APPENDIX A – INTEGRATED MASTERPLAN

nicol thomas

Revision	Date	Details
C	21.06.16	Layout for proposed pub updated

nicol thomas

architects project managers construction cost consultants CDM co-ordinators

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Also at Oldham

Proposed Developments at and adjoining Brook Farm, Marden, Herefordshire: Illustrative Masterplan

Client:	S&A Group			
Job:	Brook Farm, Marden			
Drawing title:	Illustrative Masterplan			
Drawing Number: (Job number)	**B6144**	**(PL)**	**05**	**Revision: D**
Scale:	1@500@A0			
Date:	06.05.2016			
Drawn by/ checked by:				

APPENDIX B – BROOK FARM OFFICE REDEVELOPMENT SITE ACCESS AND PARKING APPRAISAL

[PROVIDED SEPERATELY OWING TO FILE SIZE]

APPENDIX C – 'THE VOLUNTEER INN'
PUBLIC HOUSE DEVELOPMENT
HIGHWAY IMPACT STATEMENT

[PROVIDED SEPERATELY OWING TO FILE SIZE]

APPENDIX D – SITE VISIT PHOTOGRAPHS

▲ 1) Existing Car Park access at C1120

▲ 2) Existing Brook Farm Site Access at C1120

▲ 3) C1120, looking north past Brook Farm access

▲ 4) C1120, looking north past the Volunteer Inn (with S&A lorry)

▲ 5) C1120, looking south past from Walkers Green and the Volunteer Inn

▲ 6) C1120 / Paradsie Green junction (with S&A lorry)

▲ 7) Existing black 'lorry route' signage on Walkers Green

▲ 7) Existing bus stop and footway at the Volunteer Inn

APPENDIX E – S&A SAWA SITE RULES

CAMPSITE RULES

ACCOMMODATION ENTITLEMENT

Accommodation is only available for people engaged with working on the farm. Should you stop working of your own accord or not be offered work by the company or be dismissed, you will be asked to leave the accommodation.

Anyone found using accommodation without authorisation after their termination of employment may be subject to prosecution.

You will not be able to change the accommodation you have been allocated without consent.

You have to keep your accommodation and the area surrounding it clean and tidy at all times. If your accommodation is found in an unsatisfactory condition the company may ask you to leave the accommodation and ask you to pay for damages.

CAR RESTRICTION

There is a strict policy that you will not be allowed to bring cars to any of our farm sites during your stay.

WEARING IDENTIFICATION CARDS

Any worker employed by the company as a seasonal agricultural worker will be given a work ID card. For the sake of security on our camp sites and places of work the ID card must be worn at all times.

VISITORS

Visitors are only allowed onto the farm or any of the campsites with prior permission from the camp site manager. To have a visitor you will have to make a request 2 days in advance for a visitors permit.

Visitors must wear a visitor badge provided by the company at all times during their visit. Visitors must be accompanied by the host at all times during their visit. Failure of a visitor to wear the visitor badge will result in them being escorted off site. If you have visitors without permission you will be subject to disciplinary action which may result in dismissal.

FIRE FIGHTING EQUIPMENT

For your safety the farm and its work sites are equipped with firefighting equipment such as fire extinguishers and fire alarms. Should you be found to interfere with any of this equipment other than for its proper use, it will be considered gross misconduct and you will be dismissed and made to pay for any associated costs and service charges of the equipment.

ELECTRICAL EQUIPMENT

Interfering with electricity meters is strictly prohibited. If you are found to be interfering with any electrical equipment at the campsite, it will be considered as gross misconduct and you will be dismissed.

PERSONAL ELECTRICAL EQUIPMENT

If you bring with you or purchase any electrical appliances you must leave them with the campsite manager to have them tested to ensure they are safe to use in your accommodation. After testing they will be returned to you with a stamp of approval or with information explaining why they are unsuitable and must not be used. Failure to adhere to this rule will lead to disciplinary action which could result in dismissal.

POOR BEHAVIOUR

We expect people to behave appropriately. Excessive drinking or bad behaviour is not acceptable and should you become a nuisance, drunk or difficult to control on company property, you will either be escorted back to your accommodation, or in extreme cases, reported to the police where criminal charges may be made against you. In either case you will be dismissed.

NOISE ABATEMENT

Because of the close proximity of local residents and the need for other workers to have peace and quiet in their accommodation, particularly if they have to start work early in

the mornings, the playing of loud music is strictly forbidden at all times.

You may play music inside your accommodation at reasonable volumes. Anyone found playing music or making noise considered to be offensive, annoying or loud will have disciplinary action taken against them.

SMOKING POLICY

We have a No Smoking policy in many areas of the farm including all accommodation units. The Policy must be complied with. Smoking in accommodation or at the workplace will lead to dismissal.

RESTRICTED AREAS

You are not allowed to enter any fenced off areas. Disregarding this rule will result in dismissal.

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sitemap

APPENDIX F – SCOPING CORRESPONDENCE

Herefordshire Council

Economy, Communities and Corporate Directorate
Director: Geoff Hughes

Mr Aspbury
Antony Aspbury Associates Ltd
Unit 20
Park Lane Business Centre
Park Lane, Basford
Nottingham
NG6 0DW

Our Ref: P142718/CE
Please ask for: Ms K Gibbons
Direct Line / Extension: 01432 261781
E-mail: kgibbons@herefordshire.gov.uk

13 November 2014

Dear Mr Aspbury

SITE:	**Land At Brook Farm, Marden, Herefordshire, HR1 3ET**
DESCRIPTION:	**Pre-application advice request for phased redevelopment of existing seasonal agricultural works accommodation site (comprising caravans and demountable pods) to provide 76 no. (29 no. 6 bed, 30 no. 13 bed and 17 no. 15 bed) cluster apartments (819 spaces) in permanent conventional low rise buildings, new vehicular access and private internal access roads, amenity open space and landscaping**
APPLICATION NO:	**P142718/CE**
APPLICATION TYPE:	**Pre App Advice**

I refer to your pre-planning application advice request received on 29 August 2014 and our subsequent meeting on the 8th October. I apologise for the delay in formally responding to you. I have now had the responses from consultees that allow me to offer you the following advice.

The application site and its associated agricultural holding at Brook Farm has a lengthy planning history that has established the siting of agricultural seasonal workers accommodation on the site. The latest application reference 111237 varied condition 3 of the original approval DMCW/092985/F and secured planning permission for the occupation of the accommodation to persons solely employed by S and A produce Ltd to work on Brook Farm and limits this accommodation to being for no more than 850 workers at any one time. Workers are currently housed within the static caravans, demountable buildings and accommodation block and this permission expires in 2019.

As detailed in your letter and expanded upon at our meeting the current accommodation is no longer meeting the needs of the business and its workers and you are seeking to replace these with the phased programme of development high quality, permanent accommodation. You have included a masterplan with the submission that details 76 self-contained, two and three storey units that you refer to as being 'cluster' apartments, these being living units with separate bedrooms but with shared catering, dining, bathing and living accommodation. This is a model also used for student accommodation. The site is that that is broadly speaking the site of the static caravans and the recreation field to the south.

During our meeting we discussed the need to demonstrate the long term objectives of the company so and the continued need for this level of accommodation that we could move forward in confidence that there would be an ongoing need for SAW accommodation. I note from your letter that you intend to include a statement in respect of commercial and operational need. I assume that this would also

include details of financial viability moving forwards as well (kept confidential). We would welcome the opportunity to consider this before submission of possible so that if any additional details are needed we could

Having discussed this with the Councils County Land Agent, George Thompson, who was at the meeting he seemed relatively comfortable with the suggestion of improving facilities and accommodation for Seasonal Workers and the ongoing need subject to confirmation within the relevant reports and statements.

At present the polytunnels at the site (approved initially under application DCCW2009/0161/F s varied application reference 123499) requires that the polytunnels, table tops and associated equipment hereby permitted shall be removed and the land restored to its former condition on or before 27th May, 2019. I understand that you intend to submit and application for their permanent retention and I would suggest that this is submitted prior to, and permission secured prior to making the application for permanent accommodation

The very nature of SAW accommodation is that it is not required all year long and you suggested that you may wish to offer the accommodation for alternative uses so that these building are not sitting empty for months at a time. You did not expand on this, but clearly this would potentially have a significant impact upon the acceptability of the use in terms of highway safety / transport and the amenities of the locality. Once you have a clearer picture or idea of how this might work then we can offer some comments on this.

We also discussed concerns about 'future-proofing' of the development should the use cease or need for accommodation reduce (either permanently or on a season by season basis depending on demand) and you have suggested that the development could be designed so that alterations to the 'cluster block' style could be readily altered to form individual dwellings. Do you know how many dwellings this might create?

On this basis I think it is necessary to consider the proposal as a residential scheme and the requirements that this may bring.

Sustainability of the location

There is a 'part time / temporary' residential use established on this site, with all workers having access to the services and facilities and employment within the site. There is a limited 'need' to travel from the site on a day to day basis and this is reflected in the 'no car' policy. There is a bus stop at the site that serves the wider area and the local shops and pub are in walking distance.

If a permanent 'long term' solution is to be pursued we would expect connectivity via an off road footway to be included in any application. The feasibility to achieving this should be explored as part of the application and if this cannot be achieved then we would need to consider the overall acceptability of permanent residential development in this location as a whole.

Highway Safety

The proposal would require the introduction of a new access, the position of this being detailed on the drawing supplied with the submission. This would introduce an access onto the C1120, a road that, whilst being within the 30mph area could be liable to attract quite high speeds given the nature of the road on the approach towards the more built up area of the village.

I am unable to confirm what visibility splays would be required at this time and it may be that once the site and surrounds are surveys that there would be ample visibility in either direction to serve the

proposal. Otherwise, it may be appropriate to undertake speed surveys for a seven day period to ascertain true traffic speeds to inform the required visibility in this location.

Having visited the site it would appear that a significant amount of the hedge would need to be removed / translocated (if possible) behind the splay and footway to ensure safe access / egress from the site.

At perception locally is that the highway network locally is already heavily trafficked from vehicles serving Brook Farm. As we know these are not cars used by worked as there is a no car policy on the site. Whilst this may continue if the site is used for SAW accommodation, the implications if this were 'open market housing' or other uses would have to be fully assessed through the submission of a Transport Assessment.

In terms of access to the site and layout within the site, this would need to take reference from the Highways Design Guide, as amended by the Manual for Streets and to the guidance provided on the website entitled 'Guidance notes for developers and landlords on the storage & collection of domestic refuse and recycling'. The highway and access would need to be will need to be constructed to adoptable standards.

For future consideration car parking standards would be 2 spaces for each 2 or 3 bedrooms dwelling and 3 car spaces for a 4 bed.

Cycle storage should be provided and be: covered and secure, individual lockers, or can be in garages. Garages should be a minimum of 3m by 6m per space internally, as per MfS. In the event that you are using communal areas, then communal cycle parking can be provided but details should be considered.

Matters of pedestrian safety connectivity have been considered above.

Landscape impact and Considerations

Following our meeting the Councils Landscape Officer considered the site from the wider public vantage points, noting the PROW's to the Southern Boundary (MR22a) , 550m east of the proposal (MR21) and Bridleway MR20 to the north of the site. She has made the following comments:

The site is currently used as a site for seasonal workers accommodation and comprises in the main of hard standing in which static caravans are sited. As such the site is relatively well contained. To the west is an extensive mature tree belt enclosing the site from views along PROW MR21 which runs 550m east of the site. To the south is the main extent of the farm complex which consists of numerous farm buildings in addition to numerous poly tunnels which form the soft fruit operation, these essentially screen the site from views from a northerly direction located out in open countryside, including the bridleway MR20. Currently views of the site from the west are obscured by a substantial native hedgerow and views along the southern boundary, along which PROW MR22A runs, are filtered by a hedgerow and a maturing tree belt.
The proposals, as outlined in the meeting 8th October, would take the form of permanent 2 ½ storey housing blocks set out in a collegiate campus layout. Given the proposed heights of these housing blocks and their permanent nature. The proposal raises a number of concerns with regard to landscape and visual impact. The following points will therefore need to be addressed as part of the information required:

- *The potential visual impact of 2 ½ storey housing blocks, in particular along the more sensitive western and southern boundaries.*

- *The potential layout of the proposals, as discussed in the meeting, these are to take the form of collegiate campus design. Consideration should be given as to how this layout relates to the settlement of Marden, the Listed Buildings adjacent to both the north and southern boundary and the rural setting in which the proposal sits: In terms of layout, scale, form, landscaping within the site and boundaries, access and movement around the site, connectivity with the settlement and beyond*

In terms of supporting documentation we would expect the following to accompany an application:

- *A Tree and Hedgerow survey to boundaries in accordance with BS5837:2012*
- *A Topographic Survey with Existing and Proposed Levels (details of soil / waste disposal from bunds?)*
- *Landscape and Visual Impact Assessment*
- *Landscaping proposals illustrating hard and soft landscape details*
- *Landscape and ecological management plan*

Before submission of any detailed application, it would be useful to see some more detailed plans or some examples of this type of collegiate layout / design. Design proposals and impact would be considered having regard to policies LA2, LA3, LA5, LA6, DR1 and H13 of the Unitary Development Plan and the guidance contained within the National Planning Policy Framework.

I would also expect any application to address the potential conflict of noise / disturbance from the operation of S and A for occupants of any open market dwellings? (assuming the building and farm is still operational)

Ecology and Biodiversity

The National Planning Policy Framework 2012 states that "*The planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity wherever possible*". It goes on to state that "*when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity*" and "*opportunities to incorporate biodiversity in and around developments should be encouraged*".

The applicant will need to commission an ecological survey to establish the potential impacts on habitats and protected species that may be present. As protected species are a 'material consideration', Herefordshire Council cannot determine an application of this nature until all the survey, mitigation and compensation information is received. The Council will also expect the applicant to include opportunities for biodiversity enhancement.

Please note that information pertaining to the presence and location of badgers much be submitted as a report supplement and marked confidential. Information regarding badgers will not be published to the website.

Please also note that late autumn and winter is not optimal for surveys for vegetation surveys and most resident protected species: the best which maybe achieved will be scoping surveys which identify the likely presence of protected species and the further surveys required to determine mitigation. In most cases scoping surveys will not be sufficient to satisfy the ecological criteria for planning approval.

Herefordshire Council

With regard to nearby sites designated for nature conservation, the ecological report should assess the impact of the proposals on nearby special wildlife sites, traditional orchards and ancient woodlands (both of which are Habitats of Principle Importance under the NERC Act 2006), and SSSIs. The report should conform to the standard defined by BS 42020:2013 Biodiversity: Code of practice for planning and development standards. The proposed development lies within the catchment of the R. Lugg which connects to the R. Wye Special Area of Conservation (SAC). There will need to be enough information provided for the LPA to carry out a Habitats Regulations Screening Assessment. The report should refer to emissions and management of water (foul and surface rain water) and the mitigation measures to ensure that the watercourse and the SAC will not be affected in any way if a non-mains system of foul drainage is proposed.

Herefordshire Council can refuse permission if the applicant does not provide adequate information on protected species, as it will be unable to meet the requirements of the NPPF or the Wildlife & Countryside Act 1981 and the Conservation of Habitats & Species Regulations 2010. Failure to provide enough information for a Habitats Regulation Assessment will result in the LPA having to conclude that there will be a Likely Significant Effect upon the SAC and objections from Natural England.

The ecological survey must include sufficient surveys to establish species present as well as population sizes; information on exact roosting sites and flight lines for bats will be needed for sites where they are found to be present. The report must detail mitigation, compensation and enhancement measures (including landscape design or retention) in accordance with the NPPF and Herefordshire's UDP policies NC1, NC6, NC7, NC8 and NC9. An assessment and mitigation strategy for nesting birds should also be forthcoming.The methodology of the surveys can be discussed with Herefordshire Council's Ecologist before the consultant starts the survey.

The applicant should submit the following as part of a planning application:

- A Preliminary Ecological Appraisal report, with further Protected and/or Priority Species surveys as appropriate. All surveys should follow accepted Natural England Methodologies; the length and duration of surveys should preferably be agreed with the Council's Ecologist.
- Proposed mitigation, compensation and enhancement measures for all species, habitats and designated sites potentially affected which should also be agreed by the applicant.
- Habitat and landscape measures proposed as mitigation for the above should be detailed in the recommendations of the report and shown on all appropriate documents i.e. architectural drawings
- A Sustainable Drainage System (SuDS) accommodating biodiversity enhancement features together with any foul drainage management proposals.

The biological records provided in the ecological report will be forwarded to the Herefordshire Biological Records Centre.

Further guidance on conservation and ecological issues is available on the Council's website at: https://beta.herefordshire.gov.uk/conservation/

The applicant should note that if European Protected Species are found to be present on a development site and will be affected by the development proposals, the Local Planning Authority has to consider whether the application satisfies the three tests prior to determining the application. Applicants will need to provide information to enable this to be done.

The three tests are:

1. That the development is "in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".
2. That there is "no satisfactory alternative"
3. That the derogation is "not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range"

EPS Licensing

If a development could affect a European Protected Species (EPS), a licence from Natural England's Wildlife Licensing Unit (WLU) (formerly Defra) may also be required before works commence. Should it be decided that an EPS licence is required the consultant should include an outline Method Statement with the planning application. A full working Method Statement will be required for the EPS development licence application, a copy of which should also be submitted to the Local Planning Authority. Currently the applicant must apply for an EPS licence before development can commence.

The WLU must also be satisfied that three tests are satisfied before a licence is issued.

Public Open Space Requirements

I draw to your attention the requirements of policy H19 of the Herefordshire Unitary Development Plan and the necessity to provide outdoor playing space. We are is a difficult position with the unknown nature of the future use and I have not been able to speak with my colleague in Parks and Countryside to establish what she would recommend in this instance. Upon her return from leave I will endeavour to send this on to you.

Drainage and Flood Risk

The proposed development site is located entirely within Flood Zone 1, a low risk flood area with an annual probability of flooding from rivers or the sea of less that 0.1% (1 in 1000 years). As the site covers an area greater than 1ha, a flood risk assessment (FRA) will be required as part of the planning application. Due to the low fluvial flood risk, this assessment should focus on flood risks from other sources and the management of the additional surface water runoff generated by the proposed development. However, as the development is located in close proximuty to the fluvial flood extents, we would require that the Applicant considers the extent of the high risk Flood Zone 3 after taking the potential effects of climate change into account.

The FRA should be undertaken in accordance with the requirements of the National Planning Policy Framework (NPPF). Guidance on the required scope of the FRA is available on the EA website at http://www.environment-agency.gov.uk/research/planning/93498.aspx.

Surface Water Flood Risk

The Environment Agency's Risk of Flooding from Surface Water shows that the site is not located in an area at risk of flooding from surface water. This should be confirmed and discussed in the Applicant's FRA along with any required mitigation or management measures.

Other Considerations and Sources of Flood Risk

The FRA should consider all source of flooding. In accordance with the NPPF the following sources of flooding should be considered:

- Fluvial;

- Tidal, if appropriate;
- Groundwater;
- Surface water, including overland runoff;
- Sewers; and
- Artificial sources such as reservoirs and canals.

Surface Water Drainage

As part of any application submission, an outline drainage strategy demonstrating how surface water and foul water from the proposed development will be managed and we would liaise with the Councils Land Drainage Engineers on this submission. Early engagement on surface water drainage issues is encouraged especially now that the requirements under Schedule 3 of the Flood Water Management Act 2010 (due to be enacted in late 2014) all new drainage systems for new and redeveloped sites must meet the new National Standards for Sustainable Drainage (currently in draft) and will require approval from the Lead Local Flood Authority (Herefordshire Council). If approval is gained, the site drainage may be eligible for adoption by Herefordshire Council. There are implications for this in respect of Section 106 contributions.

Foul Water Drainage

We recommend that the applicant should contact Dwr Cymru Welsh Water in regards to foul water discharge from the site to check whether it is feasible to connect to the public sewers and that there is sufficient capacity in the system.

Section 106 and Control of Occupation matters

As you mention in your letter and as discussed at the meeting, there are various mechanisms and ways of controlling occupation, Section 106 agreements being one of these. Without some more detailed explanation of use / future use I'm not in a position to offer you a solution yet.

Likewise, should the site be used in the future for open market dwellings then the site would be liable for both contributions (policy DR5 and SPD – Planning Obligations) and affordable housing provision (35 % in accordance with policy H9).

I would suggest that we meet with the Councils Planning Obligations Manager, Yvonne Coleman, and talk the proposals through and try and find a resolution so that we can provide you with a Heads of Terms that is fit for purpose.

Community Consultation

As with any large-scale proposal I would strongly recommend you conduct pre-application engagement with the Parish Council in the first instance and then potentially with the wider local community. Early engagement with stakeholders is encouraged by the Council's Statement of Community Involvement and further reinforced in emerging Local Plan policies.

In terms of the Neighbourhood Plan process I am informed that the Parish has designated a Neighbourhood Plan Area and has conducted a first round of public consultation. The Council's Neighbourhood Plan support officer for Marden is Edward Bannister. You may consider contacting him with a view to liaison with the Parish (ebannister@herefordshire.gov.uk or 01432 260126).

Conclusion

I am of the opinion that there is some scope to provide some form of permanent SAW accommodation on this site (Subject to confirmation of economic viability / justification). The key concerns relate to the impact of this on the landscape in terms of scale and density and how this development would relate with the village and its forms and pattern. Technical matters that need resolution / consideration are detailed above.

This advice is given in the context of your request and the information provided in support and has regard to the Council's planning policy. Should you wish to submit a planning application I would recommend that this advice is taken into account. However this advice is offered without prejudice to any future decision the Council may make following the formal consideration of a planning application.

Yours sincerely,

KG

MS K GIBBONS
PRINCIPAL PLANNING OFFICER

Andrew Dennison

From: Gibbons, Kelly <kgibbons@herefordshire.gov.uk>
Sent: 04 August 2015 15:24
To: Andrew Dennison
Cc: Smith, Adrian; Evans, Bruce; Chris Bancroft
Subject: 142718 - Proposed Development at Brook Farm, Marden

Dear Andrew,

Thank you for your email. Adrian Smith had responded to me yesterday but I had not had the chance to get these to you. These comments are as follows:

The comments refer to the submitted Transport Assessment Scoping Report and the proposals outlined in that document.

Whilst the updating of the SAWA accommodation is acceptable in principle, of concern is the more permanent accommodation and proposal that such accommodation may be used in the off season or potentially permanently as open market accommodation (Para 3.2.4). With limited parking provision to what are effectively large HMOs, and in view of the village location, lack of local employment other than S&A , limited public transport capacity and limited local facilities a development of this size and format is very questionable, as car use is likely to be high. The SAWA is suited to the current use whereby workers are already at their place of work or transport to work and shops is provided by the employer and car ownership and use is kept to an absolute minimum and resultant trip generation on the network is kept low..

Therefore, as the units as proposed would not be compatible with a permanent open market use, the replacement of the accommodation in my view should remain of a temporary type, albeit potentially improved to Pods or demountable units, so that if the SAWA need ceases, the accommodation can then be removed. It is interesting that multi room units are proposed in light of the stated demographic change to more couple/family groups of workers mentioned in the covering letter (Page 3, bullet point 3).

Whilst it is noted in the document that the proposal for open market would need a separate application, it is obviously a determinant factor now, both as justification for the type, standard and format of the accommodation and an indication of the potential long term objective for the site, and indeed to secure funding such fall back option is mentioned in the documentation as necessary.

The document mentions in Para 3.22 the proposed residential development opposite (150431) but does not mention the current application 150989 for 90 dwellings adjacent to New House Farm.

The document also mentions in Para 3.44 the route for all traffic to the south as being via Moreton on Lugg to A49, rather than Sutton St Nicholas, but does not explain why and identifies all traffic via Route 1 (even that to the east) but does not appear to further clarify what this route is?

In Para 3.53 the document suggests that the bus service 426 has sufficient capacity, but this is very unlikely to be the case.

A further access onto the C road to serve the SAWA is undesirable, especially in view of the potential site opposite and suggested access to the 75 houses just to the south and the inter relationship of such access points needs to be considered. The need for an access to the SAWA other than through Brook Farm is also questioned, particularly as this is proposed to remain private..

Whilst not part of this pre app, I would comment that the indicative layout of the open market housing to the south implies substantially less than the 75 stated in the Transport Assessment Scoping (Para 4.1) and layout and parking would not reflect such numbers, as indeed does the lack of continuous footways into the site and

to the village centre. Clarification is required. The design with a long straight spine road is unlikely to maintain low vehicle speeds.

A continuous footway into the village centre will be required from the SAWA.

Visibility splays in accordance with measured 85%ile vehicle speeds will be required.

The rationale for combination of the two schemes and inter relationship mentioned that will necessitate coincident application is unclear, as I consider them to be two different proposals of different type and not related, with different points of access, therefore each should be separated and considered on its own merits, as should the supporting information.

One could even argue that if the application is purely for replacement of SAWA restricted accommodation of similar numbers to the existing and with car ownership/use restrictions as at present that a TA is not required and the combination of the open market housing to the south and future potential use of the SAWA accommodation only confuses the situation.

I will leave you to consider and discuss these as appropriate and we would be happy to organise a meeting if you are going to pursue this proposal.

Kind Regards

Kelly

Kelly Gibbons

Principal Planning Officer | Development Management

Economy, Environment and Culture | Places & Communities Directorate

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PO BOX 230
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HR1 2ZB

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01432 260000

General Planning Enquiries:
Planning_enquiries@herefordshire.gov.uk

From: Andrew Dennison [mailto:andrew-d@bancroftconsulting.co.uk]
Sent: 04 August 2015 11:48
To: Gibbons, Kelly
Cc: Smith, Adrian; Evans, Bruce; Chris Bancroft
Subject: RE: 142718 - Proposed Development at Brook Farm, Marden

Hello Kelly,

Further to circulation of our Scoping Study last month, I wondered whether you or your colleagues had been able to review this yet. Our client is keen to proceed with the project, and it would be helpful to confirm the study area such that we can promptly appoint traffic counts when schools reopen in September.

Do you know when we may expect your comments?

Kind regards

Andrew Dennison (Principal Engineer)

Bancroft Consulting Limited
www.bancroftconsulting.co.uk

Nottingham office: Bancroft Consulting, Jarodale House, 7 Gregory Boulevard, Nottingham, NG7 6LB
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Transport Assessments - Road Safety Audits - Access Appraisal - Highway Design - Travel Plans - Conceptual Design and Masterplanning

From: Andrew Dennison
Sent: 20 July 2015 09:25
To: 'Gibbons, Kelly'
Cc: Smith, Adrian; Evans, Bruce; Chris Bancroft
Subject: RE: 142718 - Proposed Development at Brook Farm, Marden

Thank you Kelly,

We will look forward to comments in due course.

Best regards

Andrew Dennison (Principal Engineer)

Bancroft Consulting Limited
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Transport Assessments - Road Safety Audits - Access Appraisal - Highway Design - Travel Plans - Conceptual Design and Masterplanning

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From: Gibbons, Kelly [mailto:kgibbons@herefordshire.gov.uk]
Sent: 17 July 2015 12:30
To: Evans, Bruce; Andrew Dennison
Cc: Smith, Adrian
Subject: RE: 142718 - Proposed Development at Brook Farm, Marden

No, it's a PDF and opens fine here.

Kelly

From: Evans, Bruce
Sent: 17 July 2015 12:06
To: Gibbons, Kelly; 'andrew-d@bancroftconsulting.co.uk'
Cc: Smith, Adrian
Subject: RE: 142718 - Proposed Development at Brook Farm, Marden

Hi Kelly,
I'm struggling to open this, are you having the same problem?
Cheers
Bruce

From: Gibbons, Kelly
Sent: 17 July 2015 11:41
To: 'andrew-d@bancroftconsulting.co.uk'
Cc: Smith, Adrian; Evans, Bruce
Subject: 142718 - Proposed Development at Brook Farm, Marden

Thank you Andrew, I will pass this onto my colleague in highways, Adrian Smith who may be dealing with this in the absence of the highways officer (Dave Davies) for the area who is currently on sick leave. I have also cc'd in his Line Manager, Bruce Evans.

I will formally re-consult on this and get back to you as soon as possible.

Regards

Kelly

From: Andrew Dennison [mailto:]
Sent: 17 July 2015 10:50
To: Gibbons, Kelly
Cc: Tony Aspbury; trevor.gregory@sagroup.co.uk; Peter Brown; Kevin Light; Chris Bancroft
Subject: Proposed Development at Brook Farm, Marden

Dear Ms Gibbons,

I refer to your letter dated 13 November 2014 (your ref: P142718/CE), which provided pre-application advice for the above site.

We are appointed by the landowner to provide highways and transportation advice, and accordingly I attach a copy of a 'Transport Assessment Scoping Note' for the attention of your Highways Officer. Our intent is to agree the scope of the transportation work required, in order that we can address any concerns you may have and prepare our submission report(s) promptly later this Summer.

If you could confirm receipt of this e-mail, forward it to Highways and possibly provide the Highways Officer's detail that would be much appreciated. We will look forward to receiving their comments in due course, however, please do not hesitate to contact us if you have any queries.

Best regards

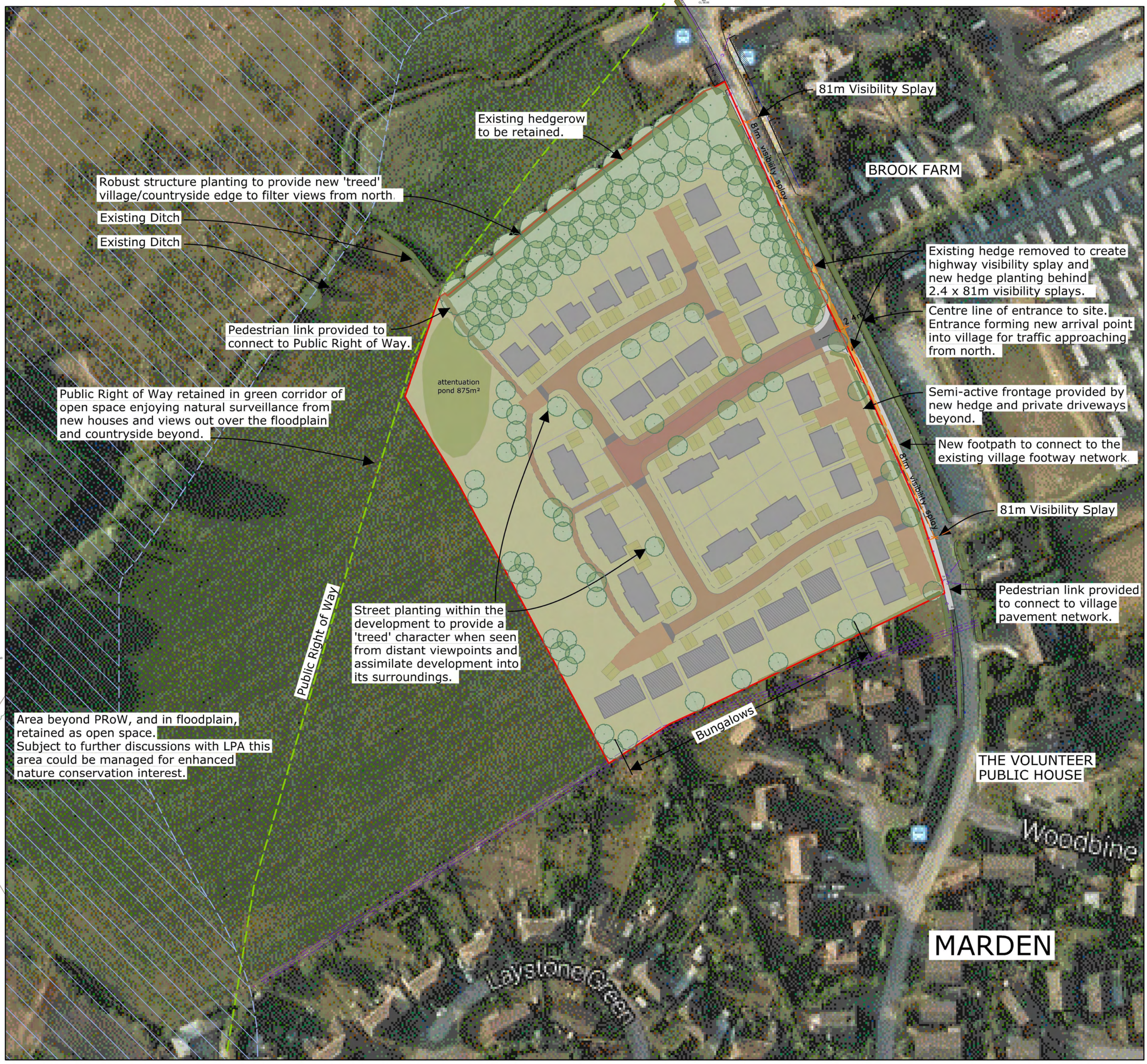
Andrew Dennison (Principal Engineer)

Bancroft Consulting Limited
www.bancroftconsulting.co.uk

*Nottingham office: **Bancroft Consulting, Jarodale House, 7 Gregory Boulevard, Nottingham, NG7 6LB***
tel (main): 0115 9602919 direct dial: 0115 9626503 fax: 0115 9648201 email: office@bancroftconsulting.co.uk

Transport Assessments - Road Safety Audits - Access Appraisal - Highway Design - Travel Plans - Conceptual Design and Masterplanning

APPENDIX G – PLANNING DOCUMENTS PERTAINING TO APPLICATION P150431/O



EXTENT OF DEVELOPMENT SITE
2.60 Hectare
26091 Sq. m

PUBLIC RIGHT OF WAY

AREA LIABLE TO FLOODING
ENVIRONMENT AGENCY MAPPING

HIGHWAYS KEY

Minor access road 5.5m wide with 2m footways

Shared surface road 4.5m wide with 2m service zone

Shared private drive min.3.5m wide

footpaths

Illustrative residential development blocks. up to 50 dwelling units

Existing Hedge Planting

Proposed Hedge Planting

Proposed Tree Planting

N

0m 10 20 40

hookmasonarchitecture
Hook Mason Limited
41 Widemarsh Street
Hereford
HR4 9EA
t. 01432 352299
f. 01432 352272
e. info@hookmason.co.uk
w. hookmason.co.uk

LAND OPPOSITE
BROOK FARM
MARDEN
HEREFORDSHIRE, HR1 3ET

ILLUSTRATIVE MASTERPLAN LAYOUT

SCALE @ A2	DATE	DRAWING NO.
1:1000	NOV 14	6243-1-8

DO NOT SCALE FROM THIS DRAWING DRAWN BY CE CHECKED BY DB

MEMORANDUM

To : **Internal Consultee Transportation**

From : **Mr Edward Thomas, Planning Services, Blueschool House - H31**

Tel : **01432 260479** **My Ref** : **150431**

Date : **18 February 2015** **Your Ref** :

SITE:	**Brook Farm, Marden, Herefordshire, HR1 3ET**
APPLICATION TYPE:	**Outline**
DESCRIPTION:	**Proposed residential development of up to 50 homes.**
APPLICATION NO:	**150431**
GRID REFERENCE:	**OS 352008, 247929**
APPLICANT:	**Mr Paske**
AGENT:	**Mr D F Baume**

The application form, plans and supporting documents are available in Wisdom.

Please let me have your comments by 11/03/2015. If I have received no response by this date I shall assume that you have no objections. Should you require further information please contact the Case Officer. Any comments should be actioned in Civica to Mr Edward Thomas.

COMMENTS: (Continue on a separate sheet if necessary) SITE VISITED: YES
The consultee:- (delete as appropriate)

1. **Recommends that any permission which this Authority may wish to give include the following conditions:-**

The access proposed is acceptable.
The increase in traffic generated by the development is well within the capacity of the local highway network.
The footway along the frontage and connecting to the existing footway network is welcomed.

CAL Parking access and turning
CAZ Parking for site operatives

I 05 No drainage to discharge to the highway
I 09 Private apparatus within the highway
I 35 Highways Design Guide
I 45 Works within the highway

[If the above comments include standard note HN7 (Section 278 Agreements) please notify Blueschool House of this requirement as there is a requirement from 1st July 2002 to enter all Section 278/Section 106 Agreements on the Statutory Register]

SIGNED: David Davies. Area Engineer (Development Control)

DATE RETURNED: 24/3/15

Town and Country Planning Act 1990
Planning and Compensation Act 1991

REFUSAL OF PLANNING PERMISSION

Applicant:
Mr Paske
Wisteston
Marden
Herefordshire
HR1 3EU

Agent:
Mr D F Baume
Hook Mason Limited
41 Widemarsh Street
Hereford
Herefordshire
HR4 9EA

Date of Application: 12 February 2015 | Application No: 150431 | Grid Ref:352008:247929

Proposed development:

SITE: **Land opposite Brook Farm, Marden, Herefordshire, HR1 3ET**
DESCRIPTION: **Proposed residential development of up to 50 homes.**

THE COUNTY OF HEREFORDSHIRE DISTRICT COUNCIL hereby gives notice in pursuance of the provisions of the above Acts that PLANNING PERMISSION has been REFUSED for the carrying out of the development described above for the following reasons:

1 The proposal would occupy prominent and elevated land on the northern fringe of the village in close proximity to the River Lugg SSSI. Large-scale development of the type proposed would result in the loss of an important approach that defines the existing built edge to the village and a pattern of development that does not integrate successfully with the village or surrounding countryside. It is considered, therefore, that the development of this site for housing would be detrimental to the legibility and character of Marden and prejudicial to the village's rural setting.

It is therefore considered the scheme is contrary to the Herefordshire Unitary Development Plan 'saved' Policies S1, S2, DR1, H13, LA2 and LA3 and is also contrary to policies of the National Planning Policy Framework, including paragraphs 14, 17 and 109. The Council has properly assessed other relevant material considerations, including the benefits arising from the development, but considers none, either in isolation or combination, outweigh the significant and demonstrable adverse impacts associated with approval.

2 The proposed development, whilst making provision for a length of footpath from the southern edge of the access point, would not provide for a convenient or safe link to village amenities and services including the primary school, post office and shop. The intermittent nature and narrowness of footpaths in conjunction with the narrowness of local highways and frequency of vehicular use, which this proposal would likely intensify, is such that it would be unsafe to encourage pedestrians to access local amenities and services, which are approximately 800m distant. As a result of the likely severity of the impact on highway and pedestrian safety, the local planning authority considers that the presumption in favour of the approval of sustainable development as enshrined in the National Planning Policy Framework does not apply and planning permission should be refused as contrary to saved Policies S1, DR1, DR3 and H13 of the Herefordshire Unitary Development Plan and paragraphs 14, 17, 29, 32 and 61 of the National Planning Policy Framework.

Planning Services
PO Box 230,
Hereford,
HR1 2ZB

Date: 2 September 2015

DEVELOPMENT MANAGER

YOUR ATTENTION IS DRAWN TO THE NOTES BELOW

NOTES

Appeals to the Secretary of State

- If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990.
- If you want to appeal, then you must do so within 6 months of the date of this notice, using a form which you can get from The Planning Inspectorate, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN.
- The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.
- The Secretary of State need not consider an appeal if it seems to him that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.
- In practice, the Secretary of State does not refuse to consider appeals solely because the local planning authority based their decision on a direction given by him.

Right to Challenge the Decision of the High Court

Currently there are no third party rights of appeal through the planning system against a decision of a Local Planning Authority. Therefore, if you have concerns about a planning application and permission is granted, you cannot appeal that decision. Any challenge under current legislation would have to be made outside the planning system through a process called Judicial Review (JR).

The decision may be challenged by making an application for judicial review to the High Court. The time limits for bringing such challenges are very strict, and applications need to be made as soon as possible after the issue of the decision notice. So, if you think you may have grounds to challenge a decision by Judicial Review you are advised to seek professional advice as soon as possible.

These notes are provided for guidance only and apply to challenges under the legislation specified. If you require further advice on making an application for Judicial review, you should consult a solicitor or other advisor or contact the Crown Office at the Royal Courts of Justice, Queens Bench Division, Strand, London, WC2 2LL (0207 947 6000). For further information on judicial review please go to http://www.justice.gov.uk

The Council has taken into account environmental information when making this decision. The decision is final unless it is successfully challenged in the Courts. The Council cannot amend or interpret the decision. It may be redetermined by the Council only if the decision is quashed by the Courts. However, if it is redetermined, it does not necessarily follow that the original decision will be reversed.

Purchase Notices

- If either the local planning authority or the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.
- In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

APPENDIX H – PLANNING DOCUMENTS PERTAINING TO APPLICATION P150989/O

Check this drawing is the latest revision.
Do not scale from this drawing.
Do not use the information on this drawing without checking all dimensions on site.
Do not use any areas indicated for either valuation, purchase, sale or any other form of legally binding contract.
Do not reproduce any part of this drawing without prior written consent.

Notes

FOR PLANNING

Revisions

Rev & Date	Drawn	Checked

ARCHITYPE
Architype, Upper Twyford, Hereford, HR2 8AD
t 01981 542111 f 01981 542112 e west@architype.co.uk www.architype.co.uk

Project	Marden Housing
Client	Dudley Price Discretionary Trust
Dwg Title	Proposed Site Layout
Dwg No.	8010 PL050
Revision	
Scales	1:500 at A1
Date	23/Mar/15
Drawn by	MH
Checked by	PN

Herefordshire Council

MEMORANDUM

To : **Internal Consultee - Transportation**

From : **Mr Edward Thomas, Planning Services, Blueschool House - H31**

Tel : **01432 260479** **My Ref** : **150989**

Date : **20 April 2015** **Your Ref** :

SITE:	**Land adjacent to New House Farm and Marden Primary School, Marden, Herefordshire**
APPLICATION TYPE:	**Outline**
DESCRIPTION:	**Proposed residential development of 90 dwellings, with provision of a site for a community building and associated open public space.**
APPLICATION NO:	**150989**
GRID REFERENCE:	**OS 352683, 247624**
APPLICANT:	**Mr Andrew Price**
AGENT:	**Mr Paul Neep**

The application form, plans and supporting documents are available in Wisdom.

Please let me have your comments by 11/05/2015. If I have received no response by this date I shall assume that you have no objections. Should you require further information please contact the Case Officer. Any comments should be actioned in Civica to Mr Edward Thomas.

COMMENTS: (Continue on a separate sheet if necessary) SITE VISITED: YES
The consultee:- (delete as appropriate)

My response at present is mixed. I would comment that the application is in outline with access and layout for consideration under this application.

The principle of the development and impact on the highway network is considered acceptable. The location is considered sustainable.

I however have some comments on the layout which will require amendment.

The development is proposed to be heavily dependant upon SUDS drainage systems and therefore gives a complex and unusual layout. Until it is conformed that such drainage system as indicated will be acceptable, my comments are obviously conditional on the layout shown being acceptable on drainage grounds.

Firstly the western and eastern access roads should be a minimum of 5.5m in width. I consider that 2 m wide footways should also be provided on both side until beyond the entry radii to achieve a safe entry and crossing point within the development (suggest to plot 46 drive and community building entrance for west access and plost 62/74 drives on east access. . Thereafter a footway on one side will be acceptable.

The footway along the existing road fronting the site should also be 2m in width. A bus stop with bus boarder kerbs will be required within this length, and probably better sited opposite Rhoddlands rather than the layby indicated, so as to not compromise the site access visibility. The footway should be extended to the east to beyond Springfield and a pedestrian crossing point provided on north and south sides of the C road.

Homezone roads should be 4.5m minimum widening to 5.0m on the bends. All footways within the site should be a minimum width of 2m.

For the indicated narrowings, forward visibility will need to be checked, provided and protected.
The pedestrian link from Homezone C to the C road should be moved to coincide either with the existing pedestrian crossing point or to the east of the post office and a new crossing point provided on both sides of the C road. Also clarification is required as to any pedestrian function of the corridor between plots 52/56 to 45/68.

Many garages do not have sufficient driveways in front (eg Plots 1, 5 20, 21etc) and 6m minimum length driveways/parking spaces are required for all plots.

Are the indicated three access points to the school agreed with the school? If not they are unlikely to be adopted.

Access to community building needs to move away from the main entry junction to give a minimum of 20m.

Street lighting or not of the development needs to be agreed with the parish council.

I would suggest that raised tables in the shared spaces are revisited and junction tables generally reviews as they would not be permissible if road is not street lit.

The footway cycleway through the site should be 3.0m minimum width. The indicated walkway structure across the retention pond would be unlikely to be adopted and therefore this area will need re-planning.

Cross sectional details are required of the proposed road construction and road edge retention proposed for the non conventional layout. Consideration can then be given to the extent of highway adoption

In general throughout the site where there are no footways, hedges will need to be set back to ensure that driveway visibility is available.

Service corridors need to be identified and service strips provided accordingly where there are no footways, as only the road, footways/cycleways and service strips will be adopted in light of the SUDS scheme design. Any adopted street lighting would need to be planted in and lighting cabling laid in highway land throughout.

In the absence of plot and dwelling size information, car parking provision cannot be checked.

All junction radii into Homezones should have footway provision on one side around the radii to provide pedestrians refuge within the junction areas.

Clarification is required as to the purpose of parallel parking provision within the Homezones.

[If the above comments include standard note HN7 (Section 278 Agreements) please notify Blueschool House of this requirement as there is a requirement from 1st July 2002 to enter all Section 278/Section 106 Agreements on the Statutory Register]

SIGNED: Adrian Smith – Area Engineer Development Control (Transportation)

DATE RETURNED: 9th July 2015

MEETING:	**PLANNING COMMITTEE**
DATE:	**7 OCTOBER 2015**
TITLE OF REPORT:	**150989 - PROPOSED RESIDENTIAL DEVELOPMENT OF UP TO 90 DWELLINGS, WITH PROVISION OF A SITE FOR A COMMUNITY BUILDING AND ASSOCIATED OPEN PUBLIC SPACE AT LAND ADJACENT TO NEW HOUSE FARM AND MARDEN PRIMARY SCHOOL, MARDEN, HEREFORDSHIRE,** **For: Mr Price per Mr Paul Neep, Twyford Barn, Upper Twyford, Hereford, Herefordshire HR2 8AD**
WEBSITE LINK:	https://www.herefordshire.gov.uk/planning-and-building-control/development-control/planning-applications/details?id=150989&search=150989
Reason Application submitted to Committee – Contrary to Policy	

Date Received: 1 April 2015 **Ward: Sutton Walls** **Grid Ref: 352683,247624**
Expiry Date: 15 July 2015
Local Member: Cllr K S Guthrie

1. Site Description and Proposal

1.1 Outline planning permission with all matters bar access reserved is sought for the erection of up to 90 dwellings on a field situated between Marden Primary School and New House Farm, Marden. The site lies to the immediate south of the C1124 highway on the eastern edge of the village and is identified within the Strategic Housing Land Availability Assessment as having low/minor constraints. The site extends to 5.12ha and is predominantly flat and rectangular in form. To the immediate west is the village primary school, playing fields and tennis courts.

1.2 New House Farm, with its visually prominent poplar lined driveway, lies to the immediate south-east. The house, its garden walls and attached stable block are designated individually as grade II listed heritage assets. To the south is further agricultural land rising to the Scheduled Ancient Monument 'Sutton Walls' 1km to the south.

1.3 Boundaries are defined by managed hedgerows and there are no landscape features within the site. The village shop is directly opposite, intermingled with residential cul-de-sacs, giving way to larger detached properties as one leaves the village moving east. The main body of the village, however, lies to the west around Walkers Green and is predominantly mid-late C20th stock, punctuated with some earlier properties, including traditional cottages and the occasional larger high-status villa.

1.4 The application was originally submitted with layout to be determined at the outline stage. However, owing to technical issues associated with adoption of the highways, footways and SUDs, layout is now reserved for future consideration such that it is now solely the principle of development and the two proposed points of access onto the C1124 that is to be determined

now. Albeit illustrative, the layout emphasises the potential for utilising sustainable urban drainage systems, with shared spaces and the orientation of dwellings having the potential to achieve Passivhaus accreditation. It should also be recorded that further to discussion with the Parish Council and Neighbourhood Plan Steering Group, the description of development has been amended to refer to the erection of 'up to 90 dwellings' as opposed to 90 in absolute terms. 90 dwellings would equate to a gross density of 18 dwellings/hectare.

1.5 Marden is a main village as defined by the Unitary Development Plan and is also a settlement within which proportionate growth will be sought during the lifetime of the emerging Core Strategy. The Core Strategy housing requirement for the parish requires a minimum of 18% growth, which taking account of existing commitments and completions stands at 69 dwellings. The draft Neighbourhood Development Plan has chosen to allocate two housing sites within Marden. This site is one of them. The other is at Rose Villa on the opposite side of the school. On its own this site would be capable of meeting and exceeding, depending on final numbers at the Reserved Matters stage, the Core Strategy minimum requirement over the lifetime of the plan.

1.6 The application is accompanied by a Design and Access Statement, Flood Risk Assessment, Transport Statement, Landscape and Visual Impact Appraisal, Ecology Surveys, Tree Report and Village Analysis. These support the application and conclude the site is capable of accommodating the development proposed. The Design and Access Statement encompasses the Statement of Community Involvement, which relates the pre-application consultation with the local community.

1.7 The application is also accompanied by a Draft Heads of Terms, which specifies financial contributions in line with the adopted Planning Obligations SPD. It is also proposed that the applicants will dedicate land to the Parish Council to facilitate the future laying out of a village green, with a further area set aside for the future erection of a new community hall; the delivery of which is an aspiration of the Neighbourhood Development Plan.

1.8 The development has been assessed against the Environmental Impact Regulations. The Council has adopted a Screening Opinion which concludes that the scheme is not EIA development.

2. Policies

2.1 National Planning Policy Framework 2012

Introduction	-	Achieving Sustainable Development
Section 4	-	Promoting Sustainable Communities
Section 6	-	Delivering a Wide Choice of High Quality Homes
Section 7	-	Requiring Good Design
Section 8	-	Promoting Healthy Communities
Section 11	-	Conserving and Enhancing the Natural Environment
Section 12	-	Conserving and Enhancing the Historic Environment

2.2 National Planning Practice Guidance 2014

2.3 Herefordshire Unitary Development Plan 2007

S1	-	Sustainable Development
S2	-	Development Requirements
S3	-	Housing
S7	-	Natural and Historic Heritage
DR1	-	Design
DR3	-	Movement

DR4	-	Environment
DR5	-	Planning Obligations
DR7	-	Flood Risk
H1	-	Hereford and the Market Towns: Settlement Boundaries and Established Residential Areas
H7	-	Housing in the Open Countryside Outside Settlements
H9	-	Affordable Housing
H10	-	Rural Exception Housing
H13	-	Sustainable Residential Design
H15	-	Density
H19	-	Open Space Requirements
E15	-	Protection of Greenfield Land
HBA4	-	Setting of Listed Buildings
HBA9	-	Protection of Open Areas and Green Spaces
T8	-	Road Hierarchy
LA2	-	Landscape Character and Areas Least Resilient to Change
LA3	-	Setting of Settlements
LA5	-	Protection of Trees, Woodlands and Hedgerow
NC1	-	Biodiversity and Development
NC6	-	Biodiversity Action Plan Priority Habitats and Species
NC7	-	Compensation for Loss of Biodiversity
CF2	-	Foul Drainage

2.4 Herefordshire Local Plan - Draft Core Strategy

SS1	-	Presumption in Favour of Sustainable Development
SS2	-	Delivering New Homes
SS3	-	Releasing Land for Residential Development
SS4	-	Movement and Transportation
SS6	-	Addressing Climate Change
RA1	-	Rural Housing Strategy
RA2	-	Herefordshire's Villages
H1	-	Affordable Housing – Thresholds and Targets
H3	-	Ensuring an Appropriate Range and Mix of Housing
OS1	-	Requirement for Open Space, Sports and Recreation Facilities
OS2	-	Meeting Open Space, Sports and Recreation Needs
MT1	-	Traffic Management, Highway Safety and Promoting Active Travel
LD1	-	Landscape and Townscape
LD2	-	Biodiversity and Geodiversity
LD3	-	Green Infrastructure
SD1	-	Sustainable Design and Energy Efficiency
SD3	-	Sustainable Water Management and Water Resources
SD4	-	Wastewater Treatment and River Water Quality
ID1	-	Infrastructure Delivery

2.5 Neighbourhood Planning

Marden Parish Council has designated a Neighbourhood Area under the Neighbourhood Planning (General) Regulations 2012. The Parish Council is in the process of preparing a Neighbourhood Development Plan for the area. Although having progressed to Regulation 14, the draft plan is not presently sufficiently far advanced to be attributed weight for the purposes of decision-taking.

2.6 The Unitary Development Plan policies together with any relevant supplementary planning documentation can be viewed on the Council's website by using the following link:-

https://www.herefordshire.gov.uk/planning-and-building-control/planning-policy/unitary-development-plan

3. Planning History

3.1 None on site.

4. Consultation Summary

4.1 Welsh Water: No objection subject to conditions

Further to our recent discussions in respect to the above site, I am writing to confirm our updated position. As you are aware the applicant undertook both a Feasibility Study on the Waste Water Treatment Works (WwTW) and a Hydraulic Modelling Assessment on the ability to supply potable water to the proposal. We have now received the results of the said studies, and confirm we can remove our objections, subject to the conditions below being attached to any consent.

Conditions

- No development shall commence until a drainage scheme for the site has been submitted to and approved in writing by the local planning authority. The scheme shall provide for the disposal of foul, surface and land water, and include an assessment of the potential to dispose of surface and land water by sustainable means. Thereafter the scheme shall be implemented in accordance with the approved details prior to the occupation of the development and no further foul water, surface water and land drainage shall be allowed to connect directly or indirectly with the public sewerage system.

  Reason: To prevent hydraulic overloading of the public sewerage system, to protect the health and safety of existing residents and ensure no pollution of or detriment to the environment.

- No development shall take place until a scheme to satisfactorily accommodate a potable water supply for the site has been submitted to and approved in writing by the local planning authority. No part of the development shall be brought into use and no dwelling shall be occupied until the approved scheme has been constructed, completed and brought into use in accordance with the approved scheme.

  Reason: To prevent hydraulic overload of the public sewerage system and pollution of the environment.

4.2 Natural England: Qualified Comment

The proposal will require screening against The Conservation of Habitats and Species Regulations 2010 (as amended) (Habitats regulations). The application site is in close proximity to the River Wye Special Area of Conservation (SAC) which is a European site. The site is also listed as notified at a national level as the River Lugg Site of Special Scientific Interest (SSSI). In considering the European site interest, Natural England advises that you, as a competent authority under the provisions of the Habitats Regulations, should have regard for any potential impacts that a plan or project may have. The Conservation objectives for each European site explain how the site should be restored and/or maintained and may be helpful in assessing what, if any, potential impacts a plan or project may have.

Standing advice is offered in relation to Green Infrastructure and protected species.

Internal Council Advice

4.3 Traffic Manager: No objection subject to conditions

The visibility splays were identified on Drawing 1393-01 in the Transport Statement Appendix B. These plays are proposed in relation to the recorded speeds of 37mph (59kph), at 59m to left and 60m to right. Our assessment using MfS2 methodology, in accordance with Table 1 paragraph 10.1.13 of that document (1.5s, 0.45g), indicates a desirable minimum of 65m and this value should be conditioned in both directions from each access. The only location this will be critical for achievement is to the west from the western access but from the drawing would appear achievable.

Drawing 1393-01 shows 4.8m width for the main access road at both access points and between. It is my opinion these should be a minimum of 5.5m for the number of houses served. I am not persuaded that a reduction can be supported on the basis that each access will cater for fewer than 50 dwellings. Furthermore the plans show 6m entry radii which we would only accept with 5.5m road width.

So any Reserved Matters submission would need to show the 5.5m width, although with layout now reserved, this should not present a problem.

Subject to the above revisions, the access junction's geometry would be acceptable but such items as pedestrian dropped crossings and footway provision into the site will need to be finalised at Reserved Matters stage as part of a finalised and adoptable layout.

4.4 Conservation Manager (Ecology): No objection subject to conditions

I welcome the ecological assessment conducted on the site and have read the report produced in support of the proposal. I am happy with the findings of these reports and would advise that a non-standard condition is added to any approval for the development worded as follows:

The recommendations set out in the recommendations of the Phase 1 Habitat ecologist's report from Hills Ecology dated April 2014 and the mitigation and compensation proposals of the great crested newt report from Hills Ecology dated May 2014 should be followed in relation to species mitigation. Prior to commencement of the development, a full working method statement for the protected species present together with a habitat enhancement plan integrated with the landscape proposals should be submitted to, and be approved in writing by, the local planning authority, and the work shall be implemented as approved.

A Habitats Regulation Assessment Screening Report has been concluded and submitted to Natural England for comment. Having regard to the advice from Natural England the Screening Report concludes the development would not, either alone or in combination, be likely to give rise to impacts on the River Wye SAC.

4.5 Conservation Manager (Landscape): No objection subject to conditions

During our meeting with the architects on Monday 29th June, I agreed that their latest landscape proposals (of that date) with exception for the need for further tree planting on the northern site boundary, now meant I had no objections to this application, subject to conditions.

Further landscape screening mitigation revisions (based on my recommendations) were received on 21st July 2015. I confirm that I am satisfied with these landscape plan revisions (drawings listed below), which incorporate more tree planting on the site's northern boundary and have no objection on this basis.

- Landscape Materials plan, Drg No 402/100 Rev B, Status P;
- Planting plan, Drg No 402/500 Rev B, Status P; and the

- Tree Protection plan, Drg No 402/700 Rev B, Status P.

4.6 Housing Manager: No objections

I would advise that in principle I support the application. The applicant has been in negotiations with Housing Partnerships and is meeting the need for affordable housing in terms of tenure and mix.

4.7 Land Drainage Officer: No objection in principle

Overall Comment
The proposals submitted by the applicant are acceptable. However we recommend that the following details are provided by the Applicant and approved by Herefordshire Council as part of any subsequent reserved matters submission or planning conditions:

- Confirmation that the land adjacent to the six houses identified as being at greatest risk of fluvial flooding is at a level a minimum of 1m above the bank top level of the watercourse to the south.
- Evidence that the finished flood levels of these properties will be located a minimum of 300mm above adjacent ground levels.
- A detailed surface water management strategy and supporting calculations that show that the development will not increase flood risk to the site or to people and property elsewhere and that users of the development will be safe up to the 1 in 100 year event, allowing for the potential effects of climate change.
- Evidence that the surface water management strategy has been designed for exceedance of surface water management features so as to minimise the risk of flooding to people and property within the site or elsewhere.
- Details of any proposed outfall structure to the watercourse to the south of site, noting that land drainage consent for connection to this watercourse will also be required from Herefordshire Council.
- Confirmation of the proposed adoption and maintenance arrangements for the proposed surface water drainage features.

4.8 Parks and Countryside Manager: No objection

In accordance with UDP Policies H19 and RST3 for a development of this size the developer provides as a minimum the following on and off site POS/Play/Outdoor Sports requirements comprising:

- 0.08 hectares o Public Open Space
- 0.16 hectares of Children's Play of which 0.05 hectares should be formal play for all ages including infants, juniors and teenagers.

Given the proximity of the existing neighbourhood play area which is owned and maintained by the Parish Council the formal play element could be split to provide both:

- on site formal equipped play integrated into the SuDs areas as described by the applicant which is suitable for infants and juniors; &
- an off site contribution in consultation with the Parish Council to identify more detailed requirements for the existing play area which in accordance with the Play Facilities Investment Plan is in need of additional investment to provide equipment for all ages.

Contributions will be calculated in accordance with the SPD on Planning Obligations and apportioned accordingly. Detail to be agreed at a reserved matters stage.

The applicant has provided in excess of the above minimum requirements on site in total 0.8ha but the proposal integrates much of the POS/Play within the retention pond and SuDs areas which although supported as it offers good imaginative design and natural play opportunities, should not take away from the need to provide more formal play and sports provision.

- An off site contribution of **£20,900 (see methodology below)** towards existing provision in Marden in accordance with policy requirements of 0.32 hectares of Outdoor Sport and the Playing Pitch Assessment and draft Investment Plan.

The investment plan which is being prepared in partnership with Sport England and the National Governing Bodies for Sport including football and will be completed later this Autumn will set out a list of priority projects countywide including the following:

Project: Marden Village Playing Fields (which are adjacent to this site): Football (owned and managed by the Parish Council). Used by Pegasus FC which has both senior and junior teams.

- Current Quality Deficiency: its quality rating has deteriorated to below a quality required by Sport England since 2011. Inspections have indicated issues with drainage which coupled with high usage has left the pitch in a poor state.
- Support: HFA has identified as a medium priority for future investment
- Costs: based on Sport England's Facilities Planning model circa: £20,900 (in the absence of details from the club or Parish Council)

Using our previous methodology tried for Bartestree:
At a rate of £27.28 per metre (figure used to inform both the SPD planning obligations and the Infrastructure Delivery Plan) for 3200 sq m (the policy requirement for this site) based on market housing only (at 65%) a contribution of **£56,742** would be asked for.

This sum is too much in view of the needs for Marden, so we would ask for the full amount of **£20,900** from this development.

4.9 Conservation Manager (Historic Buildings):

At its closest point the site is less than 50 metres from New House Farm. New House Farm is grade II listed together with its front garden walls. The stables that are attached to the north end of the farmhouse are separately listed, also grade II. The farmstead is approached via a driveway that extends southwards from the highway passing through Marden. New House Farm is seen in the context of the open agricultural landscape that surrounds it on the southern side of the highway and it is this landscape that that forms its setting. This is particularly apparent in views from within the village and the footpaths to the east. The driveway is lined by poplar trees which define the approach to the farmhouse. The poplars' characteristics allow clear views from the north east through to the site, with the listed buildings also seen in the same context.

The majority of the village has developed to the north side of the highway that runs along the northern edge of the site. Apart from a small amount of development to the west side of the school, the land to the south side is predominantly an agricultural landscape. Development of the land to the west side of the New House Farm's driveway will inevitably erode the agricultural setting of the listed buildings; however it is the landscape to east of driveway that makes a more significant contribution to their landscape setting. It is considered that by incorporating a wide band of undeveloped land to the west of the New House Farm driveway, a sense of the existing openness can be maintained. This open space needs to include a swathe of grassland between the existing poplars and the new planting scheme of hedgerow and trees.

The proposed illustrative layout indicates that a number of the dwellings would potentially back on to the highway running along the northern edge of the site. This is not necessarily good design and it is important that the new dwellings front the street and integrate into the village.

During the second half of the 20th century there has been some unfortunate development in Marden , where the layout and design has failed to take account of locally distinctive patterns of the village's traditional historic development. This site should be an opportunity to reverse the previous trend and it is recommended that a context appraisal is undertaken that looks at the positive aspects of Marden's built environment, probably also taking in nearby villages and hamlets. The findings should then be used to inform the design of the housing scheme.

5. Representations

5.1 Marden Parish Council: Supports the application in principle

Following a further representation about this application made by the landowner and architect to Marden Parish Council on 21 July 2015 and a subsequent meeting of Parish Council representatives with the Herefordshire Council Planning Officer and Head of Planning Department, Marden Parish Council wish to submit a supplementary response to application P150989/O.

This site was identified in the Marden Parish Plan in 2004 and recent community consultations have supported development on this site. It is understood that the layout for the proposed site, originally submitted with the application, has now been withdrawn.

On the assumption that this planning application is approved in outline, Marden Parish Council wish to make the following points to be addressed in the reserved matters application:

- Further discussions between the landowner/developer, the community and the Parish Council will take place to consider an amended layout;
- The Heads of Terms will be redrafted and will not include S106 monies for a cricket ground or library services and minimal monies only for recycling;
- The Heads of Terms will be amended to change the tenure of the 35% affordable housing, to give some low cost open market housing as well as affordable housing;
- The Heads of Terms will be amended to increase the footprint of a community centre to a sufficient size and to be fit for purpose for the current and future needs of a large parish such as
  Marden, while still providing a suitable village green and appropriate parking;
- Initial estimates based on facilities around the country suggest a cost between £600,000 and £800,000 to build a suitable community facility.

Providing these points are suitably and adequately addressed, Marden Parish Council supports this application P150989/O for development on Land adjacent to New House Farm and Primary School, Marden.

5.2 Two letters of objection have been received. The content is summarised as follows:-

- The application is for a disproportionately large development that would exceed Marden's minimum requirement for growth in one go. A better strategy would be to allocate more, smaller sites. There is no shortage of land.
- This scheme would result in the irretrievable loss of Marden's compact size and rural feel, which is greatly valued by many residents.
- The application proposes two points of access onto the road where on-street parking associated with the shop, school and dwellings, means that exiting from existing dwellings onto this road is very difficult. These parked vehicles often obscure visibility. Buses often pull-over at will and not at designated bus stops, which compounds the issue.
- The impact of the development and the existing level of traffic on the village roads are greatly underestimated. The village is accessible by narrow lanes, ancient and narrow

hump backed bridges and level crossings. Traffic passing through from adjoining villages has not been assessed. Although S&A traffic does not tend to use the road adjacent the application site, it is prone to use by significant traffic, including HGVs and farm vehicles;

- The village already has a community hall within the primary school. The need for a separate facility has only recently been defined and the budget for delivering the facility has yet to be earmarked. The use of the gifted land as the site for a new facility cannot be guaranteed.
- There is concern that the gift of land for community use is inadequate given the scale of the development and at odds with emerging NDP policy M6.

5.3 The consultation responses can be viewed on the Council's website by using the following link:-
http://news.herefordshire.gov.uk/housing/planning/searchplanningapplications.aspx

Internet access is available at the Council's Customer Service Centres:-
https://www.herefordshire.gov.uk/government-citizens-and-rights/customer-services-enquiries/contact-details?q=customer&type=suggestedpage

6. Officer's Appraisal

6.1 The Unitary Development Plan remains the Statutory Development Plan for the County. However, in the context of the Council's lack of housing land supply with buffer, UDP policies relevant to the supply of housing are out-of-date. Other UDP policies may continue to be attributed weight according to their consistency with the policies of the NPPF.

6.2 For the purpose of decision-taking, the practical effect of a lack of housing land supply is such that no reliance can be placed on UDP housing supply polices. In this case Policy H4 and the fact that a site falls outside a UDP defined settlement boundary, is now irrelevant. Instead, individual sites must be considered on their individual merits in the light of the NPPF and the 'saved' policies of the UDP that continue to attract weight.

6.3 Paragraph 49 of the NPPF is explicit in stating that housing applications should be considered in the context of the presumption in favour of sustainable development. Thus, in the context of a housing land supply deficit, if a housing proposal is considered to represent sustainable development, it should be approved without delay unless the adverse impacts associated with approval would significantly and demonstrably outweigh the benefits when assessed against the policies of the NPPF when read as a whole. This is the presumption in favour of sustainable development and exercising of the 'planning balance' set out at paragraph 14 of the NPPF.

6.4 NPPF Paragraph 14 states that for decision making, the presumption in favour of sustainable development means:

• "Approving development proposals that accord with the development plan without delay; &
• Where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:-
- any adverse impact of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or
- specific policies in this Framework indicate development should be restricted."

6.5 In the context of the UDP and the Council's acknowledged shortfall of housing land supply it is the second bullet point and the weighing of positive and negative impacts that is relevant in this case. The decision-taker must decide whether the development before them is representative of sustainable development having regard to the NPPF and relevant saved policies of the UDP as a whole if the positive presumption is to be engaged.

6.6 The NPPF refers to 'Sustainable Development' as having three mutually dependent dimensions; the economic, environmental and social dimensions.

6.7 The economic dimension encompasses the need to ensure that sufficient land is available in the right places at the right time in order to deliver sustainable economic growth. This includes the supply of housing land, which is further reinforced in Chapter 6 – Delivering a wide choice of high quality homes. Paragraph 47 requires that local authorities allocate sufficient housing land to meet 5 years' worth of their requirement with an additional 5% buffer. Deliverable sites should also be identified for years 6-10 and 11-15.

6.8 The social dimension also refers to the need to ensure an appropriate supply of housing to meet present and future needs and this scheme contributes towards this requirement with a mix of open market and affordable units of various sizes. Fulfilment of the environmental role requires, *inter alia*, the protection and enhancement of our natural, built and historic environment; and, as part of this, helping to improve biodiversity.

The application site relative to village facilities

6.9 The site lies adjacent the UDP defined settlement boundary. The NPPF has the reduction of travel and associated carbon emissions at its core as well as the provision of good access to services and facilities. It is an NPPF core planning principle that planning should 'actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant developments in places which are or can be made sustainable.' This objective is set out more fully in NPPF Chapter 4 – Promoting sustainable transport.

6.10 In this case the site is bound to the west by the village primary school, which doubles as the community hall outside school hours. The village play facilities, including tennis courts, are also located here. Directly opposite the site is the post office and shop. A further shop is located within reasonable walking distance further to the west. Bus stops are found on both sides of the carriageway along the C1124 and a footway already extends along part of the site's northern boundary terminating just before the village Post Office. This footway would provide a direct link to the school and the illustrative layout also promotes a further direct access from the site into the school grounds; this is subject to the necessary agreements ensuing. A footway also exists on the northern side of the carriageway.

6.11 In this instance it is your officer's opinion that in terms of access to goods and services within the village and the opportunity to access and utilise public transport for longer journeys, the application site is sustainably located and meets the NPPF objectives set out above and those within saved UDP policies S1 and DR3.

Impact on landscape character, visual amenity and heritage assets

6.12 NPPF Paragraph 109 states that valued landscapes should be protected and enhanced. Paragraph 113 advises local authorities to set criteria based policies against which proposal for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. It goes further, however, and confirms that *'distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.'* Appeal decisions have also confirmed that although not containing the 'cost-benefit' analysis of the NPPF, policies LA2 (landscape character), LA3 (setting of settlements), NC1 (biodiversity and development), NC6 (biodiversity action plans), NC7 (compensation for loss of biodiversity) and HBA4 (setting of listed buildings) are broadly consistent with chapters 11 and 12 of the NPPF.

6.13 The site is not subject of any landscape designation and categorised as a site with low/minor constraints in the SHLAA. It is also allocated for housing in the draft NDP. Although within the Principal Settled Farmlands landscape character type, where according to the Landscape Character Assessment development should consist of small wayside development, the

Conservation Manager (Landscape) has no objection. This is subject to detailed design at the Reserved Matters stage reflecting the negotiations that have been undertaken hitherto. Principally the treatment of the roadside frontage, with a view to bolstering tree planting to the south of the retained hedgerow, will need further discussion as a precursor to Reserved Matters. This should involve the local community, as per the Parish Council comments at 5.1.

6.14 It is also noted that the application is accompanied by a Tree Survey and Report with management recommendations for the Poplar lined driveway to New House Farm. The landscaped buffer to this driveway and consequently the farm complex is also noted and will be secured via condition. Principally it is recommended that notwithstanding its illustrative status, a planning condition be imposed requiring the layout forthcoming at the Reserved Matters stage to be in broad accordance with the illustrative layout. This is discussed further below.

6.15 In conclusion on landscape matters, there is no objection from the Council's expert advisor and nor is there any explicit landscape-led objection from local residents. In the context of the evidence before officers, the sensitive approach to key features, including the setting of the listed complex, and the over-arching influence of the housing land supply deficit, officers consider the application acceptable relative to the NPPF and saved UDP policies LA2 and LA3.

6.16 The Conservation Officer (Historic Buildings) has commented on the site's landscape context and the specific relationship of New House Farm with its agricultural setting. It is the officer's opinion that the development will inevitably erode the open setting, but equally that it is the open land to the east and south is more integral to the farmstead's setting. With the maintenance of a landscaped buffer, as shown on the illustrative plan, the officer is content that the harm to the significance of the listed buildings will not be substantial. In this way the proposal is considered to comply with NPPF policies at Chapter 12 and the legislative tests enshrined at 66 (1) of the Planning (Listed Buildings and Conservation Areas) Act 1990, which states:

"In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses".

6.17 The officer expresses some concern at the potential for dwellings along the road frontage to back onto the road. Given layout is reserved this can be considered further at the Reserved Matters stage.

Sustainable layout and design

6.18 The NPPF supports the transition to a low-carbon future and emphasises the role that planning should play in helping to achieve this objective. For the reasons set out in the following paragraphs, officers believe the scheme to take a proactive approach to helping deliver a layout with a high propensity for energy efficiency and the promotion of sustainable transport modes.

6.19 The application was originally made in outline with all matters bar access and layout reserved. It was the applicants' brief to the architects to design a layout that was sustainable in terms of energy consumption, pedestrian and cycle connectivity, drainage and impacts on the landscape and heritage assets. In response to pre-application consultation an area was also set aside for provision of a village green and community hall.

6.20 Subsequently it has been necessary, owing to highways-led concerns relating to detailed design, to reserve layout for future consideration. However, in doing this the applicants have confirmed they would expect the Council to recommend a planning condition requiring that the Reserved Matters submission is in broad conformity to what is now an 'illustrative' layout. This reflects the clear and evident effort that has been put towards devising the layout, which has evolved with input from the local community and key stakeholders over three separate

community consultation/feedback events over the 6 months leading towards submission of the application.

6.21 The layout details an approach that would, in theory, enable the dwellings to attain Passivhaus accreditation. The natural topography of the site is utilised to support a system of surface water attenuation features with outfall to two attenuation ponds on the lower-lying land on the southern boundary. These would discharge into the existing drainage channel at an attenuated rate. This system has the 'in principle' support of the Council's Land Drainage consultant and Landscape officer and is considered by officers to represent an innovative response to the site that should lead, when brought to fruition at the Reserved Matters stage, to a design that responds positively to the site and engenders a high-quality and permeable layout.

Transport

6.22 The Traffic Manager has no objection to the proposal. There is no suggestion that the proposal would result in an unacceptable impact on the highway network and visibility splays can be delivered in accordance with Manual for Streets guidance. The site is very well placed to take advantage of village facilities and access to public transport.

6.23 It is concluded that the site is sustainably located and well-placed to give genuine choice with regard to how people choose to move, and accords fully with saved UDP policies and the NPPF.

Impact on adjoining residential amenity

6.24 Loss of amenity arising from direct and prejudicial overlooking is a material consideration. Apart from New House Farm, the nearest dwellings are those on the opposite side of the C1124. Officers are satisfied that development of the site in the manner envisaged by the illustrative layout will adequately safeguard the amenity of residents opposite, particularly with the retention of the majority of the existing hedgerow and additional tree planting inside this hedge. Clearly this will be contingent on detailed consideration at the Reserved Matters stage. At this stage, however, officers are satisfied that an appropriate layout at the Reserved Matters stage would be capable of according with the requirements of saved UDP policy H13 and NPPF paragraph 12, which demands good standards of amenity.

Ecology

6.25 The Council's Ecologist has no objection subject to conditions and has concluded no likelihood of significant effects on the water quality of the River Wye/Lugg SAC/SSSI.

Foul drainage and water supply

6.26 Welsh Water has no objection to the development in relation to foul drainage, confirming that the treatment of domestic discharges from this site can be accommodated by the existing Waste Water Treatment Works. Work has also been progressed in relation to the supply of drinking water, with some local reinforcement work necessary. Subject to a condition requiring fulfilment of this work before first occupation of any of the dwellings, there is no objection. The cost of the upgrade is likely to be borne by the statutory undertaker.

Capacity at the local Primary School

6.27 The NPPF identifies the importance of ensuring a sufficient choice of school places for existing and new communities and recognises that local planning authorities will need to work proactively in order to meet this requirement (paragraph 72).

6.28 Marden Primary School is presently at capacity in one year group. The Schools Capital and Investment Officer has confirmed that subject to a S106 contribution, the pupils generated by this development could be accommodated.

S106 contributions

6.29 Heads of Terms are appended to the report. As per the Parish Council comments, contributions towards library facilities and the cricket club are no longer sought. A modest contribution per dwelling is sought towards waste and recycling. This will fund the purchase of recycling bins. The gift of land for a village green facility and future community hall is also secured. The legal undertaking in this respect will be similar to that executed at Bartestree (143720/O) where a specified area was gifted to the Parish Council for a nominal sum. Further negotiation as to the tenure of the affordable housing can also ensue. This is in line with Parish Council wishes.

The proposal relative to development of the Neighbourhood Plan

6.30 It is an NPPF core planning principle at paragraph 17 that planning should be *'genuinely plan led, empowering local people to shape their surroundings, with succinct local and neighbourhood plans setting out a positive vision for the future of an area'.*

6.31 Marden Parish Council has designated a Neighbourhood Plan Area. A Neighbourhood Plan Steering Group has overseen the formulation of the plan, which is at Regulation 14 stage. Drawing on case-law, officers conclude that in this instance the Neighbourhood Plan, although having progressed to Regulation 14, is not presently sufficiently far advanced to be attributed weight for the purposes of decision-taking.

6.32 However, in this instance the application site is one of two allocated for housing development and subject to the qualifications at 5.1 the Parish Council expresses its support for the development.

7. Summary and Conclusions

7.1 The Council cannot demonstrate a five-year supply of housing land with requisite buffer. The housing policies of the UDP are thus out-of-date and the full weight of the NPPF is applicable. UDP policies may be attributed weight according to their consistency with the NPPF; the greater the consistency, the greater the weight that may be accorded. In this context, officers recommend the application for approval for the following reasons:-

- When considering the three indivisible dimensions of sustainable development as set out in the NPPF, officers consider that the scheme when considered as a whole is representative of sustainable development and that the presumption in favour of approval is engaged.
- The scheme would make a contribution, on land of comparatively low environmental sensitivity, towards the supply of housing land and affordable housing in the context of an on-going deficit;
- The site lies outside but directly adjacent the settlement boundary in what is, having regard to the NPPF, a sustainable location with excellent access to local services. In this respect the proposal is in broad accordance with the requirements of chapter 4 of the NPPF (Promoting sustainable travel).
- The site is designated as a SHLAA minor constraints site and is allcoated within the Draft NDP as a preferred site for housing. It is not subject of any landscape designations;
- The layout, although reserved, would enable the delivery of energy efficient dwellings and a highly permeable and sustainably drained;
- There are benefits to the wider community through the gift of land for the laying out of a village green and land for the future erection of a community hall;
- Irrespective that the propsoal would exceed the parish's minimum housing requirement, the Parish Council has resolved to support the proposal in principle and only two letters of objection have been received;
- Both recent and historic community consultations have supported development on this site;
- There are no highways, drainage, ecological or archaeological issues that significantly and demonstrably outweigh the benefits associated with approval;

- There is no overriding evidence of significant or demonstrable harm to nature conservation interests in the form, principally of the R. Wye/Lugg SAC/SSSI;
- Any harm to the setting of the designated heritage assets can be mitigated and is not substantial.

7.2 The contribution the development would make in terms of jobs and associated activity in the construction sector and supporting businesses should also be acknowledged as fulfilment of the economic role. Likewise S106 contributions should also be regarded as material considerations. In providing a greater supply of housing and breadth of choice, including 35% affordable, officers consider that the scheme also responds positively to the requirement to demonstrate fulfilment of the social dimension of sustainable development.

7.3 It is therefore recommended that outline planning permission be granted subject to the completion of a legal undertaking and the following planning conditions.

RECOMMENDATION

Subject to the completion of a Section 106 Town & Country Planning Act 1990 obligation agreement in accordance with the Heads of Terms stated in the report, officers named in the Scheme of Delegation to Officers are authorised to grant outline planning permission, subject to the conditions below and any other further conditions considered necessary

That planning permission be granted subject to the following conditions:

1. A02 Time limit for submission of reserved matters (outline permission)

2. A03 Time limit for commencement (outline permission)

3. A04 Approval of Reserved Matters

4. The development shall include no more than 90 houses and no dwellings shall be more than 2 storeys high

Reason: To define the terms of the permission and to conform to Herefordshire Unitary Development Plan Policies S1, DR1 and H13 and the policies of the National Planning Policy Framework.

5. The submission of reserved matters in respect of layout, scale, appearance and landscaping and the implementation of the development shall be carried out in substantial accordance with the Architype Design and Access Statement (8010/PL DAS) dated March 2015.

Reason: To define the terms of the permission and to conform to Herefordshire Unitary Development Plan Policies S1, DR1, HBA4 and LA4 and the National Planning Policy Framework.

6. H03 Visibility splays (2.4m x 60m)

7. H06 Vehicular access construction

8. H18 On site roads - submission of details

9. H21 Wheel washing

10. H27 Parking for site operatives

11. H29 Secure covered cycle parking provision

12. No development shall commence until a drainage scheme for the site has been submitted to and approved in writing by the local planning authority. The scheme shall provide for the disposal of foul, surface and land water, and include an assessment of the potential to dispose of surface and land water by sustainable means. Thereafter the scheme shall be implemented in accordance with the approved details prior to the occupation of the development and no further foul water, surface water and land drainage shall be allowed to connect directly or indirectly with the public sewerage system.

Reason: To prevent hydraulic overloading of the public sewerage system, to protect the health and safety of existing residents and ensure no pollution of or detriment to the environment.

13. No development shall take place until a scheme to satisfactorily accommodate a potable water supply for the site has been submitted to and approved in writing by the local planning authority. No part of the development shall be brought into use and no dwelling shall be occupied until the approved scheme has been constructed, completed and brought into use in accordance with the approved scheme.

Reason: To prevent hydraulic overload of the public sewerage system and pollution of the environment.

14. G04 Protection of trees/hedgerows that are to be retained

15. G10 Landscaping scheme

16. G11 Landscaping scheme - implementation

17. G14 Landscape management plan

18. The recommendations set out in the recommendations of the Phase 1 Habitat ecologist's report from Hills Ecology dated April 2014 and the mitigation and compensation proposals of the great crested newt report from Hills Ecology dated May 2014 should be followed in relation to species mitigation. Prior to commencement of the development, a full working method statement for the protected species present together with a habitat enhancement plan integrated with the landscape proposals should be submitted to, and be approved in writing by, the local planning authority, and the work shall be implemented as approved.

Reason: To ensure that all species are protected having regard to the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and Policies NC1, NC6 and NC7 of the Herefordshire Unitary Development Plan

INFORMATIVES:

1. **The Local Planning Authority has acted positively and proactively in determining this application by assessing the proposal against planning policy and any other material considerations, including any representations that have been received. It has subsequently determined to grant planning permission in accordance with the presumption in favour of sustainable development, as set out within the National Planning Policy Framework.**

2. **HN08 Section 38 Agreement & Drainage details**

3. **HN28 Highways Design Guide and Specification**

4. **HN05 Works within the highway**

5. **HN24 Drainage other than via highway system**

6. **S106**

Decision: .....

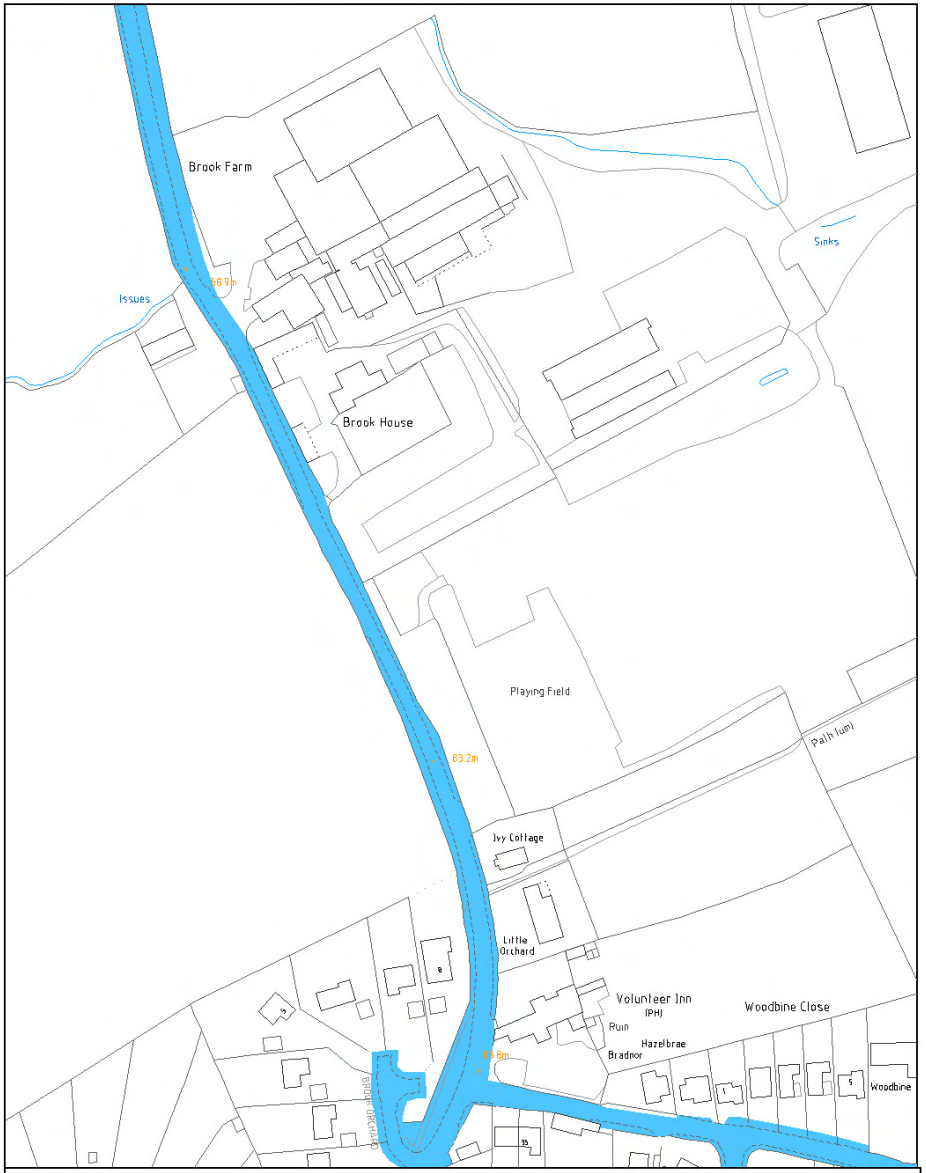
Notes: .....

.....

Background Papers

Internal departmental consultation replies.

APPENDIX I – HEREFORDSHIRE COUNCIL HIGHWAY BOUNDARY PLAN

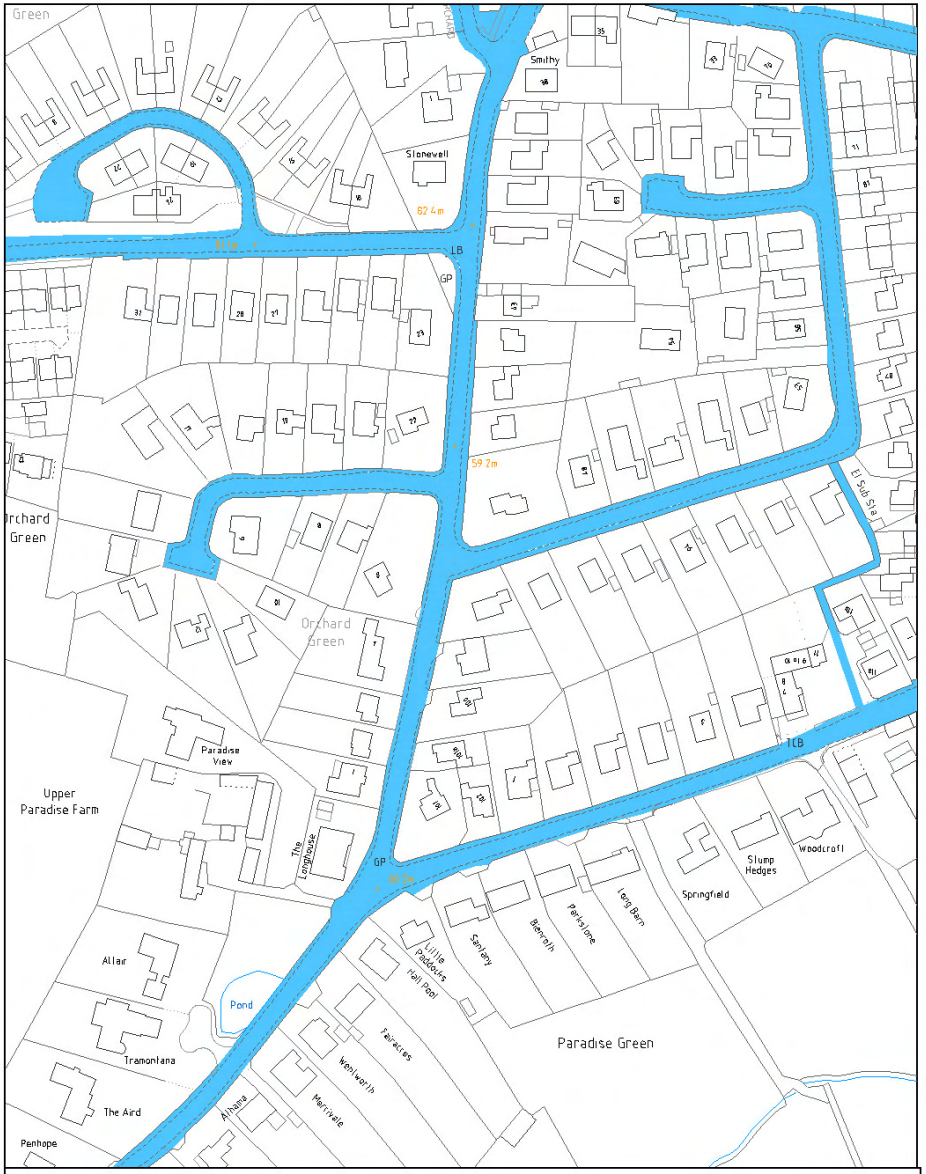


LOCATION: MARDEN PLAN 2

SCALE 1: 1250

POSTCODE: HR1

Herefordshire Council,
Highways and Transportation,
Plough Lane, Hereford, HR4 0WZ.
Tel: 01432 260000
Fax: 01432 383031



LOCATION: MARDEN PLAN 1

SCALE 1: 1250

POSTCODE: HR1

Herefordshire Council,
Highways and Transportation,
Plough Lane, Hereford, HR4 0WZ.
Tel: 01432 260000
Fax: 01432 383031

APPENDIX J – SPEED SURVEY RESULTS

observed speed mph x	no. of readings f	fx	fx^2
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	1	20	400
21	0	0	0
22	0	0	0
23	1	23	529
24	1	24	576
25	0	0	0
26	1	26	676
27	2	54	1458
28	1	28	784
29	4	116	3364
30	2	60	1800
31	3	93	2883
32	4	128	4096
33	1	33	1089
34	0	0	0
35	1	35	1225
36	4	144	5184
37	3	111	4107
38	0	0	0
39	1	39	1521
40	0	0	0
41	0	0	0
42	1	42	1764
43	1	43	1849
44	0	0	0
45	0	0	0
46	0	0	0
47	0	0	0
48	0	0	0
49	0	0	0
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68	0	0	0
69	0	0	0
70	0	0	0
71	0	0	0
72	0	0	0
73	0	0	0
74	0	0	0
75	0	0	0
76	0	0	0
77	0	0	0
78	0	0	0
79	0	0	0
80	0	0	0
Total Σ	32	1019	33305

SPEED READINGS

location: **Access to Car Park south of Brook Farm, Marden**
direction: **Northbound**
day: **Monday**
date **11th May 2015**
time: **1030 to 1230**

SUMMARY

mean	31.84 mph	51.40 kph
85%ile	37.10 mph	59.88 kph
wet 85%ile	34.62 mph	55.88 kph

Mean speed

$$\overline{x} = \frac{\sum fx}{\sum f} = \quad 31.84 \text{ mph}$$

Standard deviation

$$S_x = \sqrt{\frac{1}{\sum f - 1} \times \left[\sum fx^2 - \frac{(\sum fx)^2}{\sum f} \right]} = \quad 5.26 \text{ mph}$$

85 percentile dry weather spot speed

$$\overline{x} + S_x = \quad 37.10 \text{ mph}$$

85 percentile wet weather journey speed

$$\overline{x} + S_x - 2.478 = \quad 34.62 \text{ mph}$$

checks: 85%ile/mean = 1.17
should be 1.1 to 1.25

S.D./mean = 0.17
should be approx 1/6 (0.17)

SPEED SURVEY RESULTS

observed speed mph x	no. of readings f	fx	fx^2
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	1	17	289
18	1	18	324
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	1	23	529
24	1	24	576
25	0	0	0
26	5	130	3380
27	3	81	2187
28	4	112	3136
29	3	87	2523
30	5	150	4500
31	0	0	0
32	2	64	2048
33	3	99	3267
34	5	170	5780
35	0	0	0
36	3	108	3888
37	1	37	1369
38	0	0	0
39	0	0	0
40	0	0	0
41	0	0	0
42	0	0	0
43	0	0	0
44	0	0	0
45	0	0	0
46	0	0	0
47	0	0	0
48	0	0	0
49	0	0	0
50	0	0	0
51	0	0	0
52	0	0	0
53	0	0	0
54	0	0	0
55	0	0	0
56	0	0	0
57	0	0	0
58	0	0	0
59	0	0	0
60	0	0	0
61	0	0	0
62	0	0	0
63	0	0	0
64	0	0	0
65	0	0	0
66	0	0	0
67	0	0	0
68	0	0	0
69	0	0	0
70	0	0	0
71	0	0	0
72	0	0	0
73	0	0	0
74	0	0	0
75	0	0	0
76	0	0	0
77	0	0	0
78	0	0	0
79	0	0	0
80	0	0	0
Total Σ	38	1120	33796

SPEED READINGS

location: **Access to Car Park south of Brook Farm, Marden**
direction: **Southbound**
day: **Monday**
date **11th May 2015**
time: **1030 to 1230**

SUMMARY

mean	29.47 mph	47.57 kph
85%ile	34.08 mph	55.01 kph
wet 85%ile	31.60 mph	51.01 kph

Mean speed

$$\overline{x} = \frac{\sum fx}{\sum f} = \quad 29.47 \text{ mph}$$

Standard deviation

$$S_x = \sqrt{\frac{1}{\sum f - 1} \times \left[\sum fx^2 - \frac{(\sum fx)^2}{\sum f} \right]} = \quad 4.61 \text{ mph}$$

85 percentile dry weather spot speed

$$\overline{x} + S_x = \quad 34.08 \text{ mph}$$

85 percentile wet weather journey speed

$$\overline{x} + S_x - 2.478 = \quad 31.60 \text{ mph}$$

checks: 85%ile/mean = 1.16
should be 1.1 to 1.25

S.D./mean = 0.16
should be approx 1/6 (0.17)

SPEED SURVEY RESULTS

APPENDIX K – TRANSPORT STATEMENT FOR PLANNING APPLICATION P150431/O

[PROVIDED SEPERATELY OWING TO FILE SIZE]

APPENDIX L – C1120 TRAFFIC COUNTS

Manual Classified Turning Counts, Hereford

DATE:

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: UNNAMED ROAD NORTH

TIME / CLASS	LEFT TO MAIN ACCESS										STRAIGHT TO UNANED ROAD SOUTH										TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	1	0	3	4
7:15 - 7:30	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2
7:30 - 7:45	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	1	3	4
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	7	7
HOURLY TOTAL	0	0	0	2	0	0	0	1	0	3	0	0	0	10	2	0	0	1	1	14	17
8:00 - 8:15	0	0	0	1	0	0	0	0	0	1	0	0	0	4	1	0	0	0	0	5	6
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	1	0	7	7
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	6
HOURLY TOTAL	0	0	0	1	0	0	0	0	0	1	0	0	0	20	1	0	1	1	0	23	24
9:00 - 9:15	0	0	0	1	0	0	0	0	0	1	0	1	0	7	0	0	0	1	0	9	10
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0	0	0	0	6	6
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
HOURLY TOTAL	0	0	0	1	0	0	0	0	0	1	0	2	0	21	0	0	0	1	0	24	25
10:00 - 10:15	0	0	0	1	0	0	0	0	0	1	0	1	0	7	0	0	0	0	0	8	9
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	4
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
HOURLY TOTAL	0	0	0	1	0	0	0	0	0	1	0	1	0	14	0	0	0	1	0	16	17
11:00 - 11:15	0	0	0	0	1	0	0	0	0	1	0	0	0	3	1	0	0	0	0	4	5
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	2
11:45 - 12:00	0	0	0	1	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	4	5
HOURLY TOTAL	0	0	0	1	1	0	0	0	0	2	1	0	0	9	1	0	0	0	1	12	14
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	3	3
12:15 - 12:30	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	2	3
12:30 - 12:45	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2
12:45 - 13:00	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	1	0	1	0	4	5
HOURLY TOTAL	0	0	0	2	1	0	0	0	0	3	1	0	0	7	0	1	0	1	0	10	13
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	5	5
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	0	12	12
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2
14:15 - 14:30	0	0	0	1	1	0	1	0	0	3	1	3	0	1	1	0	0	0	0	6	9
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
HOURLY TOTAL	0	0	0	1	1	0	1	0	0	3	1	4	0	6	1	0	0	0	0	12	15
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	3
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5	5
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	4	4
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	1	0	1	13	13
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	7	0	5	1	0	0	0	0	13	13
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	6	1	0	0	0	0	8	8
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	8	0	19	2	0	0	0	0	29	29
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6	6
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	10
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6	6
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	5
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	25	2	0	0	0	0	27	27
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	6	6
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	4
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	9
18:45 - 19:00	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	2	3
HOURLY TOTAL	1	0	0	0	0	0	0	0	0	1	0	2	0	19	0	0	0	0	0	21	22
PERIOD TOTAL	1	0	0	9	3	0	1	1	0	15	3	17	0	170	12	1	2	5	3	213	228

Manual Classified Turning Counts, Hereford

DATE: 0

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: MAIN ACCESS

TIME / CLASS	LEFT TO UNANED ROAD SOUTH										RIGHT TO UNNAMED ROAD NORTH										TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2
7:30 - 7:45	0	0	0	2	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	3
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	2	0	0	0	0	0	2	0	0	0	3	1	0	0	0	0	4	6
8:00 - 8:15	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 - 8:30	0	0	0	2	0	0	1	1	0	4	0	0	0	0	0	0	0	0	0	0	4
8:30 - 8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	2
8:45 - 9:00	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	0	0	0	4	0	0	2	1	0	7	0	0	0	1	0	0	0	0	0	1	8
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:30 - 9:45	5	0	0	0	1	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	7
9:45 - 10:00	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	5	0	0	4	1	0	1	0	0	11	0	0	0	0	0	0	0	0	0	0	11
10:00 - 10:15	3	0	0	1	0	0	0	2	0	6	0	0	0	0	0	0	0	0	0	0	6
10:15 - 10:30	0	0	0	0	2	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	3
10:30 - 10:45	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
10:45 - 11:00	0	0	0	0	1	1	1	0	0	3	0	0	0	0	1	0	0	0	0	1	4
HOURLY TOTAL	3	0	0	2	4	1	1	2	0	13	0	0	0	0	2	0	0	0	0	2	15
11:00 - 11:15	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:15 - 11:30	0	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	3
11:30 - 11:45	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
HOURLY TOTAL	0	0	0	4	3	0	0	0	0	7	0	0	0	1	1	0	0	0	0	2	9
12:00 - 12:15	0	0	0	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
12:15 - 12:30	0	0	0	3	1	0	0	0	0	4	0	0	0	0	1	0	0	0	0	1	5
12:30 - 12:45	1	0	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
12:45 - 13:00	0	0	0	1	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	1	0	0	7	2	3	0	0	0	13	0	0	0	0	1	0	0	0	0	1	14
13:00 - 13:15	0	0	0	4	1	0	1	0	0	6	0	0	0	0	0	0	0	0	0	0	6
13:15 - 13:30	0	0	0	3	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
13:30 - 13:45	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	1	0	0	7	3	0	1	0	0	12	0	0	0	0	0	0	0	0	0	0	12
14:00 - 14:15	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2
14:15 - 14:30	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
14:30 - 14:45	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
14:45 - 15:00	0	0	0	2	0	1	0	1	0	4	0	0	0	0	1	0	0	0	0	1	5
HOURLY TOTAL	0	0	0	6	2	1	0	1	0	10	0	0	0	1	1	0	0	0	0	2	12
15:00 - 15:15	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	3
15:15 - 15:30	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	2
15:30 - 15:45	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
15:45 - 16:00	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	0	0	0	3	3	0	0	0	0	6	0	0	0	0	1	0	0	0	1	2	8
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
16:15 - 16:30	0	0	0	7	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8
16:30 - 16:45	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
16:45 - 17:00	0	0	0	2	0	0	0	0	0	2	0	0	0	2	0	0	0	0	1	3	5
HOURLY TOTAL	0	0	0	12	1	0	0	0	0	13	0	0	0	3	0	0	0	0	1	4	17
17:00 - 17:15	0	0	0	1	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	3
17:15 - 17:30	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
17:30 - 17:45	0	0	0	3	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	4
17:45 - 18:00	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	0	0	0	9	2	0	1	0	0	12	0	0	0	1	0	0	0	0	0	1	13
18:00 - 18:15	0	0	0	2	1	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	4
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	1	0	0	0	1	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	3
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	1	0	0	2	2	0	1	1	0	7	0	0	0	0	0	0	0	0	0	0	7
PERIOD TOTAL	11	0	0	62	23	5	7	5	0	113	0	0	0	10	7	0	0	0	2	19	132

Manual Classified Turning Counts, Hereford

DATE: 0

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: UNANED ROAD SOUTH

TIME / CLASS	STRAIGHT TO UNNAMED ROAD NORTH										RIGHT TO MAIN ACCESS										TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	FARM IMPLEMENT	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	4	1	0	0	0	0	5	0	0	0	3	1	0	0	0	0	4	9
7:15 - 7:30	0	0	0	3	0	0	0	0	0	3	0	0	0	4	2	0	0	0	0	6	9
7:30 - 7:45	0	0	0	3	2	0	0	0	0	5	1	0	0	3	0	0	0	0	0	4	9
7:45 - 8:00	0	0	0	1	2	0	0	0	0	3	1	0	0	2	1	0	0	0	0	4	7
HOURLY TOTAL	0	0	0	11	5	0	0	0	0	16	2	0	0	12	4	0	0	0	0	18	34
8:00 - 8:15	0	0	0	5	1	0	0	1	0	7	0	0	0	3	4	0	0	0	0	7	14
8:15 - 8:30	0	0	0	3	1	0	0	0	0	4	0	0	0	2	0	0	0	0	0	2	6
8:30 - 8:45	0	0	0	2	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	3
8:45 - 9:00	0	1	0	4	0	0	0	0	0	5	1	0	0	1	0	0	1	1	0	4	9
HOURLY TOTAL	0	1	0	14	2	0	0	1	0	18	1	0	0	7	4	0	1	1	0	14	32
9:00 - 9:15	0	0	0	2	1	0	0	1	0	4	0	0	0	0	0	0	1	1	0	2	6
9:15 - 9:30	0	0	0	5	2	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7
9:30 - 9:45	0	0	0	0	3	0	0	0	0	3	0	0	0	1	1	0	0	0	0	2	5
9:45 - 10:00	0	0	0	3	0	0	0	1	0	4	0	0	0	1	1	0	0	1	0	3	7
HOURLY TOTAL	0	0	0	10	6	0	0	2	0	18	0	0	0	2	2	0	1	2	0	7	25
10:00 - 10:15	0	0	0	4	0	0	1	0	0	5	0	0	0	0	0	0	1	0	0	1	6
10:15 - 10:30	0	0	0	4	0	0	0	0	0	4	0	0	0	0	2	1	0	0	0	3	7
10:30 - 10:45	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	3	4
10:45 - 11:00	0	0	0	5	1	0	0	0	1	7	0	0	0	0	0	0	1	0	0	1	8
HOURLY TOTAL	0	0	0	14	1	0	1	0	1	17	0	0	0	0	4	2	2	0	0	8	25
11:00 - 11:15	0	0	0	2	2	1	0	0	0	5	0	0	0	2	0	0	1	0	0	3	8
11:15 - 11:30	0	0	0	5	1	0	0	0	0	6	0	0	0	2	0	1	0	0	0	3	9
11:30 - 11:45	0	0	0	1	0	0	0	0	0	1	0	0	0	2	1	0	0	0	0	3	4
11:45 - 12:00	0	0	0	6	0	0	0	0	0	6	0	0	0	1	0	0	1	0	0	2	8
HOURLY TOTAL	0	0	0	14	3	1	0	0	0	18	0	0	0	7	1	1	2	0	0	11	29
12:00 - 12:15	0	0	0	3	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	2	5
12:15 - 12:30	0	0	0	4	0	0	0	0	1	5	0	0	0	1	0	0	0	0	0	1	6
12:30 - 12:45	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	2	3
12:45 - 13:00	0	0	0	3	1	0	0	0	0	4	0	0	0	0	1	0	0	0	0	1	5
HOURLY TOTAL	0	0	0	11	1	0	0	0	1	13	0	0	0	4	1	0	1	0	0	6	19
13:00 - 13:15	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2
13:15 - 13:30	0	0	0	4	0	0	0	0	0	4	0	0	0	2	0	0	0	0	0	2	6
13:30 - 13:45	0	0	0	5	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	1	6
13:45 - 14:00	0	0	0	3	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	4
HOURLY TOTAL	0	0	0	13	0	0	0	0	1	14	0	0	0	3	1	0	0	0	0	4	18
14:00 - 14:15	0	0	0	4	0	0	0	0	0	4	0	0	0	3	1	0	0	0	0	4	8
14:15 - 14:30	1	0	0	3	0	1	0	0	0	5	0	0	0	2	0	0	0	0	0	2	7
14:30 - 14:45	0	0	0	3	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	1	4
14:45 - 15:00	5	0	0	4	1	0	1	0	0	11	0	0	0	0	1	0	0	0	0	1	12
HOURLY TOTAL	6	0	0	14	1	1	1	0	0	23	0	0	0	6	2	0	0	0	0	8	31
15:00 - 15:15	0	0	0	2	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	2	4
15:15 - 15:30	6	0	0	0	0	0	0	0	0	6	0	0	0	0	1	0	1	0	0	2	8
15:30 - 15:45	3	0	0	0	0	0	0	0	0	3	0	0	0	2	2	0	0	1	0	5	8
15:45 - 16:00	4	0	0	0	0	0	0	0	0	4	0	0	0	1	1	0	0	0	0	2	6
HOURLY TOTAL	13	0	0	2	0	0	0	0	0	15	0	0	0	4	4	0	1	2	0	11	26
16:00 - 16:15	0	0	0	5	0	0	0	0	0	5	0	0	0	1	1	0	0	0	0	2	7
16:15 - 16:30	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2	1	0	0	0	5	6
16:30 - 16:45	0	0	0	7	0	0	0	1	0	8	0	0	0	0	0	0	0	0	0	0	8
16:45 - 17:00	0	1	0	5	0	0	0	0	0	6	0	0	0	5	1	0	1	0	1	8	14
HOURLY TOTAL	0	1	0	17	0	0	0	2	0	20	0	0	0	8	4	1	1	0	1	15	35
17:00 - 17:15	0	0	0	6	0	0	0	0	0	6	0	0	0	1	0	0	0	0	0	1	7
17:15 - 17:30	0	0	0	7	0	0	0	0	0	7	0	0	0	1	0	0	0	0	0	1	8
17:30 - 17:45	0	0	0	9	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	10
17:45 - 18:00	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	1	6
HOURLY TOTAL	0	0	0	27	0	0	0	0	1	28	0	0	0	2	0	0	0	1	0	3	31
18:00 - 18:15	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	1	5
18:15 - 18:30	0	0	0	2	1	0	0	0	1	4	0	0	0	0	0	0	1	0	0	1	5
18:30 - 18:45	0	0	0	8	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	1	9
18:45 - 19:00	0	0	0	7	0	0	0	0	0	7	0	0	0	0	1	0	1	2	0	4	11
HOURLY TOTAL	0	0	0	21	1	0	0	0	1	23	0	0	0	0	2	0	3	2	0	7	30
PERIOD TOTAL	19	2	0	168	20	2	2	5	5	223	3	0	0	55	29	4	12	8	1	112	335

Manual Classified Turning Counts, Hereford

DATE: Wednesday 8th July, 2015

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: UNNAMED ROAD NORTH

TIME / CLASS	LEFT TO MAIN ACCESS									STRAIGHT TO UNANED ROAD SOUTH									TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	2	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:15 - 17:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
PERIOD TOTAL	6	0	0	4	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10

Manual Classified Turning Counts, Hereford

DATE: Wednesday 8th July, 2015

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: MAIN ACCESS

TIME / CLASS	LEFT TO UNANED ROAD SOUTH									RIGHT TO UNNAMED ROAD NORTH									TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	1	0	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	1	3
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
9:30 - 9:45	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
9:45 - 10:00	2	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	6	0	0	2	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
HOURLY TOTAL	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	2
11:00 - 11:15	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
11:15 - 11:30	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	7	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12:45 - 13:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
13:00 - 13:15	2	0	0	3	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
13:30 - 13:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
13:45 - 14:00	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	4	0	0	4	0	0	0	0	8	0	0	0	1	0	0	0	0	1	9
14:00 - 14:15	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
14:15 - 14:30	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	2	3
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	5	0	0	0	0	0	0	0	5	0	0	0	2	0	0	0	0	2	7
15:00 - 15:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
15:30 - 15:45	4	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
15:45 - 16:00	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
HOURLY TOTAL	6	0	0	2	0	0	0	0	8	0	0	0	1	0	0	0	0	1	9
16:00 - 16:15	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:30 - 16:45	8	0	0	1	0	0	0	0	9	0	0	0	0	0	0	0	0	0	9
16:45 - 17:00	2	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
HOURLY TOTAL	12	0	0	2	0	0	0	0	14	0	0	0	1	0	0	0	0	1	15
17:00 - 17:15	0	0	0	5	0	0	0	0	5	0	0	0	2	0	0	0	0	2	7
17:15 - 17:30	3	0	0	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
17:30 - 17:45	1	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
17:45 - 18:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	4	0	0	11	0	0	0	0	15	0	0	0	2	0	0	0	0	2	17
18:00 - 18:15	2	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
18:15 - 18:30	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
18:30 - 18:45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
18:45 - 19:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
HOURLY TOTAL	5	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	6
PERIOD TOTAL	51	0	0	25	0	0	0	0	76	1	0	1	8	0	0	0	0	10	86

Manual Classified Turning Counts, Hereford

DATE: Wednesday 8th July, 2015

LOCATION: UNAMED ROAD / MAIN ACCESS

ARM: UNANED ROAD SOUTH

TIME / CLASS	STRAIGHT TO UNNAMED ROAD NORTH									RIGHT TO MAIN ACCESS									TOTAL MOVEMENT FROM ARM
	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	PEDESTRIAN	PEDAL CYCLE	MOTOR CYCLE	CAR TAXI	LGV	OGV 1	OGV 2	BUS COACH	TOTAL	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	2
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	2
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	7	7
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	0	0	9	9
11:00 - 11:15	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	2
11:15 - 11:30	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	8
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	9	0	0	1	0	0	0	0	10	10
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:30 - 12:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
12:45 - 13:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	3	0	0	4	0	0	0	0	7	7
13:00 - 13:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	5
13:15 - 13:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	5
13:30 - 13:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	6
13:45 - 14:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	17	17
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2
16:00 - 16:15	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	3	3
16:15 - 16:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	7	7
17:00 - 17:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	5
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	6
17:45 - 18:00	0	0	0	0	0	0	0	0	0	8	0	0	1	0	0	0	0	9	9
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	19	0	0	1	0	0	0	0	20	20
18:00 - 18:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
18:15 - 18:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTAL	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	4
PERIOD TOTAL	0	0	0	0	0	0	0	0	0	67	2	1	24	0	0	0	0	94	94

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (1) Orchard Green / Woodbine Close

Approach: Orchard Green (North)

	Left to Woodbine Close										S/B to Orchard Green (South)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	0	1	0	0	0	0	0	**1**	0	0	8	0	0	0	0	0	0	**8**
0745 - 0800	0	0	1	0	0	0	0	0	0	**1**	0	0	5	2	0	0	0	0	1	**8**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**13**	**2**	**0**	**0**	**0**	**0**	**1**	**16**
0800 - 0815	0	0	1	0	0	0	0	0	0	**1**	0	0	2	0	1	0	0	0	0	**3**
0815 - 0830	0	0	1	0	0	0	0	0	0	**1**	0	0	5	0	0	0	0	0	0	**5**
0830 - 0845	0	0	0	0	0	0	0	0	0	**0**	0	0	6	0	0	0	0	0	0	**6**
0845 - 0900	0	0	2	0	0	0	0	0	0	**2**	0	0	0	1	1	0	0	0	0	**2**
Hourly Total	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**13**	**1**	**2**	**0**	**0**	**0**	**0**	**16**
0900 - 0915	0	0	4	0	0	0	0	0	0	**4**	0	0	6	0	1	0	0	0	0	**7**
0915 - 0930	0	0	1	0	0	0	0	0	0	**1**	0	0	4	0	1	0	0	0	0	**5**
Hourly Total	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**10**	**0**	**2**	**0**	**0**	**0**	**0**	**12**
Session Total	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**36**	**3**	**4**	**0**	**0**	**0**	**1**	**44**
1630 - 1645	0	0	0	0	0	0	0	0	0	**0**	2	0	7	0	0	0	0	0	0	**9**
1645 - 1700	0	0	3	0	0	0	0	0	0	**3**	0	0	9	1	0	0	0	0	0	**10**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**16**	**1**	**0**	**0**	**0**	**0**	**0**	**19**
1700 - 1715	1	0	2	1	0	0	0	0	0	**4**	0	0	16	0	2	0	0	0	0	**18**
1715 - 1730	0	0	1	0	0	0	0	0	0	**1**	0	0	2	0	0	0	0	0	0	**2**
1730 - 1745	0	0	0	0	0	0	0	0	0	**0**	1	0	2	2	0	0	0	0	0	**5**
1745 - 1800	0	0	0	0	0	0	0	0	0	**0**	0	0	4	2	0	0	0	0	0	**6**
Hourly Total	**1**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**0**	**24**	**4**	**2**	**0**	**0**	**0**	**0**	**31**
1800 - 1815	0	0	0	0	0	0	0	0	0	**0**	0	0	7	0	0	0	0	0	0	**7**
1815 - 1830	1	0	0	0	0	0	0	0	0	**1**	0	0	4	0	1	0	0	0	0	**5**
Hourly Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**11**	**0**	**1**	**0**	**0**	**0**	**0**	**12**
Session Total	**2**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**9**	**3**	**0**	**51**	**5**	**3**	**0**	**0**	**0**	**0**	**62**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (1) Orchard Green / Woodbine Close

Approach: Woodbine Close

	Left to Orchard Green (South)										Right to Orchard Green (North)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	4	0	0	0	0	0	0	**4**	0	0	1	0	0	0	0	0	0	**1**
0745 - 0800	0	0	4	0	0	0	0	1	0	**5**	1	0	1	1	0	0	0	0	0	**3**
Hourly Total	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**4**
0800 - 0815	0	0	2	0	0	0	0	0	0	**2**	0	0	0	1	0	0	0	0	0	**1**
0815 - 0830	0	0	5	0	0	0	0	1	0	**6**	0	0	3	0	0	0	0	0	0	**3**
0830 - 0845	1	0	2	0	0	0	0	0	0	**3**	0	0	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	1	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**1**	**0**	**10**	**0**	**0**	**0**	**0**	**1**	**0**	**12**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**5**
0900 - 0915	0	0	4	0	0	0	0	0	0	**4**	0	0	2	0	0	0	0	0	1	**3**
0915 - 0930	1	0	4	0	0	0	0	0	0	**5**	0	0	5	0	0	0	0	0	0	**5**
Hourly Total	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**1**	**8**
Session Total	**2**	**0**	**26**	**0**	**0**	**0**	**0**	**2**	**0**	**30**	**1**	**0**	**13**	**2**	**0**	**0**	**0**	**0**	**1**	**17**
1630 - 1645	0	0	6	1	0	0	0	0	0	**7**	0	0	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	3	0	0	0	0	0	0	**3**	0	0	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	2	0	0	0	0	0	0	**2**	0	0	1	1	0	0	0	0	0	**2**
1715 - 1730	0	0	4	0	0	0	0	0	0	**4**	1	0	0	0	0	0	0	0	0	**1**
1730 - 1745	0	0	3	1	0	0	0	0	0	**4**	0	0	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	5	0	0	0	0	0	0	**5**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**0**	**0**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**4**
1800 - 1815	0	0	3	0	0	0	0	0	0	**3**	0	0	1	0	0	0	0	0	0	**1**
1815 - 1830	0	0	2	0	0	0	0	0	0	**2**	0	0	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Session Total	**0**	**0**	**28**	**2**	**0**	**0**	**0**	**0**	**0**	**30**	**1**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**5**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (1) Orchard Green / Woodbine Close

Approach: Orchard Green (South)

	N/B to Orchard Green (North)										Right to Woodbine Close									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	4	2	0	0	0	1	0	**7**	0	0	1	1	0	0	0	0	0	**2**
0745 - 0800	0	0	7	2	0	0	0	0	0	**9**	0	0	1	3	0	0	0	0	0	**4**
Hourly Total	**0**	**0**	**11**	**4**	**0**	**0**	**0**	**1**	**0**	**16**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**6**
0800 - 0815	0	0	3	1	0	0	0	0	0	**4**	0	0	5	1	0	0	0	0	0	**6**
0815 - 0830	0	0	3	2	0	0	0	0	0	**5**	0	0	3	1	0	0	0	0	0	**4**
0830 - 0845	0	1	3	1	2	0	0	0	0	**7**	0	0	4	0	0	0	0	0	0	**4**
0845 - 0900	0	0	6	1	1	0	0	0	0	**8**	2	0	4	0	0	0	0	0	0	**6**
Hourly Total	**0**	**1**	**15**	**5**	**3**	**0**	**0**	**0**	**0**	**24**	**2**	**0**	**16**	**2**	**0**	**0**	**0**	**0**	**0**	**20**
0900 - 0915	0	0	5	1	1	0	0	0	0	**7**	0	0	1	1	0	0	0	0	0	**2**
0915 - 0930	0	0	3	0	0	0	0	0	0	**3**	0	0	3	1	0	0	0	0	0	**4**
Hourly Total	**0**	**0**	**8**	**1**	**1**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**6**
Session Total	**0**	**1**	**34**	**10**	**4**	**0**	**0**	**1**	**0**	**50**	**2**	**0**	**22**	**8**	**0**	**0**	**0**	**0**	**0**	**32**
1630 - 1645	0	0	3	2	0	0	0	0	0	**5**	0	0	2	0	0	0	0	0	0	**2**
1645 - 1700	0	0	3	1	0	0	0	1	0	**5**	0	0	2	0	0	0	0	0	0	**2**
Hourly Total	**0**	**0**	**6**	**3**	**0**	**0**	**0**	**1**	**0**	**10**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
1700 - 1715	0	0	8	2	1	0	0	0	0	**11**	0	0	5	0	0	0	0	0	0	**5**
1715 - 1730	0	0	1	1	0	0	0	0	0	**2**	0	0	4	0	0	0	0	0	0	**4**
1730 - 1745	0	0	9	2	0	0	0	1	0	**12**	0	0	5	0	0	0	0	0	0	**5**
1745 - 1800	0	0	3	0	0	0	0	0	2	**5**	0	0	3	0	0	0	0	0	0	**3**
Hourly Total	**0**	**0**	**21**	**5**	**1**	**0**	**0**	**1**	**2**	**30**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**17**
1800 - 1815	0	0	1	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	1	0	0	0	0	1	0	**2**	1	0	3	0	0	0	0	0	0	**4**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
Session Total	**0**	**0**	**29**	**8**	**1**	**0**	**0**	**3**	**2**	**43**	**1**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**25**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (2) Walkers Green / Paradise Green

Approach: Walkers Green

	Left to Paradise Green (East)										Right to Paradise Green (West)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	1	1	0	0	0	0	0	**2**	0	0	1	0	0	0	0	0	0	**1**
0745 - 0800	0	0	0	2	0	0	0	0	0	**2**	0	0	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
0800 - 0815	0	0	6	0	1	3	0	0	0	**10**	0	0	4	0	0	0	0	0	0	**4**
0815 - 0830	0	0	4	0	0	0	0	0	0	**4**	0	0	6	0	0	0	0	0	0	**6**
0830 - 0845	0	0	3	0	0	0	0	0	0	**3**	0	0	1	0	0	2	0	0	0	**3**
0845 - 0900	1	0	2	0	0	1	0	0	0	**4**	0	0	9	0	0	4	0	0	0	**13**
Hourly Total	**1**	**0**	**15**	**0**	**1**	**4**	**0**	**0**	**0**	**21**	**0**	**0**	**20**	**0**	**0**	**6**	**0**	**0**	**0**	**26**
0900 - 0915	0	0	4	0	0	1	0	0	0	**5**	0	0	5	0	0	1	0	0	0	**6**
0915 - 0930	0	0	3	0	0	1	0	0	0	**4**	0	0	1	0	0	1	0	0	0	**2**
Hourly Total	**0**	**0**	**7**	**0**	**0**	**2**	**0**	**0**	**0**	**9**	**0**	**0**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**8**
Session Total	**1**	**0**	**23**	**3**	**1**	**6**	**0**	**0**	**0**	**34**	**0**	**0**	**27**	**0**	**0**	**8**	**0**	**0**	**0**	**35**
1630 - 1645	0	0	1	0	0	1	0	0	0	**2**	0	0	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	4	0	0	5	0	0	0	**9**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**0**	**0**	**5**	**0**	**0**	**6**	**0**	**0**	**0**	**11**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
1700 - 1715	1	0	5	0	0	1	0	0	0	**7**	0	0	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	3	0	0	1	0	0	0	**4**	0	0	3	0	0	0	0	0	0	**3**
1730 - 1745	0	0	2	0	0	0	0	0	0	**2**	0	0	1	0	0	0	0	0	0	**1**
1745 - 1800	0	0	2	0	0	0	0	0	0	**2**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**1**	**0**	**12**	**0**	**0**	**2**	**0**	**0**	**0**	**15**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
1800 - 1815	0	0	3	0	0	0	0	0	0	**3**	0	0	1	0	0	0	0	0	0	**1**
1815 - 1830	1	0	2	0	0	1	0	0	0	**4**	0	0	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**7**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Session Total	**2**	**0**	**22**	**0**	**0**	**9**	**0**	**0**	**0**	**33**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**7**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (2) Walkers Green / Paradise Green

Approach: Paradise Green (East)

	W/B to Paradise Green (West)										Right to Walkers Green									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	0	2	0	2	0	0	0	**4**	0	0	2	0	0	0	0	0	0	**2**
0745 - 0800	0	0	3	3	1	2	0	1	0	**10**	0	0	2	1	0	0	0	0	0	**3**
Hourly Total	**0**	**0**	**3**	**5**	**1**	**4**	**0**	**1**	**0**	**14**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**5**
0800 - 0815	0	0	7	1	0	1	0	0	0	**9**	0	0	1	1	0	1	0	0	0	**3**
0815 - 0830	0	0	6	2	0	0	0	0	0	**8**	0	0	2	0	0	0	0	1	0	**3**
0830 - 0845	0	0	7	0	0	2	0	0	0	**9**	0	0	1	1	0	1	0	0	0	**3**
0845 - 0900	0	0	9	1	0	8	0	0	0	**18**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**0**	**0**	**29**	**4**	**0**	**11**	**0**	**0**	**0**	**44**	**0**	**0**	**5**	**2**	**0**	**2**	**0**	**1**	**0**	**10**
0900 - 0915	0	0	6	2	0	1	0	0	0	**9**	1	0	0	1	0	1	0	0	1	**4**
0915 - 0930	0	0	7	0	0	1	0	0	0	**8**	0	0	2	0	0	1	0	0	0	**3**
Hourly Total	**0**	**0**	**13**	**2**	**0**	**2**	**0**	**0**	**0**	**17**	**1**	**0**	**2**	**1**	**0**	**2**	**0**	**0**	**1**	**7**
Session Total	**0**	**0**	**45**	**11**	**1**	**17**	**0**	**1**	**0**	**75**	**1**	**0**	**11**	**4**	**0**	**4**	**0**	**1**	**1**	**22**
1630 - 1645	0	0	4	1	0	1	0	0	0	**6**	0	0	5	2	0	0	0	0	0	**7**
1645 - 1700	0	0	5	0	0	0	0	1	0	**6**	0	0	3	0	0	3	0	0	0	**6**
Hourly Total	**0**	**0**	**9**	**1**	**0**	**1**	**0**	**1**	**0**	**12**	**0**	**0**	**8**	**2**	**0**	**3**	**0**	**0**	**0**	**13**
1700 - 1715	0	0	9	0	1	0	0	0	0	**10**	0	0	2	1	0	0	0	0	0	**3**
1715 - 1730	0	0	8	0	0	4	0	0	0	**12**	1	0	2	1	0	2	0	0	0	**6**
1730 - 1745	0	0	7	0	0	0	0	0	0	**7**	0	0	3	1	0	1	0	0	0	**5**
1745 - 1800	0	0	5	0	0	0	0	0	0	**5**	0	0	5	0	0	0	0	0	0	**5**
Hourly Total	**0**	**0**	**29**	**0**	**1**	**4**	**0**	**0**	**0**	**34**	**1**	**0**	**12**	**3**	**0**	**3**	**0**	**0**	**0**	**19**
1800 - 1815	0	0	5	1	0	0	0	0	0	**6**	0	0	1	0	0	0	0	0	0	**1**
1815 - 1830	0	0	5	0	0	0	0	1	0	**6**	0	0	3	1	0	2	0	0	0	**6**
Hourly Total	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**1**	**0**	**12**	**0**	**0**	**4**	**1**	**0**	**2**	**0**	**0**	**0**	**7**
Session Total	**0**	**0**	**48**	**2**	**1**	**5**	**0**	**2**	**0**	**58**	**1**	**0**	**24**	**6**	**0**	**8**	**0**	**0**	**0**	**39**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (2) Walkers Green / Paradise Green

Approach: Paradise Green (West)

	Left to Walkers Green										E/B to Paradise Green (East)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	0	0	0	0	0	0	0	**0**	0	0	6	0	0	0	0	0	0	**6**
0745 - 0800	0	0	1	0	1	0	0	1	0	**3**	0	0	1	2	0	0	0	1	0	**4**
Hourly Total	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**7**	**2**	**0**	**0**	**0**	**1**	**0**	**10**
0800 - 0815	0	0	0	0	0	1	0	0	0	**1**	0	0	4	0	0	3	0	0	0	**7**
0815 - 0830	0	0	2	0	0	0	0	0	0	**2**	0	0	5	1	0	1	0	0	0	**7**
0830 - 0845	0	0	3	0	0	1	0	0	0	**4**	0	0	4	1	0	0	0	0	0	**5**
0845 - 0900	0	0	0	0	0	0	0	0	0	**0**	0	0	5	1	0	3	0	0	0	**9**
Hourly Total	**0**	**0**	**5**	**0**	**0**	**2**	**0**	**0**	**0**	**7**	**0**	**0**	**18**	**3**	**0**	**7**	**0**	**0**	**0**	**28**
0900 - 0915	0	0	0	0	0	0	0	0	0	**0**	0	0	8	2	0	2	0	0	0	**12**
0915 - 0930	0	0	1	0	0	0	0	0	0	**1**	0	0	7	1	0	0	0	0	0	**8**
Hourly Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**15**	**3**	**0**	**2**	**0**	**0**	**0**	**20**
Session Total	**0**	**0**	**7**	**0**	**1**	**2**	**0**	**1**	**0**	**11**	**0**	**0**	**40**	**8**	**0**	**9**	**0**	**1**	**0**	**58**
1630 - 1645	0	0	1	0	0	1	0	0	0	**2**	0	0	4	0	0	1	0	0	1	**6**
1645 - 1700	0	0	2	1	0	0	0	0	0	**3**	0	0	3	1	0	0	0	0	0	**4**
Hourly Total	**0**	**0**	**3**	**1**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**7**	**1**	**0**	**1**	**0**	**0**	**1**	**10**
1700 - 1715	1	0	2	0	0	0	0	0	0	**3**	0	0	6	4	0	1	0	0	0	**11**
1715 - 1730	1	0	4	0	0	0	0	0	0	**5**	0	0	8	0	0	0	0	0	0	**8**
1730 - 1745	0	0	3	0	0	0	0	0	0	**3**	0	0	8	1	0	0	0	0	0	**9**
1745 - 1800	0	0	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	0	0	**4**
Hourly Total	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**26**	**5**	**0**	**1**	**0**	**0**	**0**	**32**
1800 - 1815	0	0	1	0	0	0	0	0	0	**1**	0	0	4	0	0	2	0	0	0	**6**
1815 - 1830	0	0	2	0	0	0	0	0	0	**2**	0	0	6	0	1	0	0	0	0	**7**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**10**	**0**	**1**	**2**	**0**	**0**	**0**	**13**
Session Total	**2**	**0**	**15**	**1**	**0**	**1**	**0**	**0**	**0**	**19**	**0**	**0**	**43**	**6**	**1**	**4**	**0**	**0**	**1**	**55**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (3) Orchard Green / Paradise Green

Approach: Orchard Green

	Left to Paradise Green (East)										Right to Paradise Green (West)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	3	0	0	0	0	0	0	**3**	0	0	8	2	0	0	0	0	0	**10**
0745 - 0800	0	0	2	0	0	0	0	2	1	**5**	0	0	11	1	0	0	0	0	0	**12**
Hourly Total	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**2**	**1**	**8**	**0**	**0**	**19**	**3**	**0**	**0**	**0**	**0**	**0**	**22**
0800 - 0815	0	0	0	0	0	0	0	0	0	**0**	0	0	5	2	0	0	0	0	0	**7**
0815 - 0830	1	0	1	1	0	0	0	1	0	**4**	0	0	8	2	0	0	0	0	0	**10**
0830 - 0845	0	0	3	0	0	0	0	0	0	**3**	0	0	9	0	0	0	0	0	0	**9**
0845 - 0900	0	0	4	1	0	0	0	0	0	**5**	0	0	3	1	0	0	0	0	0	**4**
Hourly Total	**1**	**0**	**8**	**2**	**0**	**0**	**0**	**1**	**0**	**12**	**0**	**0**	**25**	**5**	**0**	**0**	**0**	**0**	**0**	**30**
0900 - 0915	0	0	2	0	0	0	0	0	0	**2**	0	0	4	0	0	0	0	0	1	**5**
0915 - 0930	0	0	1	0	0	0	0	0	0	**1**	0	0	6	0	0	0	0	0	0	**6**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**1**	**11**
Session Total	**1**	**0**	**16**	**2**	**0**	**0**	**0**	**3**	**1**	**23**	**0**	**0**	**54**	**8**	**0**	**0**	**0**	**0**	**1**	**63**
1630 - 1645	0	0	0	0	0	0	0	0	0	**0**	0	0	9	1	0	0	0	0	0	**10**
1645 - 1700	0	0	2	1	1	0	0	0	0	**4**	0	0	8	1	0	0	0	0	0	**9**
Hourly Total	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**17**	**2**	**0**	**0**	**0**	**0**	**0**	**19**
1700 - 1715	0	0	2	0	0	0	0	0	0	**2**	0	0	12	1	0	0	0	0	0	**13**
1715 - 1730	0	0	0	0	0	0	0	0	0	**0**	0	0	4	2	0	0	0	0	0	**6**
1730 - 1745	0	0	3	0	0	0	0	0	0	**3**	0	0	8	1	0	0	0	0	0	**9**
1745 - 1800	0	0	2	0	0	0	0	0	0	**2**	0	0	5	2	0	0	0	0	0	**7**
Hourly Total	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**29**	**6**	**0**	**0**	**0**	**0**	**0**	**35**
1800 - 1815	0	0	3	1	0	0	0	0	0	**4**	0	0	4	2	0	0	0	0	0	**6**
1815 - 1830	0	0	1	1	0	0	0	0	0	**2**	0	0	6	1	0	0	0	0	0	**7**
Hourly Total	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**10**	**3**	**0**	**0**	**0**	**0**	**0**	**13**
Session Total	**0**	**0**	**13**	**3**	**1**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**56**	**11**	**0**	**0**	**0**	**0**	**0**	**67**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (3) Orchard Green / Paradise Green

Approach: Paradise Green (East)

	W/B to Paradise Green (West)										Right to Orchard Green									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	6	2	0	0	0	0	0	**8**	0	0	3	0	0	0	0	0	0	**3**
0745 - 0800	0	0	4	0	0	0	0	1	0	**5**	0	0	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**1**	**0**	**13**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
0800 - 0815	0	0	12	2	1	0	0	0	0	**15**	0	0	1	0	0	0	0	0	0	**1**
0815 - 0830	0	0	9	0	0	0	0	0	0	**9**	0	0	3	0	0	0	0	0	0	**3**
0830 - 0845	0	0	5	0	0	1	0	0	0	**6**	0	0	1	0	0	0	0	0	0	**1**
0845 - 0900	0	0	7	0	0	0	0	0	0	**7**	0	0	2	1	0	0	0	0	0	**3**
Hourly Total	**0**	**0**	**33**	**2**	**1**	**1**	**0**	**0**	**0**	**37**	**0**	**0**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**8**
0900 - 0915	0	0	6	0	0	0	0	0	0	**6**	0	0	6	0	0	1	0	0	0	**7**
0915 - 0930	0	0	7	0	0	0	0	0	0	**7**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**7**	**0**	**0**	**1**	**0**	**0**	**0**	**8**
Session Total	**0**	**0**	**56**	**4**	**1**	**1**	**0**	**1**	**0**	**63**	**0**	**0**	**17**	**1**	**0**	**1**	**0**	**0**	**0**	**19**
1630 - 1645	0	0	4	1	0	0	0	0	0	**5**	0	0	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	4	0	0	0	0	0	0	**4**	0	0	1	0	0	0	0	1	0	**2**
Hourly Total	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**2**
1700 - 1715	0	0	5	0	0	0	0	0	0	**5**	0	0	1	0	1	0	0	0	0	**2**
1715 - 1730	0	0	6	0	0	0	0	0	0	**6**	0	0	2	0	0	0	0	0	0	**2**
1730 - 1745	0	0	3	0	0	0	0	0	0	**3**	0	0	2	0	0	0	0	0	0	**2**
1745 - 1800	0	0	8	1	0	0	0	0	0	**9**	0	0	1	0	0	0	0	0	0	**1**
Hourly Total	**0**	**0**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**7**
1800 - 1815	0	0	5	1	0	0	0	0	0	**6**	0	0	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	3	0	0	0	0	0	0	**3**	0	0	2	0	0	0	0	1	0	**3**
Hourly Total	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**3**
Session Total	**0**	**0**	**38**	**3**	**0**	**0**	**0**	**0**	**0**	**41**	**0**	**0**	**9**	**0**	**1**	**0**	**0**	**2**	**0**	**12**

Marden - Manual Traffic Survey, Monday 22nd February 2016

Junction: (3) Orchard Green / Paradise Green

Approach: Paradise Green (West)

	Left to Orchard Green										E/B to Paradise Green (East)									
TIME	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	HGV	PEDS	HORSE	BUS	TRACTOR	**TOTAL**
0730 - 0745	0	0	4	0	0	0	0	0	0	**4**	0	0	3	0	0	0	0	0	0	**3**
0745 - 0800	0	0	6	2	0	0	0	0	0	**8**	0	0	3	1	0	0	0	0	0	**4**
Hourly Total	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**7**
0800 - 0815	0	0	3	3	0	0	0	0	0	**6**	0	0	2	1	0	0	0	0	0	**3**
0815 - 0830	0	0	5	3	0	0	0	0	0	**8**	0	0	4	1	0	0	0	0	0	**5**
0830 - 0845	1	0	4	1	0	0	0	0	0	**6**	0	0	11	2	0	0	0	0	0	**13**
0845 - 0900	0	0	5	2	0	0	0	0	0	**7**	0	0	9	4	1	0	0	0	0	**14**
Hourly Total	**1**	**0**	**17**	**9**	**0**	**0**	**0**	**0**	**0**	**27**	**0**	**0**	**26**	**8**	**1**	**0**	**0**	**0**	**0**	**35**
0900 - 0915	0	0	4	1	0	0	0	0	0	**5**	0	0	1	0	0	0	0	0	0	**1**
0915 - 0930	0	0	5	1	0	0	0	0	0	**6**	0	0	4	0	1	0	0	0	0	**5**
Hourly Total	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**6**
Session Total	**1**	**0**	**36**	**13**	**0**	**0**	**0**	**0**	**0**	**50**	**0**	**0**	**37**	**9**	**2**	**0**	**0**	**0**	**0**	**48**
1630 - 1645	0	0	5	0	0	0	0	0	0	**5**	0	0	3	0	0	0	0	0	0	**3**
1645 - 1700	0	0	6	1	0	0	0	0	0	**7**	0	0	3	0	0	0	0	0	0	**3**
Hourly Total	**0**	**0**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
1700 - 1715	0	0	11	2	0	0	0	0	0	**13**	0	0	4	3	0	0	0	0	0	**7**
1715 - 1730	0	1	12	2	0	0	0	0	0	**15**	0	0	6	0	0	0	0	0	0	**6**
1730 - 1745	0	0	11	1	0	0	0	0	0	**12**	0	0	3	0	0	0	0	0	0	**3**
1745 - 1800	0	0	8	0	0	0	0	0	0	**8**	0	0	6	1	0	0	0	0	0	**7**
Hourly Total	**0**	**1**	**42**	**5**	**0**	**0**	**0**	**0**	**0**	**48**	**0**	**0**	**19**	**4**	**0**	**0**	**0**	**0**	**0**	**23**
1800 - 1815	0	0	7	1	0	0	0	0	0	**8**	0	0	4	1	0	0	0	0	0	**5**
1815 - 1830	0	0	5	0	0	0	0	0	0	**5**	0	0	4	1	0	0	0	0	0	**5**
Hourly Total	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**10**
Session Total	**0**	**1**	**65**	**7**	**0**	**0**	**0**	**0**	**0**	**73**	**0**	**0**	**33**	**6**	**0**	**0**	**0**	**0**	**0**	**39**

APPENDIX M – TRICS DATA

Calculation Reference: AUDIT-539501-150626-0642

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:
02 SOUTH EAST
EX ESSEX 1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 237 to 237 (units:)
Range Selected by User: 50 to 491 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 11/12/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Tuesday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Edge of Town 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
Residential Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:
C3 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:
15,001 to 20,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
125,001 to 250,000 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:
No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 EX-03-A-01 SEMI-DET. ESSEX
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY 13/05/08 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CF-03-A-02	-
LN-03-A-01	-
NE-03-A-02	-
NY-03-A-10	-
SC-03-A-04	-
SF-03-A-02	-
SH-03-A-05	-
WM-03-A-03	-
WS-03-A-04	-

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	1	237	0.127	1	237	0.333	1	237	0.460
08:00 - 09:00	1	237	0.177	1	237	0.523	1	237	0.700
09:00 - 10:00	1	237	0.156	1	237	0.198	1	237	0.354
10:00 - 11:00	1	237	0.122	1	237	0.190	1	237	0.312
11:00 - 12:00	1	237	0.165	1	237	0.118	1	237	0.283
12:00 - 13:00	1	237	0.215	1	237	0.186	1	237	0.401
13:00 - 14:00	1	237	0.203	1	237	0.190	1	237	0.393
14:00 - 15:00	1	237	0.207	1	237	0.186	1	237	0.393
15:00 - 16:00	1	237	0.473	1	237	0.308	1	237	0.781
16:00 - 17:00	1	237	0.405	1	237	0.232	1	237	0.637
17:00 - 18:00	1	237	0.439	1	237	0.274	1	237	0.713
18:00 - 19:00	1	237	0.287	1	237	0.194	1	237	0.481
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.976			2.932			5.908

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	237 - 237 (units:)
Survey date date range:	01/01/07 - 11/12/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	11

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	CF	CARDIFF	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 54 to 432 (units:)
Range Selected by User: 50 to 491 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 11/12/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	3 days
Thursday	4 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	11

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	8
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	11 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000	3 days
10,001 to 15,000	3 days
15,001 to 20,000	3 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	8 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	10 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CB-03-A-04 SEMI DETACHED CUMBRIA
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82
Survey date: FRIDAY 24/04/09 Survey Type: MANUAL

2 CF-03-A-02 MIXED HOUSES CARDIFF
DROPE ROAD

CARDIFF
Edge of Town
Residential Zone
Total Number of dwellings: 196
Survey date: FRIDAY 05/10/07 Survey Type: MANUAL

3 EX-03-A-01 SEMI-DET. ESSEX
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY 13/05/08 Survey Type: MANUAL

4 LN-03-A-01 MIXED HOUSES LINCOLNSHIRE
BRANT ROAD
BRACEBRIDGE
LINCOLN
Edge of Town
Residential Zone
Total Number of dwellings: 150
Survey date: TUESDAY 15/05/07 Survey Type: MANUAL

5 NE-03-A-02 SEMI DETACHED & DETACHED NORTH EAST LINCOLNSHIRE
HANOVER WALK

SCUNTHORPE
Edge of Town
No Sub Category
Total Number of dwellings: 432
Survey date: MONDAY 12/05/14 Survey Type: MANUAL

6 NY-03-A-10 HOUSES AND FLATS NORTH YORKSHIRE
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY 17/09/13 Survey Type: MANUAL

7 SC-03-A-04 DETACHED & TERRACED SURREY
HIGH ROAD

BYFLEET
Edge of Town
Residential Zone
Total Number of dwellings: 71
Survey date: THURSDAY 23/01/14 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	SF-03-A-02 STOKE PARK DRIVE MAIDENHALL IPSWICH Edge of Town Residential Zone Total Number of dwellings:	SEMI DET./TERRACED	230	SUFFOLK
	Survey date: THURSDAY		24/05/07	Survey Type: MANUAL
9	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings:	SEMI-DETACHED/TERRACED	54	SHROPSHIRE
	Survey date: THURSDAY		24/10/13	Survey Type: MANUAL
10	WM-03-A-03 BASELEY WAY ROWLEYS GREEN COVENTRY Edge of Town Residential Zone Total Number of dwellings:	MIXED HOUSING	84	WEST MIDLANDS
	Survey date: MONDAY		24/09/07	Survey Type: MANUAL
11	WS-03-A-04 HILLS FARM LANE BROADBRIDGE HEATH HORSHAM Edge of Town Residential Zone Total Number of dwellings:	MIXED HOUSES	151	WEST SUSSEX
	Survey date: THURSDAY		11/12/14	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Bancroft Consulting Mercury House, New Basford Nottingham Licence No: 539501

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Ranking Type: TOTALS Time Range: 08:00-09:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 9 SC-03-A-04 Tot: 0.493
85th Percentile = No. 3 NY-03-A-10 Tot: 0.704

Median Values		Mean Values	
Arrivals:	0.183	Arrivals:	0.171
Departures:	0.366	Departures:	0.410
Totals:	0.549	Totals:	0.581

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces
								Arrivals	Departures	Totals	Per Dwelling
1	SF-03-A-02	SEMI DET./TERR	IPSWICH	SUFFOLK	230	Thu	24/05/07	0.243	0.491	0.734	2.48
2	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.321	0.405	0.726	2.60
3	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.183	0.521	0.704	0.83
4	EX-03-A-01	SEMI-DET.	STANFORD-LE-HOPE	ESSEX	237	Tue	13/05/08	0.177	0.523	0.700	2.53
5	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.187	0.440	0.627	4.91
6	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	1.74
7	CF-03-A-02	MIXED HOUSES	CARDIFF	CARDIFF	196	Fri	05/10/07	0.107	0.413	0.520	1.98
8	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.130	0.370	0.500	1.17
9	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.141	0.352	0.493	2.49
10	NE-03-A-02	SEMI DETACHED	SCUNTHORPE	NORTH EAST LINCOLNS	432	Mon	12/05/14	0.067	0.354	0.421	1.00
11	WS-03-A-04	MIXED HOUSES	HORSHAM	WEST SUSSEX	151	Thu	11/12/14	0.139	0.278	0.417	2.28

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.

Bancroft Consulting Mercury House, New Basford Nottingham Licence No: 539501

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Ranking Type: TOTALS Time Range: 17:00-18:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. 9 NE-03-A-02 Tot: 0.419
85th Percentile = No. 3 EX-03-A-01 Tot: 0.713

Median Values		Mean Values	
Arrivals:	0.479	Arrivals:	0.371
Departures:	0.099	Departures:	0.194
Totals:	0.578	Totals:	0.565

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces
								Arrivals	Departures	Totals	Per Dwelling
1	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.369	0.774	2.60
2	SF-03-A-02	SEMI DET./TERR	IPSWICH	SUFFOLK	230	Thu	24/05/07	0.478	0.248	0.726	2.48
3	EX-03-A-01	SEMI-DET.	STANFORD-LE-HOPE	ESSEX	237	Tue	13/05/08	0.439	0.274	0.713	2.53
4	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.413	0.213	0.626	4.91
5	CF-03-A-02	MIXED HOUSES	CARDIFF	CARDIFF	196	Fri	05/10/07	0.398	0.214	0.612	1.98
6	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.479	0.099	0.578	0.83
7	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.354	0.207	0.561	1.74
8	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.366	0.099	0.465	2.49
9	NE-03-A-02	SEMI DETACHED	SCUNTHORPE	NORTH EAST LINCOLNS	432	Mon	12/05/14	0.257	0.162	0.419	1.00
10	WS-03-A-04	MIXED HOUSES	HORSHAM	WEST SUSSEX	151	Thu	11/12/14	0.252	0.119	0.371	2.28
11	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.241	0.130	0.371	1.17

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.

Bancroft Consulting Mercury House, New Basford Nottingham Licence No: 539501

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Ranking Type: TOTALS Time Range: 07:00-19:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. 9 SH-03-A-05 Tot: 4.426

85th Percentile = No. 3 EX-03-A-01 Tot: 5.907

Median Values		Mean Values	
Arrivals:	2.573	Arrivals:	2.572
Departures:	2.610	Departures:	2.606
Totals:	5.183	Totals:	5.178

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces
								Arrivals	Departures	Totals	Per Dwelling
1	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	3.381	3.393	6.774	2.60
2	SF-03-A-02	SEMI DET./TERR	IPSWICH	SUFFOLK	230	Thu	24/05/07	3.257	3.239	6.496	2.48
3	EX-03-A-01	SEMI-DET.	STANFORD-LE-HOPE	ESSEX	237	Tue	13/05/08	2.975	2.932	5.907	2.53
4	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	2.647	2.733	5.380	4.91
5	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	2.662	2.676	5.338	2.49
6	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	2.573	2.610	5.183	1.74
7	CF-03-A-02	MIXED HOUSES	CARDIFF	CARDIFF	196	Fri	05/10/07	2.321	2.469	4.790	1.98
8	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	2.366	2.408	4.774	0.83
9	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	2.389	2.037	4.426	1.17
10	NE-03-A-02	SEMI DETACHED	SCUNTHORPE	NORTH EAST LINCOLNS	432	Mon	12/05/14	1.972	2.153	4.125	1.00
11	WS-03-A-04	MIXED HOUSES	HORSHAM	WEST SUSSEX	151	Thu	11/12/14	1.748	2.020	3.768	2.28

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.

APPENDIX N – TRANSPORT STATEMENT FOR PLANNING APPLICATION P150989/O

[PROVIDED SEPERATELY OWING TO FILE SIZE]

APPENDIX O – PICADY ASSESSMENTS

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

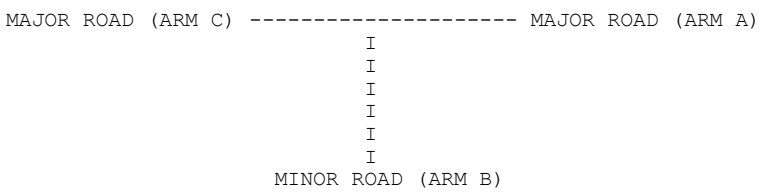
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\2021 AM Total Flows (C1120 - SITE ACCESS).vpi"
(drive-on-the-left) at 10:19:21 on Wednesday, 16 March 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Total Flows - Site Access
LOCATION	: Marden, Herefordshire
DATE	: 16/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS C1120 (North)
ARM B IS SITE ACCESS
ARM C IS C1120 (South)

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)	6.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	200.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	20.0 M.
- VISIBILITY TO RIGHT	(VB-A)	20.0 M.
- LANE 1 WIDTH	(WB-C)	2.75 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.60	0.24	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
481.56	0.22	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
689.79	0.27	0.27

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2031 AM Total Flows - Site Access

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	0.38	0.56	0.38
ARM B	15.00		45.00	75.00	0.49	0.73	0.49
ARM C	15.00		45.00	75.00	0.77	1.16	0.77

Demand set: 2031 AM Total Flows - Site Access

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000 0.0 (0.0)	0.033 1.0 (0.0)	0.967 29.0 (10.3)
	ARM B	1.000 39.0 (0.0)	0.000 0.0 (0.0)	0.000 0.0 (0.0)
	ARM C	0.597 37.0 (2.7)	0.403 25.0 (0.0)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.49	7.77	0.063		0.00	0.07	1.0		0.14
C-AB	0.33	11.67	0.028		0.00	0.03	0.5		0.09
C-A	0.45								
A-B	0.01								
A-C	0.36								
08.00-08.15									
B-AC	0.58	7.72	0.076		0.07	0.08	1.2		0.14
C-AB	0.39	11.70	0.034		0.03	0.04	0.6		0.09
C-A	0.54								
A-B	0.01								
A-C	0.43								
08.15-08.30									
B-AC	0.72	7.65	0.094		0.08	0.10	1.5		0.14
C-AB	0.49	11.75	0.041		0.04	0.05	0.7		0.09
C-A	0.65								
A-B	0.02								
A-C	0.53								
08.30-08.45									
B-AC	0.72	7.65	0.094		0.10	0.10	1.5		0.14
C-AB	0.49	11.75	0.041		0.05	0.05	0.7		0.09
C-A	0.65								
A-B	0.02								
A-C	0.53								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.58	7.72	0.076		0.10	0.08	1.3		0.14
C-AB	0.39	11.70	0.034		0.05	0.04	0.6		0.09
C-A	0.54								
A-B	0.01								
A-C	0.43								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.49	7.77	0.063		0.08	0.07	1.0		0.14
C-AB	0.33	11.67	0.028		0.04	0.03	0.5		0.09
C-A	0.45								
A-B	0.01								
A-C	0.36								

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

QUEUE FOR STREAM B-AC

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 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-AC	53.7	35.8	7.5	0.14	7.5	0.14
C-AB	36.2	24.1	3.5	0.10	3.5	0.10
C-A	49.1	32.8				
A-B	1.4	0.9				
A-C	39.9	26.6				
ALL	180.3	120.2	11.0	0.06	11.0	0.06

* 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 RUN*******

========== end of file ==========

Printed at 10:19:28 on 16/03/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

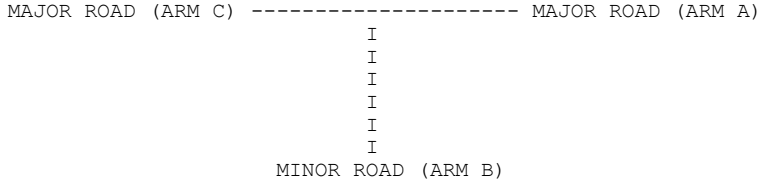
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Site Access\
2021 PM Total Flows (C1120 - SITE ACCESS).vpi"
(drive-on-the-left) at 17:27:57 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 PM Total Flows - Site Access
LOCATION	: Marden, Herefordshire
DATE	: 16/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS C1120 (North)
ARM B IS SITE ACCESS
ARM C IS C1120 (South)

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) 6.00 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 200.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 20.0 M.
- VISIBILITY TO RIGHT	(VB-A) 20.0 M.
- LANE 1 WIDTH	(WB-C) 2.75 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
620.60	0.24	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
481.56	0.22	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
689.79	0.27	0.27

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2031 AM Total Flows - Site Access

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	0.56	0.84	0.56
ARM B	15.00	45.00	75.00	0.45	0.67	0.45
ARM C	15.00	45.00	75.00	0.94	1.41	0.94

Demand set: 2031 AM Total Flows - Site Access

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.022	0.978
		0.0	1.0	44.0
		(0.0)	(0.0)	(2.3)
	ARM B	0.056	0.000	0.944
		2.0	0.0	34.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.547	0.453	0.000
		41.0	34.0	0.0
		(7.3)	(0.0)	(0.0)

TURNING PROPORTIONS (PERCENTAGE OF H.V.S)
TURNING COUNTS

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.45	10.02	0.045		0.00	0.05	0.7		0.10
C-AB	0.45	11.65	0.038		0.00	0.04	0.6		0.09
C-A	0.49								
A-B	0.01								
A-C	0.55								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.54	9.99	0.054		0.05	0.06	0.8		0.11
C-AB	0.54	11.68	0.046		0.04	0.05	0.8		0.09
C-A	0.59								
A-B	0.01								
A-C	0.66								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.66	9.95	0.066		0.06	0.07	1.0		0.11
C-AB	0.67	11.72	0.057		0.05	0.07	1.0		0.09
C-A	0.71								
A-B	0.02								
A-C	0.81								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.66	9.95	0.066		0.07	0.07	1.1		0.11
C-AB	0.67	11.72	0.057		0.07	0.07	1.0		0.09
C-A	0.71								
A-B	0.02								
A-C	0.81								

TIME (17.45-18.00)	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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
B-AC	0.54	9.99	0.054		0.07	0.06	0.9		0.11
C-AB	0.54	11.68	0.046		0.07	0.05	0.8		0.09
C-A	0.59								
A-B	0.01								
A-C	0.66								

TIME (18.00-18.15)	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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
B-AC	0.45	10.02	0.045		0.06	0.05	0.7		0.10
C-AB	0.45	11.65	0.038		0.05	0.04	0.6		0.09
C-A	0.49								
A-B	0.01								
A-C	0.55								

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

QUEUE FOR STREAM B-AC

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

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 (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	49.6	33.0	5.2	0.11	5.2	0.11
C-AB	49.5	33.0	4.9	0.10	4.9	0.10
C-A	53.7	35.8				
A-B	1.4	0.9				
A-C	60.6	40.4				
ALL	214.7	143.1	10.1	0.05	10.1	0.05

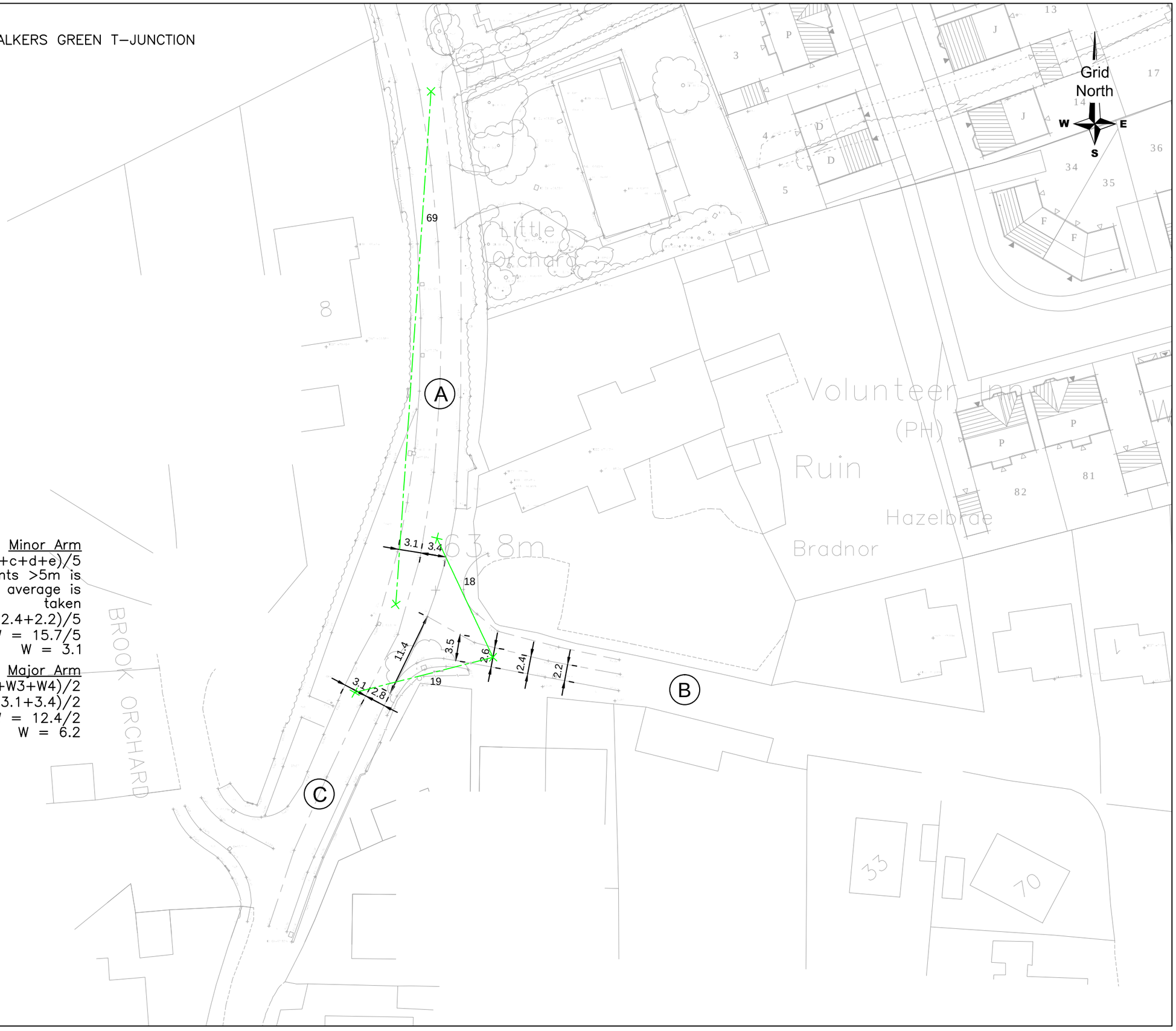
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

========== end of file ==========

Printed at 17:28:03 on 21/06/2016]

PICADY ASSESSMENT OF C1120 / WALKERS GREEN T-JUNCTION
SCALE 1:500@A3



Minor Arm
W = (a+b+c+d+e)/5
where any measurements >5m is reduced to 5m before the average is taken
W = (5+3.5+2.6+2.4+2.2)/5
W = 15.7/5
W = 3.1

Major Arm
W = (W1+W2+W3+W4)/2
W = (3.1+2.8+3.1+3.4)/2
W = 12.4/2
W = 6.2

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

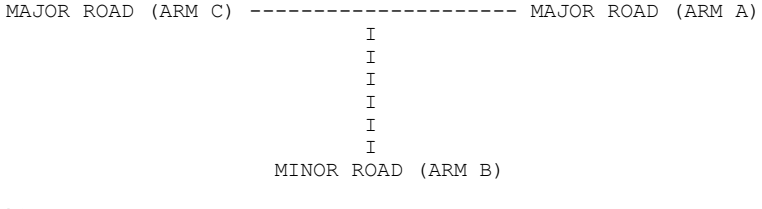
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\
2021 AM Background Flows (C1120 - Walkers Green).vpi"
(drive-on-the-left) at 12:15:25 on Tuesday, 3 May 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Background Flows - C1120 / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS C1120 (North)
ARM B IS Walkers Green
ARM C IS C1120 (South)

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) 6.20 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 69.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 19.0 M.
- VISIBILITY TO RIGHT	(VB-A) 18.0 M.
- LANE 1 WIDTH	(WB-C) 3.10 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.63	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
497.56	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
613.92	0.24	0.24

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 AM Background Traffic Flows

TIME PERIOD BEGINS 07.15 AND ENDS 08.45

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

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	0.38	0.56	0.38
ARM B	15.00	45.00	75.00	0.34	0.51	0.34
ARM C	15.00	45.00	75.00	0.56	0.84	0.56

Demand set: 2021 AM Background Traffic Flows

TIME	FROM/TO	ARM A	ARM B	ARM C
07.15 - 08.45				
	ARM A	0.000	0.133	0.867
		0.0	4.0	26.0
		(0.0)	(0.0)	(7.7)
	ARM B	0.259	0.000	0.741
		7.0	0.0	20.0
		(0.0)	(0.0)	(10.0)
	ARM C	0.600	0.400	0.000
		27.0	18.0	0.0
		(3.7)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.15-07.30									
B-AC	0.34	9.18	0.037		0.00	0.04	0.6		0.11
C-AB	0.23	10.36	0.023		0.00	0.02	0.4		0.10
C-A	0.33								
A-B	0.05								
A-C	0.33								
07.30-07.45									
B-AC	0.40	9.16	0.044		0.04	0.05	0.7		0.11
C-AB	0.28	10.38	0.027		0.02	0.03	0.4		0.10
C-A	0.39								
A-B	0.06								
A-C	0.39								
07.45-08.00									
B-AC	0.50	9.12	0.054		0.05	0.06	0.8		0.12
C-AB	0.35	10.42	0.033		0.03	0.04	0.6		0.10
C-A	0.48								
A-B	0.07								
A-C	0.48								
08.00-08.15									
B-AC	0.50	9.12	0.054		0.06	0.06	0.9		0.12
C-AB	0.35	10.42	0.033		0.04	0.04	0.6		0.10
C-A	0.48								
A-B	0.07								
A-C	0.48								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.40	9.16	0.044		0.06	0.05	0.7		0.11
C-AB	0.28	10.38	0.027		0.04	0.03	0.5		0.10
C-A	0.39								
A-B	0.06								
A-C	0.39								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.34	9.18	0.037		0.05	0.04	0.6		0.11
C-AB	0.23	10.36	0.023		0.03	0.02	0.4		0.10
C-A	0.33								
A-B	0.05								
A-C	0.33								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.30	0.0
07.45	0.0
08.00	0.1
08.15	0.1
08.30	0.0
08.45	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.30	0.0
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	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-AC	37.2	24.8	4.2	0.11	4.2	0.11
C-AB	25.8	17.2	2.8	0.11	2.8	0.11
C-A	36.1	24.1				
A-B	5.5	3.7				
A-C	35.8	23.9				
ALL	140.4	93.6	7.0	0.05	7.0	0.05

* 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 RUN*******

========== end of file ==========

Printed at 12:15:35 on 03/05/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

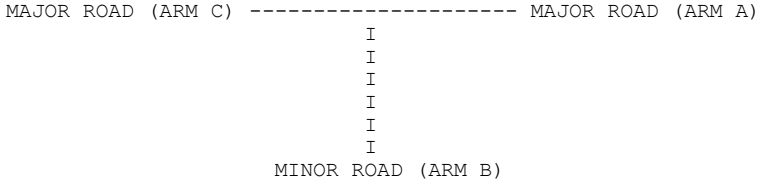
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\
2021 PM Background Flows (C1120 - Walkers Green).vpi"
(drive-on-the-left) at 14:30:52 on Tuesday, 3 May 2016

RUN INFORMATION
****

RUN TITLE	: 2021 PM Background Flows - C1120 / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS C1120 (North)
ARM B IS Walkers Green
ARM C IS C1120 (South)

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) 6.20 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 69.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 19.0 M.
- VISIBILITY TO RIGHT	(VB-A) 18.0 M.
- LANE 1 WIDTH	(WB-C) 3.10 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.63	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
497.56	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
613.92	0.24	0.24

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Background Traffic Flows

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

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

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	0.54	0.81	0.54
ARM B	15.00	45.00	75.00	0.21	0.32	0.21
ARM C	15.00	45.00	75.00	0.64	0.96	0.64

Demand set: 2021 Background Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.30 - 18.00	ARM A	0.000	0.163	0.837
		0.0	7.0	36.0
		(0.0)	(0.0)	(5.6)
	ARM B	0.118	0.000	0.882
		2.0	0.0	15.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.627	0.373	0.000
		32.0	19.0	0.0
		(9.4)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	0.21	10.19	0.021		0.00	0.02	0.3		0.10
C-AB	0.25	10.35	0.024		0.00	0.03	0.4		0.10
C-A	0.39								
A-B	0.09								
A-C	0.45								
16.45-17.00									
B-AC	0.25	10.16	0.025		0.02	0.03	0.4		0.10
C-AB	0.30	10.38	0.029		0.03	0.03	0.5		0.10
C-A	0.47								
A-B	0.10								
A-C	0.54								
17.00-17.15									
B-AC	0.31	10.12	0.031		0.03	0.03	0.5		0.10
C-AB	0.37	10.41	0.035		0.03	0.04	0.6		0.10
C-A	0.57								
A-B	0.13								
A-C	0.66								
17.15-17.30									
B-AC	0.31	10.12	0.031		0.03	0.03	0.5		0.10
C-AB	0.37	10.41	0.035		0.04	0.04	0.6		0.10
C-A	0.57								
A-B	0.13								
A-C	0.66								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.25	10.16	0.025		0.03	0.03	0.4		0.10
C-AB	0.30	10.38	0.029		0.04	0.03	0.5		0.10
C-A	0.47								
A-B	0.10								
A-C	0.54								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.21	10.19	0.021		0.03	0.02	0.3		0.10
C-AB	0.25	10.35	0.024		0.03	0.03	0.4		0.10
C-A	0.39								
A-B	0.09								
A-C	0.45								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	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-AC	23.4	15.6	2.4	0.10	2.4	0.10
C-AB	27.5	18.3	3.0	0.11	3.0	0.11
C-A	42.7	28.5				
A-B	9.6	6.4				
A-C	49.6	33.0				
ALL	152.8	101.9	5.3	0.03	5.3	0.03

* 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 RUN*******

========== end of file ==========

Printed at 14:30:57 on 03/05/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

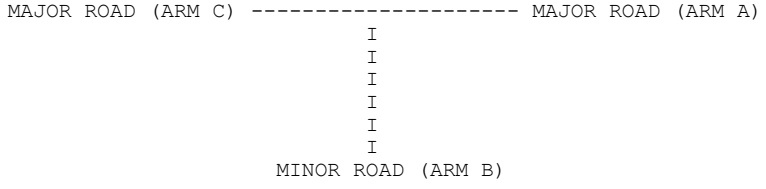
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 1\
2021 AM Total Flows (C1120 - Walkers Green).vpi"
(drive-on-the-left) at 16:21:10 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Total Flows - C1120 / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS C1120 (North)
ARM B IS Walkers Green
ARM C IS C1120 (South)

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) 6.20 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 69.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 19.0 M.
- VISIBILITY TO RIGHT	(VB-A) 18.0 M.
- LANE 1 WIDTH	(WB-C) 3.10 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.63	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
497.56	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
613.92	0.24	0.24

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 AM TotalTraffic Flows

TIME PERIOD BEGINS 07.15 AND ENDS 08.45

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

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	0.93	1.39	0.93
ARM B	15.00	45.00	75.00	0.44	0.66	0.44
ARM C	15.00	45.00	75.00	0.70	1.05	0.70

Demand set: 2021 AM TotalTraffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.15 - 08.45	ARM A	0.000	0.297	0.703
		0.0	22.0	52.0
		(0.0)	(0.0)	(3.8)
	ARM B	0.429	0.000	0.571
		15.0	0.0	20.0
		(0.0)	(0.0)	(10.0)
	ARM C	0.679	0.321	0.000
		38.0	18.0	0.0
		(2.6)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.15-07.30									
B-AC	0.44	8.80	0.050		0.00	0.05	0.8		0.12
C-AB	0.24	10.32	0.023		0.00	0.03	0.4		0.10
C-A	0.47								
A-B	0.28								
A-C	0.65								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.30-07.45									
B-AC	0.52	8.75	0.060		0.05	0.06	0.9		0.12
C-AB	0.29	10.34	0.028		0.03	0.03	0.5		0.10
C-A	0.55								
A-B	0.33								
A-C	0.78								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.64	8.68	0.074		0.06	0.08	1.2		0.12
C-AB	0.35	10.36	0.034		0.03	0.04	0.6		0.10
C-A	0.67								
A-B	0.40								
A-C	0.95								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.64	8.68	0.074		0.08	0.08	1.2		0.12
C-AB	0.35	10.36	0.034		0.04	0.04	0.6		0.10
C-A	0.67								
A-B	0.40								
A-C	0.95								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.52	8.75	0.060		0.08	0.06	1.0		0.12
C-AB	0.29	10.34	0.028		0.04	0.03	0.5		0.10
C-A	0.55								
A-B	0.33								
A-C	0.78								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.44	8.80	0.050		0.06	0.05	0.8		0.12
C-AB	0.24	10.32	0.023		0.03	0.03	0.4		0.10
C-A	0.47								
A-B	0.28								
A-C	0.65								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.30	0.1
07.45	0.1
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.30	0.0
07.45	0.0
08.00	0.0
08.15	0.0
08.30	0.0
08.45	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-AC	48.2	32.1	5.8	0.12	5.8	0.12
C-AB	26.3	17.5	2.9	0.11	2.9	0.11
C-A	50.8	33.9				
A-B	30.3	20.2				
A-C	71.6	47.7				
ALL	227.1	151.4	8.8	0.04	8.8	0.04

* 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 RUN*******

========== end of file ==========

Printed at 16:21:23 on 21/06/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

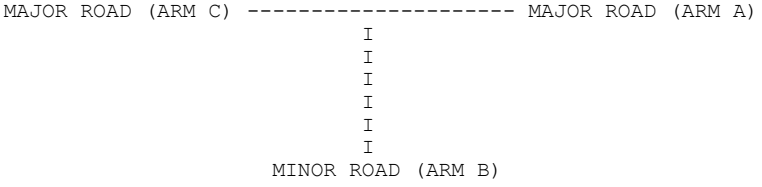
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 1\
2021 PM Total Flows (C1120 - Walkers Green).vpi"
(drive-on-the-left) at 17:29:58 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 PM Total Flows - C1120 / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS C1120 (North)
ARM B IS Walkers Green
ARM C IS C1120 (South)

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)	6.20 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	69.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	19.0 M.
- VISIBILITY TO RIGHT	(VB-A)	18.0 M.
- LANE 1 WIDTH	(WB-C)	3.10 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.63	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
497.56	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
613.92	0.24	0.24

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Total Traffic Flows

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

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

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	0.73	1.09	0.73
ARM B	15.00	45.00	75.00	0.35	0.52	0.35
ARM C	15.00	45.00	75.00	0.84	1.26	0.84

Demand set: 2021 Total Traffic Flows

TIME	FROM/TO	ARM A	ARM B	ARM C
16.30 - 18.00				
	ARM A	0.000	0.224	0.776
		0.0	13.0	45.0
		(0.0)	(0.0)	(4.4)
	ARM B	0.464	0.000	0.536
		13.0	0.0	15.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.716	0.284	0.000
		48.0	19.0	0.0
		(6.3)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	0.35	9.17	0.038		0.00	0.04	0.6		0.11
C-AB	0.25	10.44	0.024		0.00	0.03	0.4		0.10
C-A	0.59								
A-B	0.16								
A-C	0.56								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.42	9.12	0.046		0.04	0.05	0.7		0.11
C-AB	0.31	10.48	0.029		0.03	0.03	0.5		0.10
C-A	0.70								
A-B	0.19								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.51	9.05	0.057		0.05	0.06	0.9		0.12
C-AB	0.38	10.54	0.036		0.03	0.04	0.7		0.10
C-A	0.85								
A-B	0.24								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.51	9.05	0.057		0.06	0.06	0.9		0.12
C-AB	0.38	10.54	0.036		0.04	0.04	0.7		0.10
C-A	0.85								
A-B	0.24								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.42	9.12	0.046		0.06	0.05	0.7		0.11
C-AB	0.31	10.48	0.029		0.04	0.03	0.5		0.10
C-A	0.70								
A-B	0.19								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.35	9.17	0.038		0.05	0.04	0.6		0.11
C-AB	0.25	10.44	0.024		0.03	0.03	0.4		0.10
C-A	0.59								
A-B	0.16								
A-C	0.56								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	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-AC	38.5	25.7	4.4	0.11	4.4	0.11
C-AB	28.2	18.8	3.2	0.11	3.2	0.11
C-A	64.1	42.7				
A-B	17.9	11.9				
A-C	61.9	41.3				
ALL	210.6	140.4	7.6	0.04	7.6	0.04

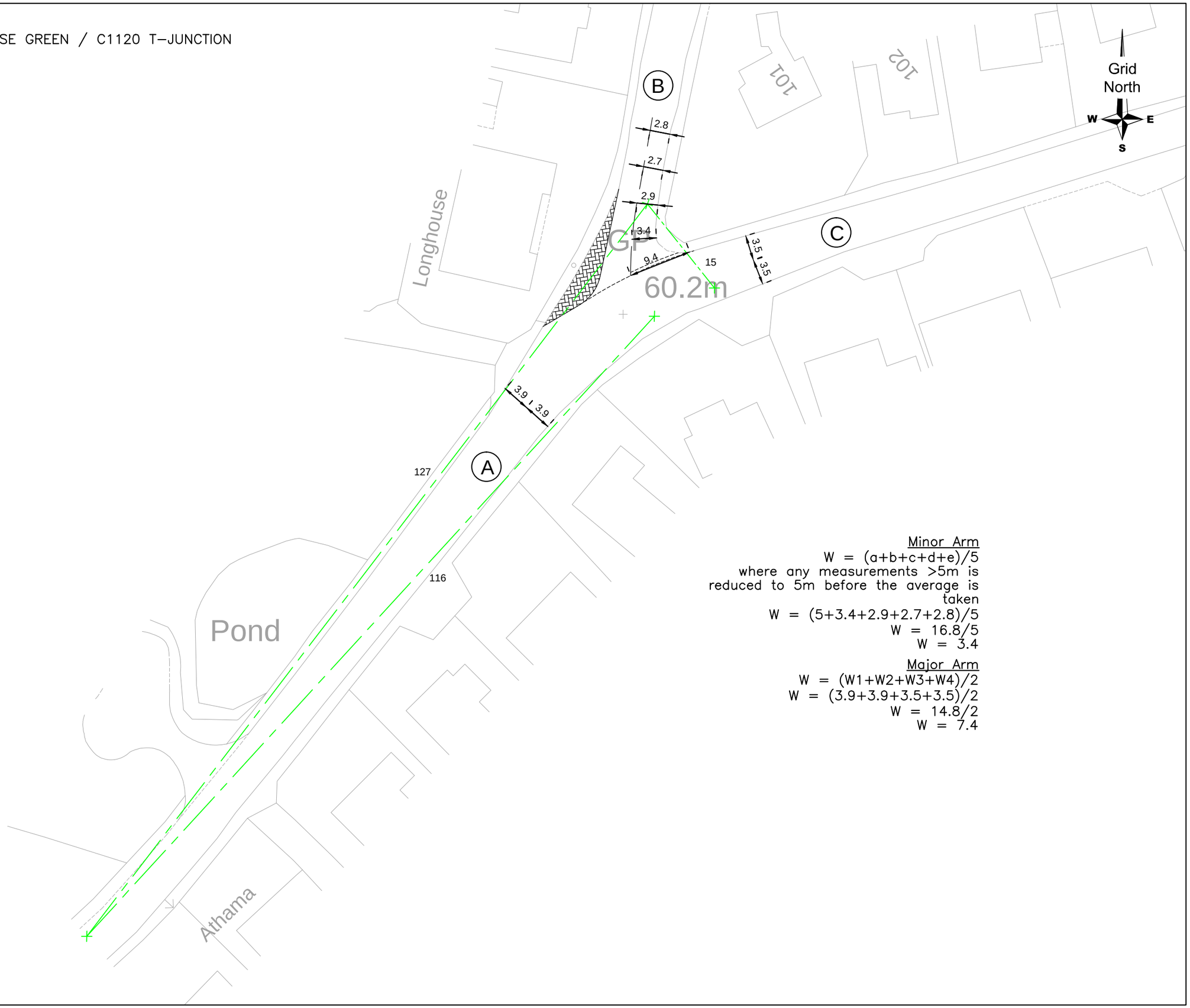
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

========== end of file ==========

Printed at 17:30:05 on 21/06/2016]

PICADY ASSESSMENT OF PARADISE GREEN / C1120 T-JUNCTION
SCALE 1:500@A3



Minor Arm
W = (a+b+c+d+e)/5
where any measurements >5m is reduced to 5m before the average is taken
W = (5+3.4+2.9+2.7+2.8)/5
W = 16.8/5
W = 3.4

Major Arm
W = (W1+W2+W3+W4)/2
W = (3.9+3.9+3.5+3.5)/2
W = 14.8/2
W = 7.4

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

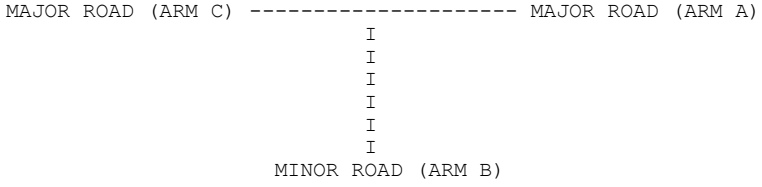
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\
2021 AM Background Flows (Paradise Green - Walkers Green).vpi"
(drive-on-the-left) at 12:24:22 on Tuesday, 3 May 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Background Flows - Paradise Green / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS Walkers Green
ARM C IS Paradise Green (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) 7.00 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 63.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 44.0 M.
- VISIBILITY TO RIGHT	(VB-A) 20.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
668.39	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
526.75	0.23	0.09	0.15	0.33

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
610.45	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Background Traffic Flows

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

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

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	0.52	0.79	0.52
ARM B	15.00	45.00	75.00	0.46	0.69	0.46
ARM C	15.00	45.00	75.00	0.82	1.24	0.82

Demand set: 2021 Background Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
08.00 - 09.30	ARM A	0.000	0.119	0.881
		0.0	5.0	37.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.595	0.000	0.405
		22.0	0.0	15.0
		(0.0)	(0.0)	(18.2)
	ARM C	0.833	0.167	0.000
		55.0	11.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.46	8.83	0.053		0.00	0.06	0.8		0.12
C-AB	0.15	10.51	0.014		0.00	0.02	0.2		0.10
C-A	0.68								
A-B	0.06								
A-C	0.46								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.55	8.79	0.063		0.06	0.07	1.0		0.12
C-AB	0.18	10.58	0.017		0.02	0.02	0.3		0.10
C-A	0.81								
A-B	0.07								
A-C	0.55								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.68	8.73	0.078		0.07	0.08	1.2		0.12
C-AB	0.22	10.67	0.021		0.02	0.03	0.4		0.10
C-A	0.99								
A-B	0.09								
A-C	0.68								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.68	8.73	0.078		0.08	0.08	1.3		0.12
C-AB	0.22	10.67	0.021		0.03	0.03	0.4		0.10
C-A	0.99								
A-B	0.09								
A-C	0.68								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.55	8.79	0.063		0.08	0.07	1.0		0.12
C-AB	0.18	10.58	0.017		0.03	0.02	0.3		0.10
C-A	0.81								
A-B	0.07								
A-C	0.55								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	0.46	8.83	0.053		0.07	0.06	0.9		0.12
C-AB	0.15	10.51	0.014		0.02	0.02	0.2		0.10
C-A	0.68								
A-B	0.06								
A-C	0.46								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	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-AC	50.9	34.0	6.2	0.12	6.2	0.12
C-AB	16.5	11.0	1.8	0.11	1.8	0.11
C-A	74.4	49.6				
A-B	6.9	4.6				
A-C	50.9	34.0				
ALL	199.6	133.1	8.0	0.04	8.0	0.04

* 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 RUN*******

========== end of file ==========

Printed at 12:24:27 on 03/05/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

FOR SALES AND DISTRIBUTION INFORMATION,
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EMAIL: software@trl.co.uk

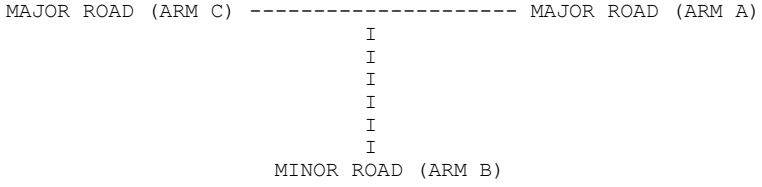
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 2\
2021 PM Background Flows (Paradise Green - Walkers Green).vpi"
(drive-on-the-left) at 14:44:12 on Tuesday, 3 May 2016

RUN INFORMATION

RUN TITLE	: 2021 PM Background Flows - Paradise Green / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS Walkers Green
ARM C IS Paradise Green (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) 7.00 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B) 63.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 44.0 M.
- VISIBILITY TO RIGHT	(VB-A) 20.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
668.39	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
526.75	0.23	0.09	0.15	0.33

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
610.45	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Background Traffic Flows

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

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

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	0.82	1.24	0.82
ARM B	15.00	45.00	75.00	0.28	0.41	0.28
ARM C	15.00	45.00	75.00	0.73	1.09	0.73

Demand set: 2021 Background Traffic Flows

TIME	FROM/TO	ARM A	ARM B	ARM C
16.30 - 18.00				
	ARM A	0.000	0.197	0.803
		0.0	13.0	53.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.227	0.000	0.773
		5.0	0.0	17.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.741	0.259	0.000
		43.0	15.0	0.0
		(4.7)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	0.28	10.27	0.027		0.00	0.03	0.4		0.10
C-AB	0.20	10.34	0.019		0.00	0.02	0.3		0.10
C-A	0.53								
A-B	0.16								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.33	10.23	0.032		0.03	0.03	0.5		0.10
C-AB	0.24	10.37	0.023		0.02	0.03	0.4		0.10
C-A	0.63								
A-B	0.19								
A-C	0.79								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.40	10.17	0.040		0.03	0.04	0.6		0.10
C-AB	0.30	10.42	0.029		0.03	0.03	0.5		0.10
C-A	0.77								
A-B	0.24								
A-C	0.97								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.40	10.17	0.040		0.04	0.04	0.6		0.10
C-AB	0.30	10.42	0.029		0.03	0.03	0.5		0.10
C-A	0.77								
A-B	0.24								
A-C	0.97								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.33	10.23	0.032		0.04	0.03	0.5		0.10
C-AB	0.24	10.37	0.023		0.03	0.03	0.4		0.10
C-A	0.63								
A-B	0.19								
A-C	0.79								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.28	10.27	0.027		0.03	0.03	0.4		0.10
C-AB	0.20	10.34	0.019		0.03	0.02	0.3		0.10
C-A	0.53								
A-B	0.16								
A-C	0.67								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	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-AC	30.3	20.2	3.0	0.10	3.0	0.10
C-AB	22.1	14.7	2.5	0.11	2.5	0.11
C-A	57.8	38.5				
A-B	17.9	11.9				
A-C	73.0	48.6				
ALL	201.0	134.0	5.5	0.03	5.5	0.03

* 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 RUN*******

========== end of file ==========

Printed at 14:44:17 on 03/05/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

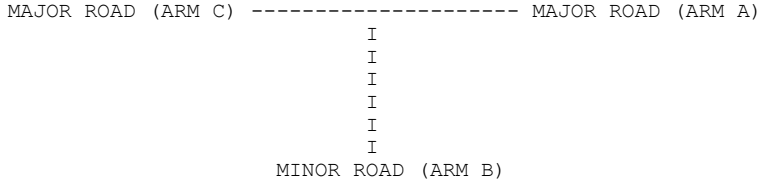
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 2\
2021 AM Total Flows (Paradise Green - Walkers Green).vpi"
(drive-on-the-left) at 17:00:36 on Tuesday, 21 June 2016

RUN INFORMATION
****

RUN TITLE	: 2021 AM Total Flows - Paradise Green / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS Walkers Green
ARM C IS Paradise Green (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)	7.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	63.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	44.0 M.
- VISIBILITY TO RIGHT	(VB-A)	20.0 M.
- LANE 1 WIDTH	(WB-C)	3.50 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
668.39	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
526.75	0.23	0.09	0.15	0.33

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
610.45	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Total Traffic Flows

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

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

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	0.52	0.79	0.52
ARM B	15.00	45.00	75.00	0.69	1.03	0.69
ARM C	15.00	45.00	75.00	0.93	1.39	0.93

Demand set: 2021 Total Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
08.00 - 09.30	ARM A	0.000	0.119	0.881
		0.0	5.0	37.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.400	0.000	0.600
		22.0	0.0	33.0
		(0.0)	(0.0)	(11.8)
	ARM C	0.743	0.257	0.000
		55.0	19.0	0.0
		(10.5)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.69	9.25	0.075		0.00	0.08	1.2		0.12
C-AB	0.26	10.49	0.024		0.00	0.03	0.4		0.10
C-A	0.67								
A-B	0.06								
A-C	0.46								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.82	9.21	0.089		0.08	0.10	1.4		0.12
C-AB	0.31	10.55	0.029		0.03	0.04	0.5		0.10
C-A	0.80								
A-B	0.07								
A-C	0.55								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	1.01	9.16	0.110		0.10	0.12	1.8		0.12
C-AB	0.38	10.64	0.036		0.04	0.04	0.7		0.10
C-A	0.97								
A-B	0.09								
A-C	0.68								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	1.01	9.16	0.110		0.12	0.12	1.8		0.12
C-AB	0.38	10.64	0.036		0.04	0.04	0.7		0.10
C-A	0.97								
A-B	0.09								
A-C	0.68								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.82	9.21	0.089		0.12	0.10	1.5		0.12
C-AB	0.31	10.55	0.029		0.04	0.04	0.5		0.10
C-A	0.80								
A-B	0.07								
A-C	0.55								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	0.69	9.25	0.075		0.10	0.08	1.2		0.12
C-AB	0.26	10.49	0.024		0.04	0.03	0.4		0.10
C-A	0.67								
A-B	0.06								
A-C	0.46								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	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-AC	75.7	50.5	9.0	0.12	9.0	0.12
C-AB	28.5	19.0	3.3	0.11	3.3	0.11
C-A	73.4	48.9				
A-B	6.9	4.6				
A-C	50.9	34.0				
ALL	235.4	156.9	12.3	0.05	12.3	0.05

* 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 RUN*******

========== end of file ==========

Printed at 17:00:43 on 21/06/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

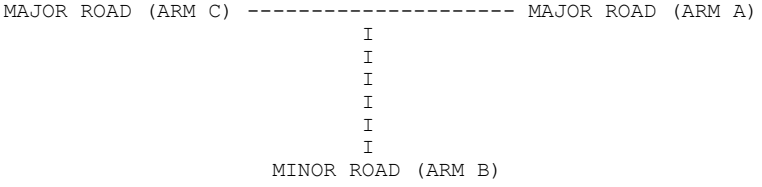
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 2\
2021 PM Total Flows (Paradise Green - Walkers Green).vpi"
(drive-on-the-left) at 17:31:34 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 PM Total Flows - Paradise Green / Walkers Green
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS Walkers Green
ARM C IS Paradise Green (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)	7.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	63.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	44.0 M.
- VISIBILITY TO RIGHT	(VB-A)	20.0 M.
- LANE 1 WIDTH	(WB-C)	3.50 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
668.39	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
526.75	0.23	0.09	0.15	0.33

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
610.45	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Total Traffic Flows

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

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

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	0.82	1.24	0.82
ARM B	15.00	45.00	75.00	0.35	0.52	0.35
ARM C	15.00	45.00	75.00	0.86	1.29	0.86

Demand set: 2021 Total Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.30 - 18.00	ARM A	0.000	0.197	0.803
		0.0	13.0	53.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.179	0.000	0.821
		5.0	0.0	23.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.623	0.377	0.000
		43.0	26.0	0.0
		(4.7)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	0.35	10.40	0.034		0.00	0.03	0.5		0.10
C-AB	0.34	10.34	0.033		0.00	0.04	0.6		0.10
C-A	0.52								
A-B	0.16								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.42	10.35	0.041		0.03	0.04	0.6		0.10
C-AB	0.42	10.37	0.040		0.04	0.05	0.7		0.10
C-A	0.62								
A-B	0.19								
A-C	0.79								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.51	10.29	0.050		0.04	0.05	0.8		0.10
C-AB	0.52	10.42	0.050		0.05	0.06	0.9		0.10
C-A	0.75								
A-B	0.24								
A-C	0.97								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.51	10.29	0.050		0.05	0.05	0.8		0.10
C-AB	0.52	10.42	0.050		0.06	0.06	0.9		0.10
C-A	0.75								
A-B	0.24								
A-C	0.97								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.42	10.35	0.041		0.05	0.04	0.6		0.10
C-AB	0.42	10.37	0.040		0.06	0.05	0.7		0.10
C-A	0.62								
A-B	0.19								
A-C	0.79								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.35	10.40	0.034		0.04	0.04	0.5		0.10
C-AB	0.34	10.34	0.033		0.05	0.04	0.6		0.10
C-A	0.52								
A-B	0.16								
A-C	0.67								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.45	0.0
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.0
18.00	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-AC	38.5	25.7	3.9	0.10	3.9	0.10
C-AB	38.3	25.5	4.3	0.11	4.3	0.11
C-A	56.7	37.8				
A-B	17.9	11.9				
A-C	73.0	48.6				
ALL	224.4	149.6	8.2	0.04	8.2	0.04

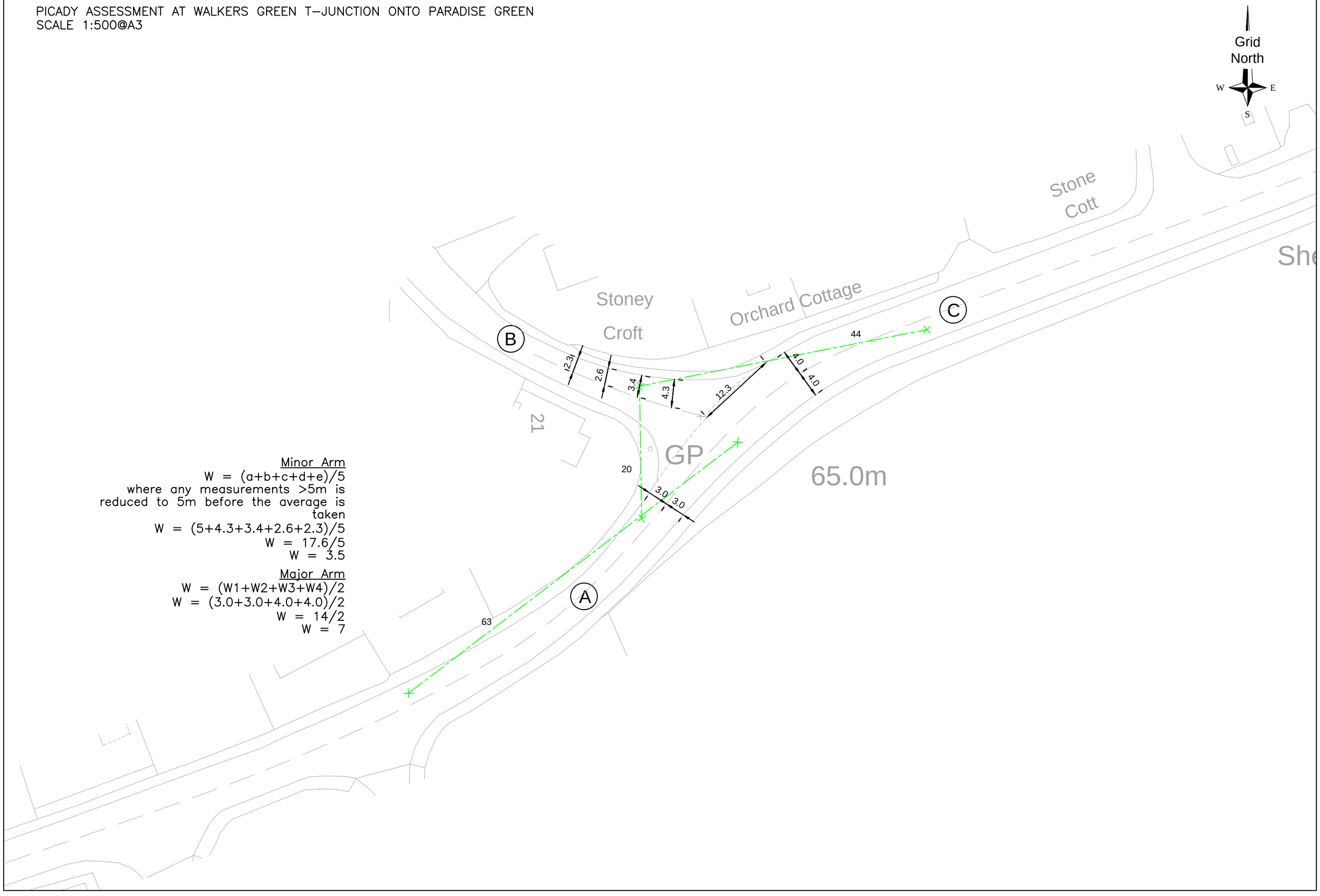
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

========== end of file ==========

Printed at 17:31:41 on 21/06/2016]

PICADY ASSESSMENT AT WALKERS GREEN T–JUNCTION ONTO PARADISE GREEN
SCALE 1:500@A3



Minor Arm
W = (a+b+c+d+e)/5
where any measurements >5m is reduced to 5m before the average is taken
W = (5+4.3+3.4+2.6+2.3)/5
W = 17.6/5
W = 3.5

Major Arm
W = (W1+W2+W3+W4)/2
W = (3.0+3.0+4.0+4.0)/2
W = 14/2
W = 7

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

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RELEASE 5.0 (JUNE 2010)

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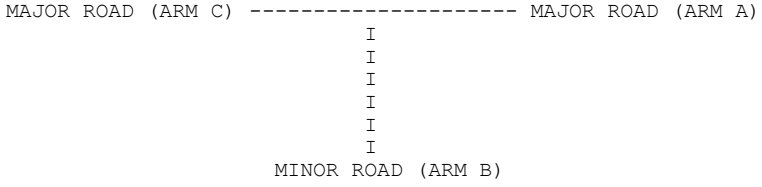
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\
2021 AM Background Flows (Paradise Green - C1120).vpi"
(drive-on-the-left) at 12:31:26 on Tuesday, 3 May 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Background Flows - Paradise Green / C1120
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS C1120
ARM C IS Paradise Green (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.

TRL TRL Viewer 3.2 AG Z:\.. \Capacity Analysis\2021 AM Background Flows (Paradise Green - C1120).vpo

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)116.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 15.0 M.
- VISIBILITY TO RIGHT	(VB-A) 127.0 M.
- LANE 1 WIDTH	(WB-C) 3.40 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
732.08	0.27	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
566.22	0.24	0.10	0.15	0.35

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.14	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Background Traffic Flows

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	0.91	1.37	0.91
ARM B	15.00	45.00	75.00	0.55	0.83	0.55
ARM C	15.00	45.00	75.00	0.84	1.26	0.84

Demand set: 2021 Background Traffic Flows

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.384	0.616
		0.0	28.0	45.0
		(0.0)	(0.0)	(2.2)
	ARM B	0.727	0.000	0.273
		32.0	0.0	12.0
		(0.0)	(0.0)	(8.3)
	ARM C	0.866	0.134	0.000
		58.0	9.0	0.0
		(1.7)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.55	9.57	0.058		0.00	0.06	0.9		0.11
C-AB	0.12	10.94	0.011		0.00	0.01	0.2		0.09
C-A	0.72								
A-B	0.35								
A-C	0.56								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.66	9.52	0.069		0.06	0.07	1.1		0.11
C-AB	0.15	10.99	0.013		0.01	0.02	0.2		0.09
C-A	0.86								
A-B	0.42								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.81	9.44	0.086		0.07	0.09	1.4		0.12
C-AB	0.18	11.06	0.017		0.02	0.02	0.3		0.09
C-A	1.05								
A-B	0.51								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.81	9.44	0.086		0.09	0.09	1.4		0.12
C-AB	0.18	11.06	0.017		0.02	0.02	0.3		0.09
C-A	1.05								
A-B	0.51								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.66	9.52	0.069		0.09	0.08	1.1		0.11
C-AB	0.15	10.99	0.013		0.02	0.02	0.2		0.09
C-A	0.86								
A-B	0.42								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.55	9.57	0.058		0.08	0.06	0.9		0.11
C-AB	0.12	10.94	0.011		0.02	0.01	0.2		0.09
C-A	0.72								
A-B	0.35								
A-C	0.56								

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

QUEUE FOR STREAM B-AC

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 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-AC	60.6	40.4	6.8	0.11	6.8	0.11
C-AB	13.5	9.0	1.4	0.10	1.4	0.10
C-A	78.7	52.5				
A-B	38.5	25.7				
A-C	61.9	41.3				
ALL	253.3	168.8	8.2	0.03	8.2	0.03

* 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 RUN*******

========== end of file ==========

Printed at 12:31:32 on 03/05/2016]

TRL LIMITED

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

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RELEASE 5.0 (JUNE 2010)

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EMAIL: software@trl.co.uk

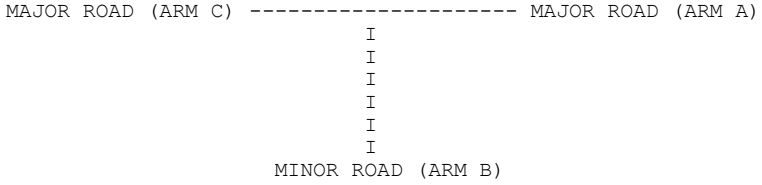
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 3\
2021 PM Background Flows (Paradise Green - C1120).vpi"
(drive-on-the-left) at 14:46:18 on Tuesday, 3 May 2016

RUN INFORMATION
****

RUN TITLE	: 2021 PM Background Flows - Paradise Green / C1120
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS C1120
ARM C IS Paradise Green (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) 7.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)116.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 15.0 M.
- VISIBILITY TO RIGHT	(VB-A) 127.0 M.
- LANE 1 WIDTH	(WB-C) 3.40 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
732.08	0.27	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
566.22	0.24	0.10	0.15	0.35

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.14	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Background Traffic Flows

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	1.20	1.80	1.20
ARM B	15.00	45.00	75.00	0.55	0.83	0.55
ARM C	15.00	45.00	75.00	0.52	0.79	0.52

Demand set: 2021 Background Traffic Flows

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.531	0.469
		0.0	51.0	45.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.841	0.000	0.159
		37.0	0.0	7.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.833	0.167	0.000
		35.0	7.0	0.0
		(14.3)	(2.9)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.55	9.49	0.058		0.00	0.06	0.9		0.11
C-AB	0.09	10.38	0.009		0.00	0.01	0.1		0.10
C-A	0.44								
A-B	0.64								
A-C	0.56								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.66	9.43	0.070		0.06	0.07	1.1		0.11
C-AB	0.11	10.38	0.011		0.01	0.01	0.2		0.10
C-A	0.52								
A-B	0.76								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.81	9.35	0.086		0.07	0.09	1.4		0.12
C-AB	0.14	10.38	0.013		0.01	0.01	0.2		0.10
C-A	0.63								
A-B	0.94								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.81	9.35	0.086		0.09	0.09	1.4		0.12
C-AB	0.14	10.38	0.013		0.01	0.01	0.2		0.10
C-A	0.63								
A-B	0.94								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.66	9.43	0.070		0.09	0.08	1.2		0.11
C-AB	0.11	10.38	0.011		0.01	0.01	0.2		0.10
C-A	0.52								
A-B	0.76								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	0.55	9.49	0.058		0.08	0.06	1.0		0.11
C-AB	0.09	10.38	0.009		0.01	0.01	0.1		0.10
C-A	0.44								
A-B	0.64								
A-C	0.56								

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

QUEUE FOR STREAM B-AC

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

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	60.6	40.4	6.9	0.11	6.9	0.11
C-AB	10.2	6.8	1.1	0.11	1.1	0.11
C-A	47.6	31.8				
A-B	70.2	46.8				
A-C	61.9	41.3				
ALL	250.5	167.0	8.0	0.03	8.0	0.03

* 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 RUN*******

========== end of file ==========

Printed at 14:46:25 on 03/05/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

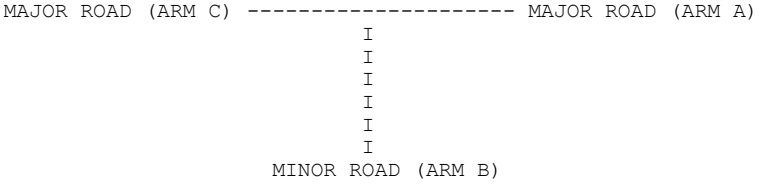
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 3\
2021 AM Total Flows (Paradise Green - C1120).vpi"
(drive-on-the-left) at 17:06:24 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 AM Total Flows - Paradise Green / C1120
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	: Preliminary
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS C1120
ARM C IS Paradise Green (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)	7.40 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	116.00 M.
- BLOCKS TRAFFIC (SPACES)		YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	15.0 M.
- VISIBILITY TO RIGHT	(VB-A)	127.0 M.
- LANE 1 WIDTH	(WB-C)	3.40 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
732.08	0.27	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
566.22	0.24	0.10	0.15	0.35

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.14	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Total Traffic Flows

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

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	1.04	1.56	1.04
ARM B	15.00	45.00	75.00	0.82	1.24	0.82
ARM C	15.00	45.00	75.00	0.84	1.26	0.84

Demand set: 2021 Total Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.458	0.542
		0.0	38.0	45.0
		(0.0)	(0.0)	(2.2)
	ARM B	0.818	0.000	0.182
		54.0	0.0	12.0
		(0.0)	(0.0)	(8.3)
	ARM C	0.866	0.134	0.000
		58.0	9.0	0.0
		(1.7)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	0.83	9.40	0.088		0.00	0.10	1.4		0.12
C-AB	0.12	10.91	0.011		0.00	0.01	0.2		0.09
C-A	0.72								
A-B	0.48								
A-C	0.56								
08.00-08.15									
B-AC	0.99	9.34	0.106		0.10	0.12	1.7		0.12
C-AB	0.15	10.95	0.013		0.01	0.02	0.2		0.09
C-A	0.86								
A-B	0.57								
A-C	0.67								
08.15-08.30									
B-AC	1.21	9.25	0.131		0.12	0.15	2.2		0.12
C-AB	0.18	11.02	0.017		0.02	0.02	0.3		0.09
C-A	1.05								
A-B	0.70								
A-C	0.83								
08.30-08.45									
B-AC	1.21	9.25	0.131		0.15	0.15	2.2		0.12
C-AB	0.18	11.02	0.017		0.02	0.02	0.3		0.09
C-A	1.05								
A-B	0.70								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.99	9.34	0.106		0.15	0.12	1.8		0.12
C-AB	0.15	10.95	0.013		0.02	0.02	0.2		0.09
C-A	0.86								
A-B	0.57								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.83	9.40	0.088		0.12	0.10	1.5		0.12
C-AB	0.12	10.91	0.011		0.02	0.01	0.2		0.09
C-A	0.72								
A-B	0.48								
A-C	0.56								

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

QUEUE FOR STREAM B-AC

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 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-AC	90.8	60.6	10.9	0.12	10.9	0.12
C-AB	13.5	9.0	1.4	0.10	1.4	0.10
C-A	78.7	52.5				
A-B	52.3	34.9				
A-C	61.9	41.3				
ALL	297.3	198.2	12.3	0.04	12.3	0.04

* 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 RUN*******

========== end of file ==========

Printed at 17:06:31 on 21/06/2016]

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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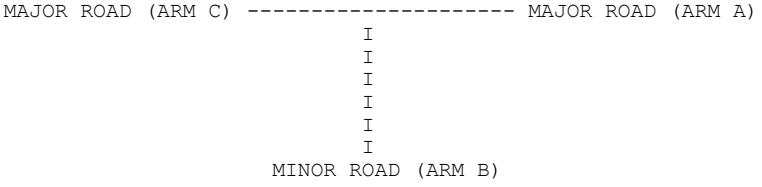
Run with file:-
"Z:\2014 Projects\F14215 Brook Farm, Marden\Capacity Analysis\Junction 3\
2021 PM Total Flows (Paradise Green - C1120).vpi"
(drive-on-the-left) at 17:32:45 on Tuesday, 21 June 2016

RUN INFORMATION

RUN TITLE	: 2021 PM Total Flows - Paradise Green / C1120
LOCATION	: Marden, Herefordshire
DATE	: 09/03/16
CLIENT	: S&A
ENUMERATOR	: ACD
JOB NUMBER	: F14215
STATUS	:
DESCRIPTION	:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Paradise Green (West)
ARM B IS C1120
ARM C IS Paradise Green (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) 7.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.
- VISIBILITY	(VC-B)116.00 M.
- BLOCKS TRAFFIC (SPACES)	YES (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 15.0 M.
- VISIBILITY TO RIGHT	(VB-A) 127.0 M.
- LANE 1 WIDTH	(WB-C) 3.40 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
732.08	0.27	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
566.22	0.24	0.10	0.15	0.35

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
641.14	0.23	0.23

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2021 Total Traffic Flows

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

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	1.38	2.06	1.38
ARM B	15.00	45.00	75.00	0.65	0.97	0.65
ARM C	15.00	45.00	75.00	0.52	0.79	0.52

Demand set: 2021 Total Traffic Flows

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.591	0.409
		0.0	65.0	45.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.865	0.000	0.135
		45.0	0.0	7.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.833	0.167	0.000
		35.0	7.0	0.0
		(14.3)	(2.9)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	0.65	9.41	0.069		0.00	0.07	1.1		0.11
C-AB	0.09	10.34	0.009		0.00	0.01	0.1		0.10
C-A	0.44								
A-B	0.82								
A-C	0.56								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.78	9.35	0.083		0.07	0.09	1.3		0.12
C-AB	0.11	10.34	0.011		0.01	0.01	0.2		0.10
C-A	0.52								
A-B	0.97								
A-C	0.67								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.95	9.26	0.103		0.09	0.11	1.7		0.12
C-AB	0.14	10.33	0.013		0.01	0.01	0.2		0.10
C-A	0.63								
A-B	1.19								
A-C	0.83								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	0.95	9.26	0.103		0.11	0.11	1.7		0.12
C-AB	0.14	10.33	0.013		0.01	0.01	0.2		0.10
C-A	0.63								
A-B	1.19								
A-C	0.83								

TIME (VEH/MIN)	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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	0.78	9.35	0.083		0.11	0.09	1.4		0.12
C-AB	0.11	10.34	0.011		0.01	0.01	0.2		0.10
C-A	0.52								
A-B	0.97								
A-C	0.67								

TIME (VEH/MIN)	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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	0.65	9.41	0.069		0.09	0.08	1.1		0.11
C-AB	0.09	10.34	0.009		0.01	0.01	0.1		0.10
C-A	0.44								
A-B	0.82								
A-C	0.56								

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

QUEUE FOR STREAM B-AC

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

QUEUE FOR STREAM C-AB

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

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-AC	71.6	47.7	8.3	0.12	8.3	0.12
C-AB	10.2	6.8	1.1	0.11	1.1	0.11
C-A	47.6	31.8				
A-B	89.5	59.6				
A-C	61.9	41.3				
ALL	280.8	187.2	9.4	0.03	9.4	0.03

* 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 RUN*******

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