the east of the site - 5.0%

6.5 These increases are well within the 10% increase suggested by the Institution of Highways and Transportation in 'Guidelines for Traffic Impact Assessments' as the level requiring further traffic assessment, and such additional flows should have no significant impact on traffic conditions or road safety. Also, this scenario assumes no development at Peacock Farm and no new associated link to A329, Berkshire Way. If either or both these occur by 2005, the impact on Peacock Lane would be even less.

East Access (direct onto Peacock Lane)

6.6 The operational performance of the proposed east access junction with Peacock Lane, as shown on **Figure 4.2,** has been assessed using the standard PICADY 4.1 software for priority junctions. Junction assessments using PICADY make reference to the ratio of flow to capacity (RFC) on approaches. This provides a basis for judging the performance of the junction, and it is generally accepted that a junction will operate satisfactorily, with the ability to cope with fluctuations in flows, if the RFC value does not exceed 0.85.

6.7 A summary of the results of the assessment of the junction are contained **in Tables 6.1 and 6.2** below, whilst the printouts of the PICADY input/output are contained in **Appendix E.**

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
East access to site	0.066	0.1
Peacock Lane (east)	0.012	0

Table 6.1: Operational performance at the East Access/Peacock Lane junction Weekday 08:00 to 09:00 (2005)

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
East access to site	0.014	0
Peacock Lane (west)	0.064	0.1

Table 6.3: Operational performance at the East Access/Peacock lane junction Weekday 17:00 to 18:00 (2005)

6.8 The analyses indicate that the junction will operate during both the morning and evening peak hours with significant spare capacity.

West Access (via Beehive Road/Peacock Lane junction)

6.9 The west access is proposed directly from Beehive Road. The operational performance of the Beehive Road junction with Peacock Lane, as shown on **Figure 4.3,** has also been assessed using the standard PICADY 4.1 software for priority junctions.

6.10 A summary of the results of the assessment of the junction are contained in **Tables 6.3 and 6.4** below, whilst the printouts of the PICADY input/output are contained in **Appendix E.**

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
Beehive Road	0.124	0.1
Peacock Lane (east)	0.036	0

Table 6.3: Operational performance at the Beehive Road/Peacock Lane junction Weekday 08:00 to 09:00 (2005)

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
Beehive Road	0.029	0
Peacock Lane (west)	0.135	0.3

Table 6.4: Operational performance at the Beehive Road/Peacock lane junction Weekday 17:00 to 18:00 (2005)

6.11 The analyses indicate that the junction will operate during both the morning and evening peak hours with significant spare capacity.

Scenario 2 Wykery Copse and Peacock Farm Developments (2010)

Highway flows – Opening Year 2010

6.12 The existing (November 2001) morning and evening peak hour flows on Peacock Lane and at the Ellesfield Road roundabout junction are shown on **Figure 6.1**.

6.13 The changes to traffic flows between 2001 and 2010 associated with the Peacock Farm development have been derived from examination of the Transport Assessment (WSP Development Limited – February 2002) for the Peacock Farm development. The flow changes arise from the assessed Peacock Farm traffic generation, traffic growth over the period and changes to traffic patterns due to the provision of the new link to A329, Berkshire Way. These derived changes to traffic movements between 2001 and 2010 are set out in **Figure 6.4**.

6.14 The assessed overall 2010 traffic flows for the morning and evening peak hours, with both the Wykery Copse and Peacock Farm developments completed, are shown on **Figure 6.5** which is a summation of the flows on Figures 5.1, 6.1 and 6.4.

6.15 The Wykery Copse development is assessed to increase peak hour flows (2010) on Peacock Lane in the vicinity of the site as follows:

- Peacock Lane to the west of the site - 2.2%
- Peacock Lane to the east of the site - 2.3%

6.16 Again, these increases are well within the 10% increase suggested by the Institution of Highways and Transportation in 'Guidelines for Traffic Impact Assessments' as the level requiring further traffic assessment, and such additional flows should have no significant impact on traffic conditions or road safety.

East Access (direct onto Peacock Lane)

6.17 The operational performance of the proposed east access junction with Peacock Lane, as shown on **Figure 4.2,** has been assessed using the standard PICADY 4.1 software for priority junctions.

6.18 A summary of the results of the assessment of the junction are contained **in Tables 6.5 and 6.6** below, whilst the printouts of the PICADY input/output are contained in **Appendix F.**

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
East access to site	0.158	0.2
Peacock Lane (east)	0.010	0

Table 6.5: Operational performance at the East Access/Peacock Lane junction Weekday 08:00 to 09:00 (2010)

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
East access to site	0.029	0
Peacock Lane (west)	0.041	0.1

Table 6.6: Operational performance at the East Access/Peacock lane junction Weekday 17:00 to 18:00 (2010)

6.19 The analyses indicate that the junction will operate during both the morning and evening peak hours with significant spare capacity.

West Access (via Beehive Road/Peacock Lane junction)

6.20 The west access is proposed directly from Beehive Road. The operational performance of the Beehive Road junction with Peacock Lane, as shown on **Figure 4.3,** has also been assessed using the standard PICADY 4.1 software for priority junctions.

6.21 A summary of the results of the assessment of the junction are contained in **Tables 6.7 and 6.8** below, whilst the printouts of the PICADY input/output are contained in **Appendix F.**

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
Beehive Road	0.332	0.5
Peacock Lane (east)	0.028	0

Table 6.7: Operational performance at the Beehive Road/Peacock Lane junction Weekday 08:00 to 09:00 (2010)

Arm of junction	Maximum RFC	Queue (vehicles)
Peacock Lane (west)	-	-
Beehive Road	0.064	0.1
Peacock Lane (west)	0.111	0.2

Table 6.8: Operational performance at the Beehive Road/Peacock lane junction Weekday 17:00 to 18:00 (2010)

6.22 The analyses indicate that the junction will operate during both the morning and evening peak hours with significant spare capacity.

7. CONCLUSIONS

7.1 The assessment of traffic generation from the development indicates that around 80 vehicle trips will be generated during the morning and evening peak hours. Overall weekday flows are assessed at 866 vehicle trips.

7.2 Assignment of the generated traffic to Peacock Lane at the anticipated 'opening year' of 2005, assuming no development at Peacock Farm, is assessed to increase peak hour flows on Peacock Lane by about 1% to the west of the site and 5% to the east of the site.

7.3 The Transport Assessment for the Peacock Farm development indicates an increase in peak hour traffic on Peacock Lane adjacent to the Wykery Copse site at the 2010 'design year' of around 35% compared to the assumed 2001 base situation. It is assessed that the addition of the Wykery Copse development flows at 2010 would increase Peacock Lane peak hour flows by around 2.3%.

7.4 Analyses of the performances of both the proposed east and west accesses to the Wykery Copse site from Peacock Lane during the morning and evening peak hours indicates that they would both operate with significant spare capacity, with or without the Peacock Farm development.

7.5 The proposals include new footway links between the site, the Southern Industrial Area and the Beehive Road footbridge over A329, Berkshire Way. These links give access to pedestrian routes to the town centre and the remainder of Bracknell. The Peacock Farm development will give opportunities for wider pedestrian and cycle links to be developed to the south and west of the site.

7.6 Overall, it is concluded that the assessed additional development-related traffic flows will have no material impact on traffic conditions, or road safety, on the local highway network.

FIGURES

APPENDIX A

Wykery Copse, Bracknell

Proposed Residential Development

Transport Assessment
Scoping Statement

September 2002

Mouchel Consulting Limited
West Hall, Parvis Road
West Byfleet
Surrey
KT14 6EZ

Mouchel

DOCUMENT CONTROL SHEET

PROJECT: Wykery Copse, Bracknell – proposed residential development

Transport Assessment - Scoping Statement

ISSUE	STATUS	AUTHOR	DATE	CHECK	DATE	APPROVED AND AUTHORISED FOR ISSUE	DATE
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DISTRIBUTION OF THIS ISSUE:

Copy No.	Issued to	Date
1	M Bourne – Bracknell Forest BC	25 September 2002
2	Max Wildsmith – Wykery Copse Ltd	25 September 2002
3	Graham Bell – Bell Cornwell Partnership	25 September 2002
4	Mouchel Consulting Limited (File)	25 September 2002

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Project No. 46343
WP ref L:\F46343\Scoping Report Final.doc

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Section	Title
1.	Introduction
2.	Size and description of the proposals
3.	Description of existing land uses
4.	Relocation of an existing use
5.	Requirement for traffic surveys
6.	Potential modal split
7.	Potential Traffic Generation from the site
8.	Attraction of Traffic from Other Routes
9.	Critical time period of assessment
10.	Proposed Highway access
11.	Area of impact of the proposal
12.	Assessment Year and Traffic Growth
13.	Level of car parking provision
14.	Sustainability
15.	Special Circumstances

Figures

1 Location Plan

1. Introduction

1.1 This Scoping Statement forms the basis for the preparation of a Transport Assessment in connection with a proposed planning application for residential development on land to the west, north and east of Wykery Copse, off Peacock Lane in Bracknell.

1.2 This Scoping Statement has been set out generally following the pattern suggested by the Institution of Highways and Transportation in paragraph 3.1.12 of their "Guidelines for Traffic Impact Assessment".

2. Size and description of the proposals

2.1 The site is located on land west of the Southern Industrial Area in Bracknell. It is bounded by Longshot Lane, a public footpath, to the east; Peacock Lane to the south; Beehive Road to the west; and, A329, Berkshire Way, to the north (see Figure 1).

2.2 The proposed development comprises around 150 dwellings located on land lying to the west, north and east of Wykery Copse, a Site of Special Scientific Interest. Access is proposed off Peacock Lane comprising a direct access at the east end of the site and an access via Beehive Road at the west end of the site.

3. Description of existing land uses

3.1 Current land uses are for agricultural purposes. The land has two high voltage overhead cables passing east-west through the site. At some stage in the past, the site has been used as a borrow-pit and land levels are reduced across the northern half of the site

4. Relocation of an existing use

4.1 There is no existing use to be relocated. The current agricultural use will cease.

5. Requirement for traffic surveys

5.1 Current traffic flows on Peacock Lane and A329 Berkshire Way have been obtained from Bracknell Forest BC. Additional traffic flow information has been obtained on the surrounding local highway network from the planning application file relating to the approved Peacock Farm development.

6. Potential modal split

6.1 The site is located adjacent to the Southern Industrial area, which has bus services to/from Bracknell town centre and the railway station, and to/from Reading. Nearest bus stops are at the north end of Lovelace Road, around 200 metres from the proposed east access. It is noted that bus services are planned be diverted through the Peacock Farm development emerging onto

Peacock Lane opposite Wykery Copse in due course. This will give the opportunity of a bus stop closer to the development.

6.2 Initial pedestrian links will be to the existing footway system at the Southern Industrial Area and to the existing footbridge over A329, Berkshire Way. Wider pedestrian/cycle links will be enabled in due course as a result of the Peacock Farm development.

7. Potential Traffic Generation from the site

7.1 The TRICS trip generation database gives vehicular trip rates for various land uses. Generally similarly located sites will be used as a basis for establishing the potential traffic generation for the site.

7.2 An initial assessment has been made, based on a notional 150 dwellings and using a similar traffic distribution to that used for the Peacock Farm development proposals. This suggests that additional peak hour traffic on Peacock Lane will be less than 5% of current flows and less still as a percentage of projected flows with Peacock Farm development traffic.

9. Critical time period of assessment

9.1 Based on the traffic flow information received for Peacock Lane it is anticipated that the critical hours for assessment will be the morning (08:00 to 09:00) and evening (17:00 to 18:00) weekday peak periods.

10. Proposed Highway access

10.1 Two accesses are proposed as follows:

- off Beehive Road on the west side of the site, with traffic joining Peacock Lane at the Beehive Road junction; and,
- directly off Peacock Lane, on the site frontage to the east of Wykery Copse.

An internal road connection is proposed through the site between the two accesses.

11. Area of impact of the proposal

11.1 In terms of traffic impact, it is anticipated that assessment will not need to extend beyond the immediate junctions with Peacock Lane. The wider local area will be considered in terms of the provision of appropriate links for pedestrians/cyclists and routes to bus services, including taking account of the Peacock Farm proposals.

12. Assessment Year and Traffic Growth

12.1 The assessment year will be 2005 in line with the currently anticipated completion date for the development.

12.2 Any necessary allowance for base traffic growth to assessment year will be based on appropriate National Road Traffic Forecast data unless otherwise advised by Bracknell Forest BC.

13. Level of car and cycle parking provision

13.1 Parking and cycle parking provision will be in accordance with Bracknell Forest BC standards.

14. Sustainability

14.1 A Travel Plan is not appropriate for a residential development, but the Transport Assessment will consider sustainable transport issues.

15. Special Circumstances

15.1 It is proposed that the transport aspects of the development are considered in the light of both the current local highway/transport situation, and any approved Peacock Farm proposals.

APPENDIX B

Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

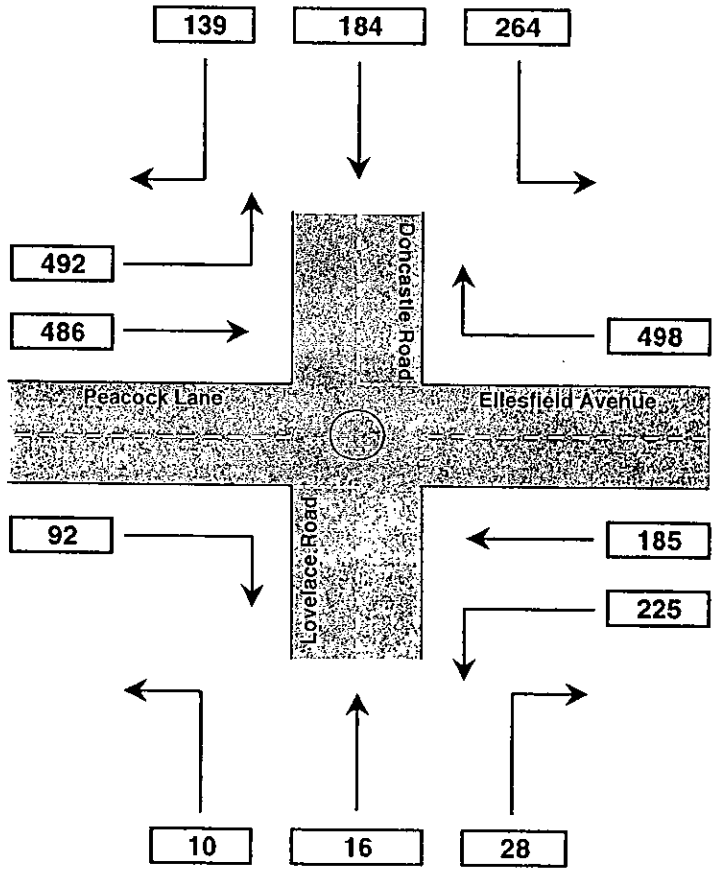
Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Vehicle Class: ALL CLASSES

Start Time: 1) 0800

End Time: 1) 0900

☐ Peak Hour



Note: The above diagram represents the Junction surveyed, although may not be the exact layout of the actual location.

Important Note: This spreadsheet & Interactive Vehicle Flow Diagram was produced based on specific parameters. Consequently, alteration to the spreadsheet format or it's properties may result in malfunction.

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Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

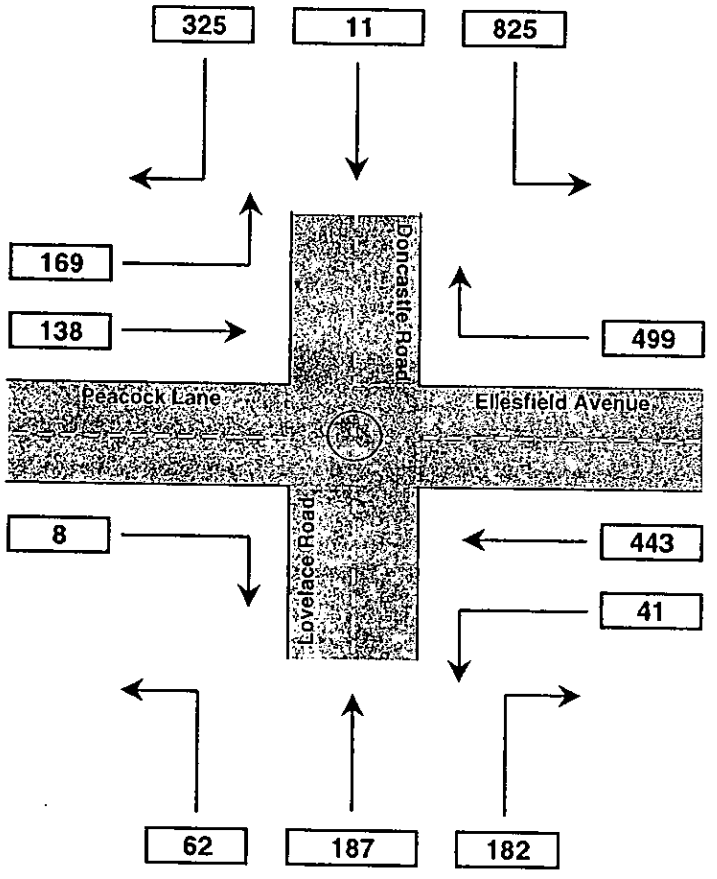
Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Vehicle Class: ALL CLASSES

Start Time: 2) 1700

End Time: 2) 1800

☐ **Peak Hour**



Note: The above diagram represents the Junction surveyed, although may not be the exact layout of the actual location.

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Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Approach: Lovelace Road

	Left to Peacock Lane			N/B to Doncastle Road			Right to Ellesfield Avenue		
TIME	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL
0730 - 0745	2	1	3	4	2	6	2	1	3
0745 - 0800	0	0	0	4	1	5	4	1	5
Hourly Total	**2**	**1**	**3**	**8**	**3**	**11**	**6**	**2**	**8**
0800 - 0815	2	0	2	2	1	3	7	2	9
0815 - 0830	1	1	2	3	0	3	3	3	6
0830 - 0845	4	1	5	3	0	3	6	2	8
0845 - 0900	1	0	1	6	1	7	4	1	5
Hourly Total	**8**	**2**	**10**	**14**	**2**	**16**	**20**	**8**	**28**
0900 - 0915	2	0	2	5	1	6	3	2	5
0915 - 0930	1	0	1	5	1	6	4	2	6
Hourly Total	**3**	**0**	**3**	**10**	**2**	**12**	**7**	**4**	**11**
Session Total	**13**	**3**	**16**	**32**	**7**	**39**	**33**	**14**	**47**
1630 - 1645	7	1	8	24	1	25	29	2	31
1645 - 1700	9	0	9	29	0	29	29	0	29
Hourly Total	**16**	**1**	**17**	**53**	**1**	**54**	**58**	**2**	**60**
1700 - 1715	11	0	11	34	2	36	31	1	32
1715 - 1730	12	0	12	42	0	42	57	2	59
1730 - 1745	23	0	23	67	0	67	61	1	62
1745 - 1800	16	0	16	42	0	42	27	2	29
Hourly Total	**62**	**0**	**62**	**185**	**2**	**187**	**176**	**6**	**182**
1800 - 1815	13	0	13	38	0	38	40	1	41
1815 - 1830	11	0	11	21	0	21	20	0	20
Hourly Total	**24**	**0**	**24**	**59**	**0**	**59**	**60**	**1**	**61**
Session Total	**102**	**1**	**103**	**297**	**3**	**300**	**294**	**9**	**303**

Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Approach: Peacock Lane

	Left to Doncastle Road			E/B to Ellesfield Avenue			Right to Lovelace Road		
TIME	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL
0730 - 0745	90	0	90	86	0	86	12	0	12
0745 - 0800	109	1	110	93	2	95	17	0	17
Hourly Total	**199**	**1**	**200**	**179**	**2**	**181**	**29**	**0**	**29**
0800 - 0815	110	0	110	121	0	121	15	0	15
0815 - 0830	129	3	132	121	1	122	21	0	21
0830 - 0845	124	2	126	132	1	133	29	0	29
0845 - 0900	122	2	124	109	1	110	27	0	27
Hourly Total	**485**	**7**	**492**	**483**	**3**	**486**	**92**	**0**	**92**
0900 - 0915	104	1	105	98	0	98	19	0	19
0915 - 0930	91	2	93	95	1	96	12	0	12
Hourly Total	**195**	**3**	**198**	**193**	**1**	**194**	**31**	**0**	**31**
Session Total	**879**	**11**	**890**	**855**	**6**	**861**	**152**	**0**	**152**
1630 - 1645	38	0	38	35	1	36	5	0	5
1645 - 1700	36	1	37	32	0	32	3	0	3
Hourly Total	**74**	**1**	**75**	**67**	**1**	**68**	**8**	**0**	**8**
1700 - 1715	46	0	46	34	0	34	1	0	1
1715 - 1730	47	0	47	38	0	38	1	0	1
1730 - 1745	32	1	33	25	0	25	4	0	4
1745 - 1800	43	0	43	41	0	41	2	0	2
Hourly Total	**168**	**1**	**169**	**138**	**0**	**138**	**8**	**0**	**8**
1800 - 1815	32	1	33	27	0	27	2	0	2
1815 - 1830	26	0	26	21	0	21	2	0	2
Hourly Total	**58**	**1**	**59**	**48**	**0**	**48**	**4**	**0**	**4**
Session Total	**300**	**3**	**303**	**253**	**1**	**254**	**20**	**0**	**20**

Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Approach: Doncastle Road

	Left to Ellesfield Avenue			S/B to Lovelace Road			Right to Peacock Lane		
TIME	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL
0730 - 0745	83	3	86	17	2	19	24	0	24
0745 - 0800	102	0	102	39	1	40	28	0	28
Hourly Total	**185**	**3**	**188**	**56**	**3**	**59**	**52**	**0**	**52**
0800 - 0815	75	2	77	36	1	37	20	0	20
0815 - 0830	55	0	55	24	1	25	41	2	43
0830 - 0845	51	1	52	62	2	64	33	1	34
0845 - 0900	78	2	80	55	3	58	41	1	42
Hourly Total	**259**	**5**	**264**	**177**	**7**	**184**	**135**	**4**	**139**
0900 - 0915	54	2	56	70	0	70	37	0	37
0915 - 0930	62	3	65	48	2	50	21	0	21
Hourly Total	**116**	**5**	**121**	**118**	**2**	**120**	**58**	**0**	**58**
Session Total	**560**	**13**	**573**	**351**	**12**	**363**	**245**	**4**	**249**
1630 - 1645	124	2	126	4	3	7	48	0	48
1645 - 1700	142	2	144	2	1	3	51	0	51
Hourly Total	**266**	**4**	**270**	**6**	**4**	**10**	**99**	**0**	**99**
1700 - 1715	165	2	167	3	1	4	80	0	80
1715 - 1730	202	0	202	3	1	4	88	0	88
1730 - 1745	229	4	233	1	0	1	71	1	72
1745 - 1800	223	0	223	2	0	2	85	0	85
Hourly Total	**819**	**6**	**825**	**9**	**2**	**11**	**324**	**1**	**325**
1800 - 1815	207	0	207	2	1	3	92	0	92
1815 - 1830	178	1	179	2	0	2	71	0	71
Hourly Total	**385**	**1**	**386**	**4**	**1**	**5**	**163**	**0**	**163**
Session Total	**1470**	**11**	**1481**	**19**	**7**	**26**	**586**	**1**	**587**

Bracknell - Manual Traffic Survey, Tuesday 23rd October 2001

Produced by The Paul Castle Consultancy

Junction: Doncastle Road / Ellesfield Avenue / Lovelace Road / Peacock Lane

Approach: Ellesfield Avenue

	Left to Lovelace Road			W/B to Peacock Lane			Right to Doncastle Road		
TIME	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL	LIGHT	HEAVY	TOTAL
0730 - 0745	16	0	16	34	1	35	132	4	136
0745 - 0800	41	1	42	43	0	43	98	2	100
Hourly Total	**57**	**1**	**58**	**77**	**1**	**78**	**230**	**6**	**236**
0800 - 0815	42	1	43	46	0	46	98	2	100
0815 - 0830	52	0	52	56	0	56	107	0	107
0830 - 0845	51	0	51	47	0	47	154	4	158
0845 - 0900	78	1	79	35	1	36	132	1	133
Hourly Total	**223**	**2**	**225**	**184**	**1**	**185**	**491**	**7**	**498**
0900 - 0915	45	3	48	22	0	22	122	5	127
0915 - 0930	38	3	41	19	1	20	74	1	75
Hourly Total	**83**	**6**	**89**	**41**	**1**	**42**	**196**	**6**	**202**
Session Total	**363**	**9**	**372**	**302**	**3**	**305**	**917**	**19**	**936**
1630 - 1645	11	1	12	51	0	51	84	3	87
1645 - 1700	11	1	12	64	1	65	83	1	84
Hourly Total	**22**	**2**	**24**	**115**	**1**	**116**	**167**	**4**	**171**
1700 - 1715	7	1	8	85	0	85	120	1	121
1715 - 1730	15	2	17	95	2	97	113	0	113
1730 - 1745	6	0	6	127	1	128	131	3	134
1745 - 1800	9	1	10	133	0	133	128	3	131
Hourly Total	**37**	**4**	**41**	**440**	**3**	**443**	**492**	**7**	**499**
1800 - 1815	2	0	2	126	0	126	118	6	124
1815 - 1830	6	1	7	75	0	75	98	4	102
Hourly Total	**8**	**1**	**9**	**201**	**0**	**201**	**216**	**10**	**226**
Session Total	**67**	**7**	**74**	**756**	**4**	**760**	**875**	**21**	**896**

APPENDIX C

A329 Berkshire Way Bracknell

Two-way traffic flows Sunday 16 June to Saturday 22 June 2002

Total traffic

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	5-day avg	7 day avg
12 hour (7-19)	26648	42576	42797	43847	41963	36036	24584	41444	36922
16 hour (6-22)	30382	49935	50314	51517	50385	42709	27972	48972	43316
18 hour (6-24)	30950	50533	50992	52305	51202	43695	29106	49745	44112
24 hour (0-24)	31883	53279	53471	54828	53817	46965	30360	52472	46372

HGV No.

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	5-day avg	5-day %
12 hour (7-19)	724	3378	2928	3130	2970	1970	678	2875	6.9%
16 hour (6-22)	860	3707	3316	3532	3453	2344	827	3270	6.7%
18 hour (6-24)	900	3767	3380	3599	3529	2415	848	3338	6.7%
24 hour (0-24)	949	4075	3746	3963	3917	2847	1067	3710	7.1%

Overnight flows

	Sun/Mon	Mon/Tue	Tue/Wed	Wed/Thu	Thu/Fri	Fri/Sat	Sat/Sun	7 day avg
23:00-24:00	165	193	202	251	257	358	463	270
24:00-01;00	99	109	109	123	147	171	256	145
01:00-02:00	52	80	85	99	99	151	177	106
02:00-03:00	99	84	105	95	129	120	80	102
03:00-04:00	125	116	140	154	159	101	60	122
04:00-05:00	478	422	409	415	461	207	146	363
05:00-06:00	1893	1668	1675	1729	2275	504	263	1430
06:00-07:00	4330	4070	4067	4028	3229	809	425	2994

Peacock Lane Bracknell

Two-way traffic flows Monday 22 July to Sunday 28 July 2002

Total traffic

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	5-day avg	7 day avg
12 hour (7-19)	7949	7888	7620	7709	7924	3456	2415	7818	6423
16 hour (6-22)	8837	8818	8522	8681	8703	3916	2867	8712	7192
18 hour (6-24)	8990	9006	8691	8837	8858	4069	2978	8876	7347
24 hour (0-24)	9072	9076	8775	8930	8952	4217	3105	8961	7447

Overnight flows

	Mon/Tue	Tue/Wed	Wed/Thu	Thu/Fri	Fri/Sat	Sat/Sun	Sun/Mon	7 day avg
23:00-24:00	56	104	60	71	72	73	52	70
24:00-01;00	10	21	35	28	54	54	21	32
01:00-02:00	8	7	13	9	23	29	9	14
02:00-03:00	1	9	5	3	20	19	5	9
03:00-04:00	7	6	5	5	13	9	6	7
04:00-05:00	10	10	7	9	16	7	10	10
05:00-06:00	34	31	28	40	22	9	34	28
06:00-07:00	169	146	161	137	42	20	153	118

APPENDIX D

Mouchel Consulting Ltd Parvis Road West Byfleet Licence No: 390591

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 RESIDENTIAL
Category : K MIXED PRIVATE HOUSING

Selected Regions and Areas:

02 SOUTH EAST

HC	HAMPSHIRE	12 days
WS	WEST SUSSEX	10 days

Main Parameter Selection:

Parameter: Number of Households
Range: 26 to 1165 (units:)

Date Range: 01/01/94 to 08/12/00

Selected Survey Days:

Monday	2 days
Tuesday	2 days
Wednesday	3 days
Thursday	9 days
Friday	6 days

Selected Survey Types:

Manual Count	4 days
One Way ATC Count	18 days

Optional Parameter Selection:

Use Class:

C3	22 days

Location:

Neighbourhood Centre	10 days
Edge of Town	12 days

Population within 1 Mile:

1,001 to 5,000	10 days
10,001 to 15,000	9 days
15,001 to 20,000	3 days

Population within 5 Miles:

75,001 to 100,000	19 days
250,001 to 500,000	3 days

Car ownership within 5 Miles:

0.5 or Less	2 days
1.1 to 1.5	19 days
1.6 to 2.0	1 days

Optional Parameter Selection (Cont.):

Buses/Trains per day (both directions):

Frequency	*Per Hour*	*Per Day*	*Surveys*
Not Known			0 days
0	0	0	0 days
<20 per day	1	20	0 days
20-39 per day	2	40	0 days
40-59 per day	3	60	10 days
60-79 per day	4	80	0 days
80+ per day	> 4	> 80	12 days

LIST OF SITES relevant to selection parameters

1 **HC-03-K-04** **PORTSMOUTH HOUSING** **HAMPSHIRE**
ST GEORGES ROAD

PORTSMOUTH
Total Number of Households: 150 ******

2 **HC-03-K-05** **PORTSMOUTH HOUSING** **HAMPSHIRE**
BROAD STREET

PORTSMOUTH
Total Number of Households: 64 ******

3 **HC-03-K-09** **WINCHESTER HOUSING** **HAMPSHIRE**
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of Households: 1040 ******

4 **HC-03-K-10** **EASTLEIGH HOUSING** **HAMPSHIRE**
KNIGHTWOOD ROAD
BADGER'S COPSE
EASTLEIGH
Total Number of Households: 700 ******

5 **HC-03-K-11** **WINCHESTER HOUSING** **HAMPSHIRE**
RIDGEWAY/MEADOW W.
BADGER FARM
WINCHESTER
Total Number of Households: 1040 ******

6 **WS-03-K-02** **CHICHESTER HOUSING** **WEST SUSSEX**
LAVANT DOWN ROAD
LAVANT
CHICHESTER
Total Number of Households: 90 ******

7 **WS-03-K-03** **CHICHESTER HOUSING** **WEST SUSSEX**
LAVANT DOWN ROAD
LAVANT
CHICHESTER
Total Number of Households: 90 ******

TRIP RATE for Land Use RESIDENTIAL/MIXED PRIVATE HOUSING

Calculation Factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS No. Days	ARRIVALS Ave. HHOLDS	ARRIVALS Trip Rate	DEPARTURES No. Days	DEPARTURES Ave. HHOLDS	DEPARTURES Trip Rate	TOTALS No. Days	TOTALS Ave. HHOLDS	TOTALS Trip Rate
00:00 - 01:00	18	512	0.02	18	512	0.01	18	512	0.03
01:00 - 02:00	18	512	0.01	18	512	0.00	18	512	0.01
02:00 - 03:00	18	512	0.00	18	512	0.00	18	512	0.01
03:00 - 04:00	18	512	0.00	18	512	0.00	18	512	0.00
04:00 - 05:00	18	512	0.00	18	512	0.01	18	512	0.01
05:00 - 06:00	18	512	0.01	18	512	0.02	18	512	0.03
06:00 - 07:00	18	512	0.02	18	512	0.10	18	512	0.12
07:00 - 08:00	23	518	0.07	23	518	0.35	23	518	0.42
08:00 - 09:00	23	518	0.09	**23**	**518**	**0.42**	23	518	0.51
09:00 - 10:00	23	518	0.11	23	518	0.18	23	518	0.29
10:00 - 11:00	23	518	0.10	23	518	0.13	23	518	0.23
11:00 - 12:00	23	518	0.12	23	518	0.12	23	518	0.24
12:00 - 13:00	23	518	0.16	23	518	0.13	23	518	0.28
13:00 - 14:00	23	518	0.14	23	518	0.15	23	518	0.29
14:00 - 15:00	23	518	0.14	23	518	0.13	23	518	0.27
15:00 - 16:00	23	518	0.20	23	518	0.16	23	518	0.36
16:00 - 17:00	23	518	0.26	23	518	0.15	23	518	0.42
17:00 - 18:00	**23**	**518**	**0.39**	23	518	0.16	**23**	**518**	**0.55**
18:00 - 19:00	23	518	0.34	23	518	0.20	23	518	0.55
19:00 - 20:00	18	512	0.25	18	512	0.19	18	512	0.44
20:00 - 21:00	18	512	0.16	18	512	0.12	18	512	0.28
21:00 - 22:00	18	512	0.13	18	512	0.06	18	512	0.19
22:00 - 23:00	18	512	0.09	18	512	0.05	18	512	0.14
23:00 - 24:00	18	512	0.08	18	512	0.04	18	512	0.11
Daily Trip Rates:			2.89			2.90			5.79

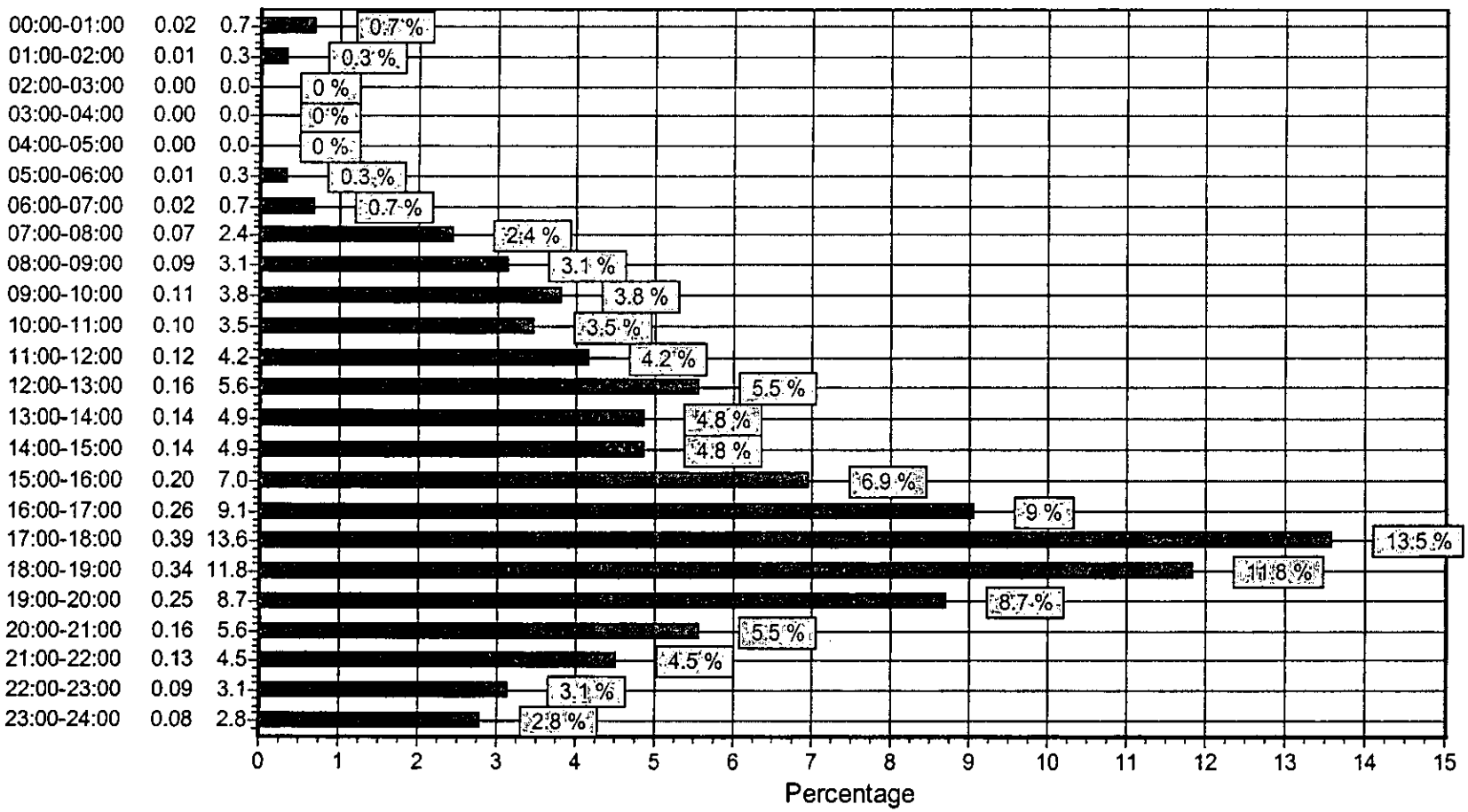
Parameter Summary

Trip Rate Parameter Range Selected:	26 - 1165 (units:)
Survey Date Date Range:	01/01/94 - 08/12/00
Number of Weekdays (Monday-Friday):	22
Number of Saturdays:	0
Number of Sundays:	0
Optional Parameters Used in Selection:	YES
Surveys Manually Removed from Selection:	0

Mouchel Consulting Ltd Parvis Road West Byfleet Licence No: 390591

TRIP RATE GRAPH - ARRIVALS

Time	Rate	%
00:00-01:00	0.02	0.7
01:00-02:00	0.01	0.3
02:00-03:00	0.00	0.0
03:00-04:00	0.00	0.0
04:00-05:00	0.00	0.0
05:00-06:00	0.01	0.3
06:00-07:00	0.02	0.7
07:00-08:00	0.07	2.4
08:00-09:00	0.09	3.1
09:00-10:00	0.11	3.8
10:00-11:00	0.10	3.5
11:00-12:00	0.12	4.2
12:00-13:00	0.16	5.6
13:00-14:00	0.14	4.9
14:00-15:00	0.14	4.9
15:00-16:00	0.20	7.0
16:00-17:00	0.26	9.1
17:00-18:00	0.39	13.6
18:00-19:00	0.34	11.8
19:00-20:00	0.25	8.7
20:00-21:00	0.16	5.6
21:00-22:00	0.13	4.5
22:00-23:00	0.09	3.1
23:00-24:00	0.08	2.8



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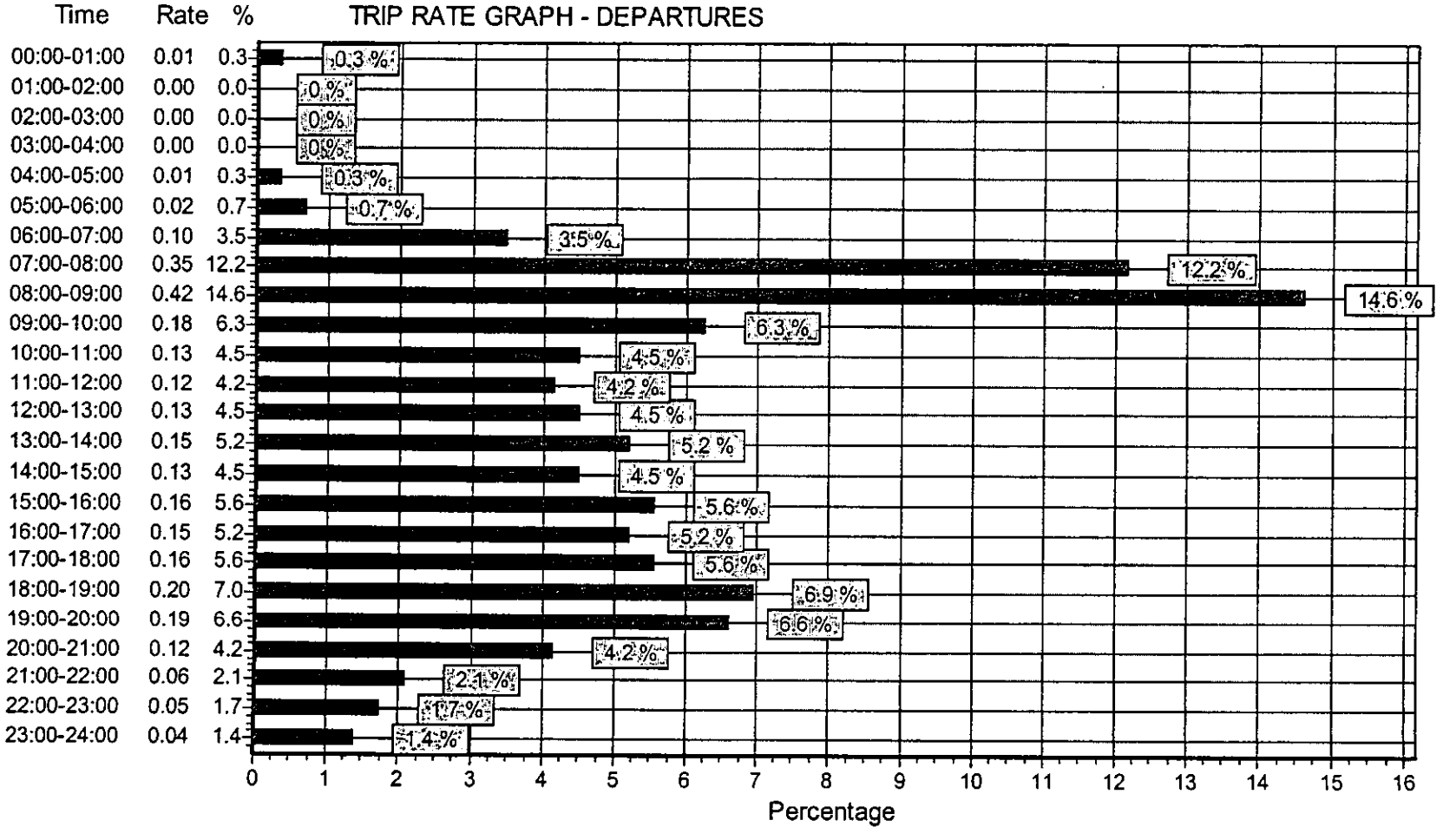

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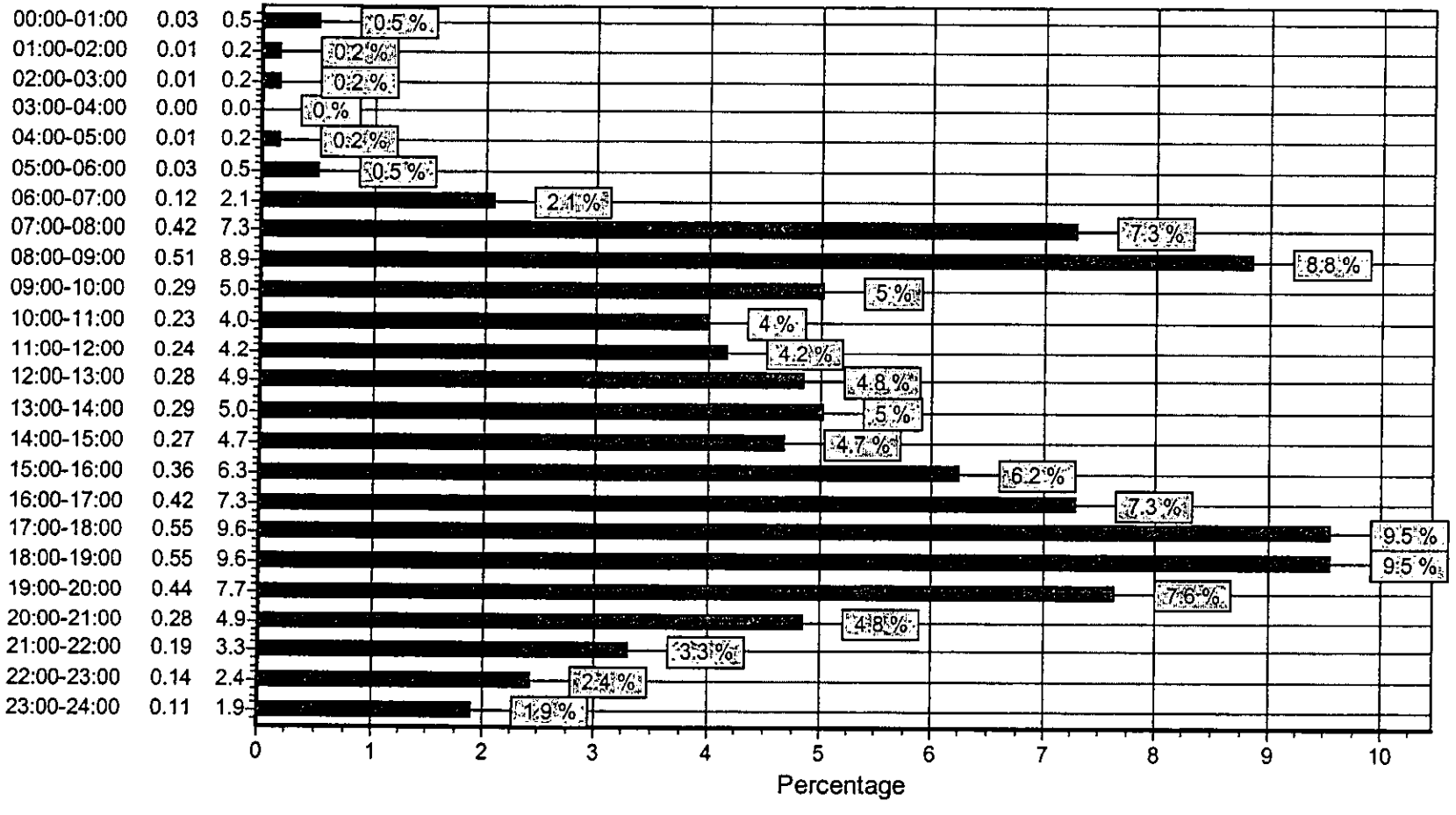
TRIP RATE GRAPH - TOTALS

Time	Rate	%
00:00-01:00	0.03	0.5
01:00-02:00	0.01	0.2
02:00-03:00	0.01	0.2
03:00-04:00	0.00	0.0
04:00-05:00	0.01	0.2
05:00-06:00	0.03	0.5
06:00-07:00	0.12	2.1
07:00-08:00	0.42	7.3
08:00-09:00	0.51	8.9
09:00-10:00	0.29	5.0
10:00-11:00	0.23	4.0
11:00-12:00	0.24	4.2
12:00-13:00	0.28	4.9
13:00-14:00	0.29	5.0
14:00-15:00	0.27	4.7
15:00-16:00	0.36	6.3
16:00-17:00	0.42	7.3
17:00-18:00	0.55	9.6
18:00-19:00	0.55	9.6
19:00-20:00	0.44	7.7
20:00-21:00	0.28	4.9
21:00-22:00	0.19	3.3
22:00-23:00	0.14	2.4
23:00-24:00	0.11	1.9



APPENDIX E

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "l:\P46343\Junc-ana\WC05AM01.vpi" at 10:29:28 on Monday, 21 October 2002

RUN TITLE
****

WC05AM01- Wykery Copse/Peacock Lane Proposed Jct 2005 AM Peak Flows + Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA

MAJOR ROAD (ARM C) ---------- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Peacock Lane (West)
ARM B IS Site
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.30 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.60 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	90.0 M.
- VISIBILITY TO RIGHT	(VB-A)	43.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		4.28 M.
- WIDTH AT 10 M FROM JUNC.		3.10 M.
- WIDTH AT 15 M FROM JUNC.		2.90 M.
- WIDTH AT 20 M FROM JUNC.		2.90 M.
- LENGTH OF FLARED SECTION		1 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	14.80	22.20	14.80
ARM B	15.00	45.00	75.00	0.26	0.39	0.26
ARM C	15.00	45.00	75.00	4.63	6.94	4.63

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.001	0.999
		0.0	1.0	1183.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.143	0.000	0.857
		3.0	0.0	18.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.992	0.008	0.000
		367.0	3.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
07.45-08.00								
B-C	0.22	6.73	0.033		0.0	0.0	0.5	
B-A	0.04	4.72	0.008		0.0	0.0	0.1	
C-AB	0.06	11.06	0.006		0.0	0.0	0.1	
C-A	4.56							
A-B	0.01							
A-C	14.79							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-C	0.27	6.00	0.045		0.0	0.0	0.7	
B-A	0.04	3.77	0.012		0.0	0.0	0.2	
C-AB	0.08	10.96	0.008		0.0	0.0	0.1	
C-A	5.44							
A-B	0.01							
A-C	17.66							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-C	0.33	4.99	0.066		0.0	0.1	1.0	
B-A	0.05	2.46	0.022		0.0	0.0	0.3	
C-AB	0.13	10.88	0.012		0.0	0.0	0.2	
C-A	6.64							
A-B	0.02							
A-C	21.63							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-C	0.33	4.99	0.066		0.1	0.1	1.0	
B-A	0.05	2.46	0.022		0.0	0.0	0.3	
C-AB	0.13	10.88	0.012		0.0	0.0	0.2	
C-A	6.64							
A-B	0.02							
A-C	21.63							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-C	0.27	6.00	0.045		0.1	0.0	0.7	
B-A	0.04	3.77	0.012		0.0	0.0	0.2	
C-AB	0.08	10.96	0.008		0.0	0.0	0.1	
C-A	5.44							
A-B	0.01							
A-C	17.66							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
B-C	0.22	6.73	0.033		0.0	0.0	0.5	
B-A	0.04	4.72	0.008		0.0	0.0	0.1	
C-AB	0.06	11.06	0.006		0.0	0.0	0.1	
C-A	4.56							
A-B	0.01							
A-C	14.79							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	24.7	16.5	4.5	0.18	4.5	0.18
B-A	4.1	2.7	1.3	0.30	1.3	0.30
C-AB	8.2	5.5	0.8	0.10	0.8	0.10
C-A	499.2	332.8				
A-B	1.4	0.9				
A-C	1622.1	1081.4				
ALL	2159.7	1439.8	6.6	0.00	6.6	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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RELEASE 3.0 (MAR 2001)

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Run with file:- "l:\F46343\Junc-ana\WC05PM01.vpi" at 10:30:39 on Monday, 21 October 2002

RUN TITLE
****

WC05PM01- Wykery Copse/Peacock Lane Proposed Jct 2005 PM Peak Flows + Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA

MAJOR ROAD (ARM C) ---------- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Peacock Lane (West)
ARM B IS Site
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.30 M.	
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.	
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.60 M.	
- VISIBILITY	(VC-B)	220.0 M.	
- BLOCKS TRAFFIC		YES	
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	90.0 M.	
- VISIBILITY TO RIGHT	(VB-A)	43.0 M.	
- LANE 1 WIDTH	(WB-C)	-	
- LANE 2 WIDTH	(WB-A)	-	
- WIDTH AT 0 M FROM JUNC.		10.00 M.	
- WIDTH AT 5 M FROM JUNC.		4.28 M.	
- WIDTH AT 10 M FROM JUNC.		3.10 M.	
- WIDTH AT 15 M FROM JUNC.		2.90 M.	
- WIDTH AT 20 M FROM JUNC.		2.90 M.	
- LENGTH OF FLARED SECTION		1 VEHS	

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.44	6.66	4.44
ARM B	15.00	45.00	75.00	0.10	0.15	0.10
ARM C	15.00	45.00	75.00	11.71	17.57	11.71

TIME	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.008	0.992
		0.0	3.0	352.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.125	0.000	0.875
		1.0	0.0	7.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.983	0.017	0.000
		921.0	16.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-C	0.09	9.37	0.009		0.0	0.0	0.1	
B-A	0.01	6.32	0.002		0.0	0.0	0.0	
C-AB	0.44	17.06	0.026		0.0	0.0	0.5	
C-A	11.27							
A-B	0.04							
A-C	4.40							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-C	0.10	9.15	0.011		0.0	0.0	0.2	
B-A	0.01	5.68	0.003		0.0	0.0	0.0	
C-AB	0.73	18.48	0.039		0.0	0.1	0.8	
C-A	13.26							
A-B	0.04							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-C	0.13	8.85	0.014		0.0	0.0	0.2	
B-A	0.02	4.79	0.004		0.0	0.0	0.1	
C-AB	1.28	20.15	0.063		0.1	0.1	1.6	
C-A	15.85							
A-B	0.05							
A-C	6.43							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-C	0.13	8.85	0.014		0.0	0.0	0.2	
B-A	0.02	4.79	0.004		0.0	0.0	0.1	
C-AB	1.28	20.15	0.064		0.1	0.1	1.6	
C-A	15.85							
A-B	0.05							
A-C	6.43							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-C	0.10	9.15	0.011		0.0	0.0	0.2	
B-A	0.01	5.68	0.003		0.0	0.0	0.0	
C-AB	0.73	18.48	0.039		0.1	0.1	0.8	
C-A	13.26							
A-B	0.04							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
B-C	0.09	9.37	0.009		0.0	0.0	0.1	
B-A	0.01	6.32	0.002		0.0	0.0	0.0	
C-AB	0.45	17.06	0.026		0.1	0.0	0.5	
C-A	11.27							
A-B	0.04							
A-C	4.40							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	9.6	6.4	1.1	0.11	1.1	0.11
B-A	1.4	0.9	0.3	0.18	0.3	0.18
C-AB	73.6	49.1	5.8	0.08	5.8	0.08
C-A	1211.2	807.5				
A-B	4.1	2.7				
A-C	482.7	321.8				
ALL	1782.6	1188.4	7.2	0.00	7.2	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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Run with file:- "l:\P46343\Junc-ana\WB05AM01.vpi" at 10:34:57 on Monday, 21 October 2002

RUN TITLE
****

WB05AM01-Wykery Copse/Beehive Rd Existing Jct 2005 AM Peak Flows + Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA

MAJOR ROAD (ARM C) ---------- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Peacock Lane (West)
ARM B IS Beehive Road
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.60 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.80 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	85.0 M.
- VISIBILITY TO RIGHT	(VB-A)	64.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		6.88 M.
- WIDTH AT 10 M FROM JUNC.		4.69 M.
- WIDTH AT 15 M FROM JUNC.		3.88 M.
- WIDTH AT 20 M FROM JUNC.		3.27 M.
- LENGTH OF FLARED SECTION		2 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	14.35	21.53	14.35
ARM B	15.00	45.00	75.00	0.55	0.83	0.55
ARM C	15.00	45.00	75.00	4.63	6.94	4.63

TIME	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.002	0.998
		0.0	2.0	1146.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.136	0.000	0.864
		6.0	0.0	38.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.973	0.027	0.000
		360.0	10.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
07.45-08.00								
B-C	0.47	7.42	0.064		0.0	0.1	1.0	
B-A	0.08	3.94	0.019		0.0	0.0	0.3	
C-AB	0.20	11.29	0.018		0.0	0.0	0.3	
C-A	4.42							
A-B	0.03							
A-C	14.32							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-C	0.57	6.66	0.085		0.1	0.1	1.3	
B-A	0.09	3.21	0.028		0.0	0.0	0.4	
C-AB	0.27	11.19	0.024		0.0	0.0	0.5	
C-A	5.25							
A-B	0.03							
A-C	17.11							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-C	0.69	5.60	0.124		0.1	0.1	2.0	
B-A	0.11	2.19	0.050		0.0	0.1	0.7	
C-AB	0.40	11.09	0.036		0.0	0.0	0.7	
C-A	6.36							
A-B	0.04							
A-C	20.95							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-C	0.69	5.60	0.124		0.1	0.1	2.1	
B-A	0.11	2.19	0.050		0.1	0.1	0.8	
C-AB	0.40	11.09	0.036		0.0	0.1	0.8	
C-A	6.36							
A-B	0.04							
A-C	20.95							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-C	0.57	6.66	0.085		0.1	0.1	1.5	
B-A	0.09	3.21	0.028		0.1	0.0	0.5	
C-AB	0.27	11.19	0.024		0.1	0.0	0.5	
C-A	5.25							
A-B	0.03							
A-C	17.11							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
B-C	0.47	7.42	0.064		0.1	0.1	1.1	
B-A	0.08	3.94	0.019		0.0	0.0	0.3	
C-AB	0.20	11.29	0.018		0.0	0.0	0.3	
C-A	4.42							
A-B	0.03							
A-C	14.32							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	52.1	34.7	9.0	0.17	9.0	0.17
B-A	8.2	5.5	2.9	0.36	2.9	0.36
C-AB	26.3	17.5	3.0	0.12	3.0	0.12
C-A	481.1	320.7				
A-B	2.7	1.8				
A-C	1571.4	1047.6				
ALL	2141.8	1427.9	15.0	0.01	15.0	0.01

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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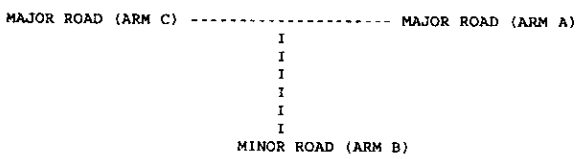
Run with file:- "l:\P46343\Junc-ana\WB05PM01.vpi" at 10:35:53 on Monday, 21 October 2002

RUN TITLE
****

WB05PM01-Wykery Copse/Beehive Rd Existing Jct 2005 PM Peak Flows + Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Peacock Lane (West)
ARM B IS Beehive Road
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.60 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.80 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	85.0 M.
- VISIBILITY TO RIGHT	(VB-A)	64.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		6.88 M.
- WIDTH AT 10 M FROM JUNC.		4.69 M.
- WIDTH AT 15 M FROM JUNC.		3.88 M.
- WIDTH AT 20 M FROM JUNC.		3.27 M.
- LENGTH OF FLARED SECTION		2 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.34	6.51	4.34
ARM B	15.00	45.00	75.00	0.22	0.34	0.22
ARM C	15.00	45.00	75.00	11.52	17.29	11.52

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.020	0.980
		0.0	7.0	340.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.167	0.000	0.833
		3.0	0.0	15.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.963	0.037	0.000
		888.0	34.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-C	0.19	10.12	0.019		0.0	0.0	0.3	
B-A	0.04	5.17	0.007		0.0	0.0	0.1	
C-AB	1.04	17.47	0.060		0.0	0.1	1.4	
C-A	10.48							
A-B	0.09							
A-C	4.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-C	0.22	9.89	0.023		0.0	0.0	0.3	
B-A	0.04	4.66	0.010		0.0	0.0	0.1	
C-AB	1.59	18.65	0.086		0.1	0.2	2.5	
C-A	12.17							
A-B	0.10							
A-C	5.07							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-C	0.27	9.57	0.029		0.0	0.0	0.4	
B-A	0.05	3.96	0.014		0.0	0.0	0.2	
C-AB	2.72	20.21	0.135		0.2	0.3	5.1	
C-A	14.13							
A-B	0.13							
A-C	6.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-C	0.27	9.57	0.029		0.0	0.0	0.4	
B-A	0.05	3.95	0.014		0.0	0.0	0.2	
C-AB	2.73	20.22	0.135		0.3	0.3	5.2	
C-A	14.13							
A-B	0.13							
A-C	6.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-C	0.22	9.89	0.023		0.0	0.0	0.4	
B-A	0.04	4.65	0.010		0.0	0.0	0.2	
C-AB	1.60	18.65	0.086		0.3	0.2	2.6	
C-A	12.16							
A-B	0.10							
A-C	5.07							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
B-C	0.19	10.12	0.019		0.0	0.0	0.3	
B-A	0.04	5.16	0.007		0.0	0.0	0.1	
C-AB	1.05	17.47	0.060		0.2	0.1	1.5	
C-A	10.48							
A-B	0.09							
A-C	4.25							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	20.6	13.7	2.1	0.10	2.1	0.10
B-A	4.1	2.7	0.9	0.22	0.9	0.22
C-AB	161.1	107.4	18.2	0.11	18.2	0.11
C-A	1103.2	735.4				
A-B	9.6	6.4				
A-C	466.2	310.8				
ALL	1764.7	1176.5	21.3	0.01	21.3	0.01

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

APPENDIX F

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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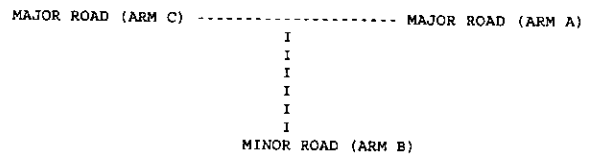
Run with file:- "l:\F46343\Junc-ana\WC10AM02.vpi" at 09:16:10 on Tuesday, 22 October 2002

RUN TITLE
****

WC10AM02-Wykery Copse/Peacock Lane Prpsd Jct+Peacock Farm 2010 AM Pk Flows+Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Peacock Lane (West)
ARM B IS Site
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.30 M.	
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.	
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.60 M.	
- VISIBILITY	(VC-B)	220.0 M.	
- BLOCKS TRAFFIC		YES	
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	90.0 M.	
- VISIBILITY TO RIGHT	(VB-A)	43.0 M.	
- LANE 1 WIDTH	(WB-C)	-	
- LANE 2 WIDTH	(WB-A)	-	
- WIDTH AT 0 M FROM JUNC.		10.00 M.	
- WIDTH AT 5 M FROM JUNC.		4.28 M.	
- WIDTH AT 10 M FROM JUNC.		3.10 M.	
- WIDTH AT 15 M FROM JUNC.		2.90 M.	
- WIDTH AT 20 M FROM JUNC		2.90 M.	
- LENGTH OF FLARED SECTION		1 VEHS	

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	16.17	24.26	16.17
ARM B	15.00	45.00	75.00	0.26	0.39	0.26
ARM C	15.00	45.00	75.00	7.63	11.44	7.63

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.002	0.998
		0.0	2.0	1292.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.476	0.000	0.524
		10.0	0.0	11.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.997	0.003	0.000
		608.0	2.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
07.45-08.00								
B-C	0.14	6.35	0.022		0.0	0.0	0.3	
B-A	0.12	3.83	0.033		0.0	0.0	0.5	
C-AB	0.05	12.67	0.004		0.0	0.0	0.1	
C-A	7.57							
A-B	0.02							
A-C	16.15							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-C	0.16	5.53	0.030		0.0	0.0	0.4	
B-A	0.15	2.71	0.055		0.0	0.1	0.8	
C-AB	0.08	12.91	0.006		0.0	0.0	0.1	
C-A	9.03							
A-B	0.03							
A-C	19.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-C	0.20	4.31	0.047		0.0	0.0	0.7	
B-A	0.18	1.16	0.158		0.1	0.2	2.3	
C-AB	0.13	13.28	0.010		0.0	0.0	0.2	
C-A	11.02							
A-B	0.04							
A-C	23.62							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-C	0.20	4.30	0.047		0.0	0.0	0.7	
B-A	0.18	1.16	0.158		0.2	0.2	2.7	
C-AB	0.13	13.28	0.010		0.0	0.0	0.2	
C-A	11.02							
A-B	0.04							
A-C	23.62							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-C	0.16	5.52	0.030		0.0	0.0	0.5	
B-A	0.15	2.71	0.055		0.2	0.1	1.0	
C-AB	0.08	12.91	0.006		0.0	0.0	0.1	
C-A	9.03							
A-B	0.03							
A-C	19.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
B-C	0.14	6.35	0.022		0.0	0.0	0.3	
B-A	0.12	3.83	0.033		0.1	0.0	0.5	
C-AB	0.05	12.67	0.004		0.0	0.0	0.1	
C-A	7.57							
A-B	0.02							
A-C	16.15							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	15.1	10.1	3.0	0.20	3.0	0.20
B A	13.7	9.1	7.8	0.57	7.8	0.57
C-AB	7.9	5.3	0.7	0.08	0.7	0.08
C-A	828.5	552.4				
A-B	2.7	1.8				
A-C	1771.6	1181.1				
ALL	2639.6	1759.7	11.4	0.00	11.4	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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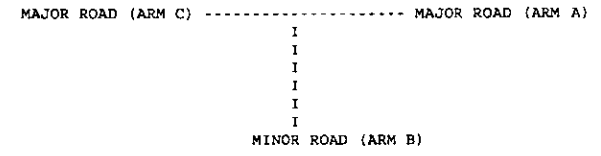
Run with file:- "l:\F46343\Junc-ana\WC10PM02.vpi" at 09:15:45 on Tuesday, 22 October 2002

RUN TITLE
****

WC10PM02-Wykery Copse/Peacock Lane Prpsd Jct+Peacock Farm 2010 PM Pk Flows + Dev

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Peacock Lane (West)
ARM B IS Site
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.30 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.60 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	90.0 M.
- VISIBILITY TO RIGHT	(VB-A)	43.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		4.28 M.
- WIDTH AT 10 M FROM JUNC.		3.10 M.
- WIDTH AT 15 M FROM JUNC.		2.90 M.
- WIDTH AT 20 M FROM JUNC.		2 90 M
- LENGTH OF FLARED SECTION		1 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.19	13.78	9.19
ARM B	15.00	45.00	75.00	0.10	0.15	0.10
ARM C	15.00	45.00	75.00	12.09	18.13	12.09

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.014	0.986
		0.0	10.0	725.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		4.0	0.0	4.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.991	0.009	0.000
		958.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00									
	B-C	0.05	9.21	0.005		0.0	0.0	0.1	
	B-A	0.05	4.41	0.011		0.0	0.0	0.2	
	C-AB	0.28	16.40	0.017		0.0	0.0	0.3	
	C-A	11.81							
	A-B	0.13							
	A-C	9.06							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15									
	B-C	0.06	8.69	0.007		0.0	0.0	0.1	
	B-A	0.06	3.61	0.017		0.0	0.0	0.2	
	C-AB	0.39	17.12	0.023		0.0	0.0	0.4	
	C-A	14.04							
	A-B	0.15							
	A-C	10.82							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30									
	B-C	0.07	7.97	0.009		0.0	0.0	0.1	
	B-A	0.07	2.51	0.029		0.0	0.0	0.4	
	C-AB	0.78	19.08	0.041		0.0	0.1	0.9	
	C-A	16.90							
	A-B	0.18							
	A-C	13.25							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45									
	B-C	0.07	7.97	0.009		0.0	0.0	0.1	
	B-A	0.07	2.51	0.029		0.0	0.0	0.4	
	C-AB	0.78	19.08	0.041		0.1	0.1	0.9	
	C-A	16.90							
	A-B	0.18							
	A-C	13.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-C	0.06	8.69	0.007		0.0	0.0	0.1	
B-A	0.06	3.61	0.017		0.0	0.0	0.3	
C-AB	0.39	17.12	0.023		0.1	0.0	0.4	
C-A	14.04							
A-B	0.15							
A-C	10.82							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
B-C	0.05	9.21	0.005		0.0	0.0	0.1	
B-A	0.05	4.41	0.011		0.0	0.0	0.2	
C-AB	0.28	16.40	0.017		0.0	0.0	0.3	
C-A	11.81							
A-B	0.13							
A-C	9.06							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	5.5	3.7	0.6	0.12	0.6	0.12
B-A	5.5	3.7	1.7	0.31	1.7	0.31
C-AB	43.6	29.0	3.2	0.07	3.2	0.07
C-A	1282.4	854.9				
A-B	13.7	9.1				
A-C	994.1	662.8				
ALL	2344.8	1563.2	5.5	0.00	5.5	0.00

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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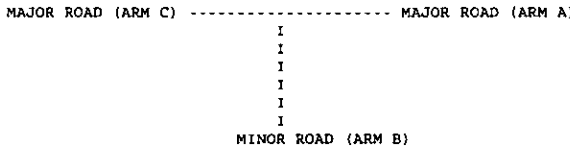
Run with file:- "l:\F46343\Junc-ana\WB10AM01.vpi" at 11:38:28 on Monday, 21 October 2002

RUN TITLE
****

WB10AM01-Wykery Copse/Beehive Rd Exist Jct 2010 AM Peak Flows+Dev+Peacock Farm

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Peacock Lane (West)
ARM B IS Beehive Road
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.60 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.80 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	85.0 M.
- VISIBILITY TO RIGHT	(VB-A)	64.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		6.88 M.
- WIDTH AT 10 M FROM JUNC.		4.69 M.
- WIDTH AT 15 M FROM JUNC.		3.88 M.
- WIDTH AT 20 M FROM JUNC.		3.27 M.
- LENGTH OF FLARED SECTION		2 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	16.00	24.00	16.00
ARM B	15.00	45.00	75.00	0.55	0.83	0.55
ARM C	15.00	45.00	75.00	7.79	11.68	7.79

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.005	0.995
		0.0	6.0	1274.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.477	0.000	0.523
		21.0	0.0	23.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.990	0.010	0.000
		617.0	6.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
07.45-08.00								
B-C	0.29	6.55	0.044		0.0	0.0	0.7	
B-A	0.26	3.50	0.075		0.0	0.1	1.1	
C-AB	0.16	12.93	0.012		0.0	0.0	0.2	
C-A	7.63							
A-B	0.08							
A-C	15.93							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-C	0.34	5.69	0.060		0.0	0.1	0.9	
B-A	0.31	2.51	0.125		0.1	0.1	1.9	
C-AB	0.23	13.17	0.018		0.0	0.0	0.3	
C-A	9.07							
A-B	0.09							
A-C	19.02							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-C	0.42	4.33	0.097		0.1	0.1	1.5	
B-A	0.38	1.16	0.332		0.1	0.4	5.7	
C-AB	0.38	13.55	0.028		0.0	0.0	0.5	
C-A	11.01							
A-B	0.11							
A-C	23.29							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-C	0.42	4.30	0.098		0.1	0.1	1.6	
B-A	0.38	1.16	0.332		0.4	0.5	6.9	
C-AB	0.38	13.55	0.028		0.0	0.0	0.5	
C-A	11.01							
A-B	0.11							
A-C	23.29							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-C	0.34	5.68	0.060		0.1	0.1	1.0	
B-A	0.31	2.51	0.125		0.5	0.1	2.5	
C-AB	0.23	13.18	0.018		0.0	0.0	0.3	
C-A	9.07							
A-B	0.09							
A-C	19.02							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
B-C	0.29	6.54	0.044		0.1	0.0	0.7	
B-A	0.26	3.50	0.075		0.1	0.1	1.3	
C-AB	0.16	12.93	0.012		0.0	0.0	0.2	
C-A	7.63							
A-B	0.08							
A-C	15.93							

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.4
08.45	0.5
09.00	0.1
09.15	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	31.5	21.0	6.4	0.20	6.4	0.20
B-A	28.8	19.2	19.4	0.67	19.4	0.67
C-AB	23.3	15.5	2.1	0.09	2.1	0.09
C-A	831.0	554.0				
A-B	8.2	5.5				
A-C	1746.9	1164.6				
ALL	2669.7	1779.8	28.0	0.01	28.0	0.01

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

****** PICADY 4 run completed.

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAR 2001)

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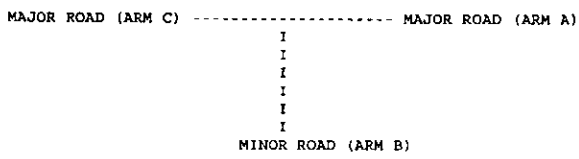
Run with file:- "l:\P46343\Junc-ana\WB10PM01.vpi" at 11:39:30 on Monday, 21 October 2002

RUN TITLE
****

WB10PM01-Wykery Copse/Beehive Rd Exist Jct 2010 PM Peak Flows+Dev+Peacock Farm

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Peacock Lane (West)
ARM B IS Beehive Road
ARM C IS Peacock Lane (East)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.60 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.80 M.
- VISIBILITY	(VC-B)	220.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	85.0 M.
- VISIBILITY TO RIGHT	(VB-A)	64.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		10.00 M.
- WIDTH AT 5 M FROM JUNC.		6.88 M.
- WIDTH AT 10 M FROM JUNC.		4.69 M.
- WIDTH AT 15 M FROM JUNC.		3.88 M.
- WIDTH AT 20 M FROM JUNC.		3.27 M.
- LENGTH OF FLARED SECTION		2 VEHS

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	9.41	14.12	9.41
ARM B	15.00	45.00	75.00	0.22	0.34	0.22
ARM C	15.00	45.00	75.00	11.95	17.92	11.95

TIME	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.027	0.973
		0.0	20.0	733.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		9.0	0.0	9.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.978	0.022	0.000
		935.0	21.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-C	0.11	8.26	0.014		0.0	0.0	0.2	
B-A	0.11	4.48	0.025		0.0	0.0	0.4	
C-AB	0.74	16.87	0.044		0.0	0.1	0.9	
C-A	11.21							
A-B	0.25							
A-C	9.16							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-C	0.13	7.79	0.017		0.0	0.0	0.3	
B-A	0.13	3.68	0.037		0.0	0.0	0.5	
C-AB	1.08	17.77	0.061		0.1	0.1	1.5	
C-A	13.19							
A-B	0.30							
A-C	10.94							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-C	0.16	7.11	0.023		0.0	0.0	0.3	
B-A	0.16	2.57	0.064		0.0	0.1	0.9	
C-AB	2.20	19.77	0.111		0.1	0.2	3.7	
C-A	15.28							
A-B	0.37							
A-C	13 40							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-C	0.16	7.11	0.023		0.0	0.0	0.4	
B-A	0.16	2.56	0.064		0.1	0.1	1.0	
C-AB	2.20	19.78	0.111		0.2	0.2	3.8	
C-A	15.27							
A-B	0.37							
A-C	13.40							