Land at Dyers Road, Stanway

Transport Assessment
Taylor Wimpey UK Ltd
December 2007
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<th>Issue/revision</th>
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<th>Revision 1</th>
<th>Revision 2</th>
<th>Revision 3</th>
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<td>For Planning</td>
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<td>Prepared by</td>
<td>D Gooding</td>
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1 Introduction

1.1 FOREWORD

1.1.1 This Transport Assessment (TA) has been prepared on behalf of Taylor Wimpey UK Limited in support of the proposed residential development on land at Dyers Road in Stanway. A site location plan is shown in Appendix A.

1.1.2 Initial scoping discussions have been undertaken with Essex County Council (ECC), as the local highway authority and with the Highways Agency. The responses to the preliminary Transport Assessment dated July 2006 received from Mouchel Parkman (MP) on behalf of Essex County Council, and from Faber Maunsell (FM) on behalf of the Highways Agency (HA) are contained in Appendix B.

1.1.3 This Transport Assessment considers the existing transport provision in the vicinity of the site for both non-car and car modes, assesses the accessibility of the site by sustainable modes, and then considers the residual impact on the local highway network of travel by private car from the proposed development.
2 Existing Situation

2.1 INTRODUCTION
2.1.1 This section describes the current use of the proposed development site and the existing transport facilities nearby.

2.2 SITE DESCRIPTION
2.2.1 A plan showing the location of the site is shown at Appendix A. The proposed development site is located on the south western edge of Colchester, in the suburb of Stanway. The site is approximately 9ha in area, and is mainly in agricultural use.
2.2.2 The site is bounded to the east by Dyers Road, to the west by Warren Lane and to the north and south by existing residential properties. A street map of the area surrounding the site is contained in Appendix A.

2.3 PEDESTRIAN NETWORK
2.3.1 Within Stanway, the local road network is generally flanked by footways. However, there are currently no footway linkages between the proposed development site and the residential areas to the north. The existing footways currently end near the southern edges of the existing residential areas to the north-east and north-west of the proposed development site.
2.3.2 To the north of the site, the footways are of generally good quality. There is also a metalled pedestrian route through the housing estate immediately to the north of the proposed development site which provides a pedestrian route to Blackberry Road, emerging opposite a parade of shops. There is a zebra crossing on Blackberry Road where this footpath route emerges to provide easy access for pedestrians from the south side of Blackberry Road to the shopping parade situated on its northern side.
2.3.3 At the northern end of Dyers Road, the ‘Fiveways’ junction also incorporates a zebra crossing for pedestrians wishing to head north into Winstree Road.
2.3.4 There are a number of public footpaths which start at Warren Lane. Although the majority of these head west and south, away from Colchester, however these footpaths are a useful resource for leisure walking from the proposed development site.

2.4 CYCLE NETWORK
2.4.1 Appendix C shows the cycle network in the vicinity of the proposed development site. Appendix C also indicates the comprehensive network of on-road and off-road signposted cycle routes, and also many advisory cycle routes along roads that are lightly trafficked.
2.4.2 The principal dedicated cycle facility in the vicinity of the development site is a footway/cycleway which runs along the eastern flank of Warren Lane between Dyers Road and a sand and gravel pit to the south. Both Warren Lane and Dyers Road are shown as advisory cycle routes in Appendix C. There is also cycle parking at the shops on Blackberry Road.
2.4.3 To the east of the site, National Cycle Network (NCN) route 1 runs north/south along a greenway route before turning eastwards towards Colchester town centre, and
provides a signposted, mainly off-road, cycle route. In the vicinity of the site, access to NCN route 1 can be gained from Peartree Road, Heath Road and Wheatfield Road.

2.4.4 The extensive formal and advisory cycle network shown in Appendix C means that there are continuous cycle routes to a many destinations within Colchester.

2.5 PUBLIC TRANSPORT NETWORK

2.5.1 Appendix D shows the local bus routes that operate in the vicinity of the proposed development site. The proposed development site is currently not served directly by local bus services; however the nearest bus stops are located on Blackberry Road, approximately 300m crow fly distance from the northern site boundary. These bus stops are served by the bus services shown in Table 2.1.

### Table 2.1 Local Bus Services

<table>
<thead>
<tr>
<th>No.</th>
<th>Route</th>
<th>Frequency (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mon - Fri</td>
</tr>
<tr>
<td>4</td>
<td>Stanway (Tollgate) – Westlands – Prettygate – Shrub End – Colchester</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Town Centre</td>
<td>Mon - Fri</td>
</tr>
<tr>
<td>65</td>
<td>Stanway – Colchester Town Centre – Colchester North Station – General</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Hospital – Highwoods</td>
<td>Mon - Fri</td>
</tr>
<tr>
<td>176</td>
<td>Mersea – Great Wigborough – Layer – Stanway – Colchester - Highwoods</td>
<td>One journey (Monday only)</td>
</tr>
</tbody>
</table>

2.5.2 Bus service 65 is a high quality and frequent service linking to Colchester station and the town centre at ten minute intervals. This indicates that bus service 65 would be a practicable service to access the train services available from Colchester station, and for shopping and employment journeys to Colchester town centre. Bus service 65 also serves Colchester General Hospital.

2.5.3 In a straight line, the nearest train station to the proposed development site is located in Marks Tey, to the west of Colchester, and is the preceding stop to Colchester for trains from the south. Colchester station is, however, only marginally further away than Marks Tey station, but Colchester station is served by the frequent bus service 65 from near to the proposed development site.

2.5.4 Marks Tey and Colchester stations are both served by Great Eastern mainline train services between London and East Anglia. Table 2.2 below shows the main destinations of train services from Marks Tey and Colchester, which indicates approximate frequencies and journey times. The journey time between Marks Tey and Colchester is six minutes. All the trains that stop at Marks Tey (other than the Sudbury service) also stop at Colchester station. It should be noted that a greater number of trains stop at Colchester station than at Marks Tey.
Table 2.2  Train services from Marks Tey and Colchester stations (frequency as trains per hour)

<table>
<thead>
<tr>
<th>Destination Station</th>
<th>Colchester</th>
<th></th>
<th>Marks Tey</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Journey Time</td>
<td>Frequency</td>
<td>Journey Time</td>
</tr>
<tr>
<td>London Liverpool Street</td>
<td>5</td>
<td>51-65 mins</td>
<td>2</td>
<td>50-59 mins</td>
</tr>
<tr>
<td>Chelmsford</td>
<td>4</td>
<td>16-25 mins</td>
<td>2</td>
<td>16-19 mins</td>
</tr>
<tr>
<td>Clacton₁</td>
<td>1</td>
<td>27-48 mins</td>
<td>1</td>
<td>37-59 mins</td>
</tr>
<tr>
<td>Ipswich</td>
<td>3</td>
<td>15-19 mins</td>
<td>2</td>
<td>26-39 mins</td>
</tr>
<tr>
<td>Norwich₁</td>
<td>2</td>
<td>62-73 mins</td>
<td>2</td>
<td>77-88 mins</td>
</tr>
<tr>
<td>Harwich Town</td>
<td>1</td>
<td>31-33 mins</td>
<td>1</td>
<td>39-49 mins</td>
</tr>
<tr>
<td>Lowestoft</td>
<td>2</td>
<td>112-144 mins</td>
<td>1</td>
<td>121-159 mins</td>
</tr>
<tr>
<td>Sudbury₂</td>
<td>1</td>
<td>29-48 mins</td>
<td>1</td>
<td>19 mins</td>
</tr>
<tr>
<td>Walton-on-Naze₁</td>
<td>2</td>
<td>32-53 mins</td>
<td>1</td>
<td>40-84 mins</td>
</tr>
</tbody>
</table>

1 - Services from Colchester only; 2 – Starts at Marks Tey

2.5.5  Based on information provided on the National Rail website regarding station facilities, Marks Tey station has 25 bicycle and 197 car parking spaces and Colchester station has 60 bicycle and nearly 1,500 car parking spaces.

2.5.6  Both Marks Tey and Colchester stations are accessible by cycling from the proposed development site where there are cycle parking facilities, and Colchester station is additionally accessible by bus from the proposed development site.

2.6  HIGHWAY NETWORK

2.6.1  The proposed development site has road frontages onto Dyers Road to the east and Warren Lane to the west. In the vicinity of the site, Dyers Road is a country lane with ditches on both sides. To the north of the site, Dyers Road enters the urban area of Stanway, and becomes more formalised, with kerbs, and near its northern end, a footway on its western side. At its southern end, Dyers Road meets Warren Lane at a priority junction where Dyers Road is the minor road. Warren Lane is a good quality two way single carriageway road.

2.6.2  The highway network in the vicinity of the proposed development site will change following the programmed construction of the Stanway Western Bypass, which is due to be completed by 2012, and will reduce traffic flows through the existing mini-roundabouts at the northern end of Warren Lane. The northern section of the bypass between the junction with Tollgate West and the A12 interchange has already been constructed, and the remaining southern section of the bypass will come forward with the implementation of the allocated residential areas to the south of the existing Tollgate retail park.
2.7 LOCAL FACILITIES

2.7.1 Although the proposed development site is situated on the edge of the urban area, it is well located to local day to day facilities. The plan contained in Appendix E shows the locations of some of these day to day facilities in the vicinity of the proposed development site.

2.7.2 There are three schools close to the site, namely:
- Stanway Fiveways Primary School;
- Stanway Primary School; and
- The Stanway School (secondary).

2.7.3 Other facilities in the vicinity of the proposed development include:
- Supermarkets (Cooperative [Fiveways], Sainsbury’s, Iceland);
- Employment areas (Tollgate, Peartree Road) – Office/ industrial;
- Post Office;
- Employment areas (Tollgate, Peartree Road) – Office/ industrial;
- Newsagent;
- Doctor/ Dentist;
- Off-Licence;
- Library; and
- Convenience store;
- Hairdresser.

2.7.4 The nearest shops to the proposed development are located on Blackberry Road, approximately 300m crow-fly distance to the north, which include a post office, newsagent, off-licence, convenience store and hairdresser.

2.7.5 There is a good selection of additional retail stores in the vicinity of the site with a Cooperative (Fiveways) store on Peartree Road a short distance to the east of Dyers Road and to the north-west is the Tollgate Retail Park which includes a Sainsbury’s and large variety of retail units including Boots the Chemist and an Iceland store.

2.7.6 There are a doctors, dentist, library and employment areas in the vicinity of the site, offering office, retail and industrial job opportunities.

2.8 ACCIDENTS

2.8.1 Personal injury road traffic accident data was obtained from ECC for the three year period from March 2004 to February 2007. A copy of this data is contained in Appendix F. Over this period there were forty-four slight injury accidents and seven serious injury accidents recorded in the vicinity of the site. No fatal accidents were recorded.

2.8.2 From an inspection of the accident records it is considered that there is not a significant accident problem at any of the junctions in the vicinity of the site owing to the accidents being evenly spread across the local road network.
2.9 TRAFFIC DATA

2.9.1 Traffic counts were undertaken at junctions within the Transport Assessment study area, as shown on Figure 2, on 18 April 2007. These traffic counts indicate that the local weekday peak hours are as follows:

- AM Peak Hour – 08:00 – 09:00
- PM Peak Hour – 17:00 – 18:00.

2.9.2 The observed traffic count data is contained on the CD appended to this Transport Assessment.
3 Development Proposals

3.1 INTRODUCTION
3.1.1 This section sets out the land uses and transport infrastructure in the proposed development. This section also provides information requested by Mouchel Parkman on behalf of Essex County Council also a copy of the draft masterplan is contained in Appendix G.

3.2 DEVELOPMENT CONTENT
3.2.1 As this proposed development site is at an early design stage, the exact development mix is not yet known. House sizes and the proportion of affordable housing will be decided upon when a planning application is submitted; but it is likely that a proportion of the housing will be affordable. However, to ensure this report has been as robust as possible, it has been assumed that all 250 dwellings are privately owned as this would generate a higher trip generation than with a percentage of affordable dwellings.

3.3 ACCESS
3.3.1 Access to the site will be provided from Dyers Road. The drawing contained in Appendix H shows a potential mini-roundabout option for this access. An emergency access to the site could be provided onto Warren Lane – which could be converted into the main access to the site following the completion of the Stanway Western Bypass by others. Appendix H also contains two options for an access from the future roundabout junction between Warren Lane and the proposed bypass.

3.3.2 The proposed access onto Dyers Road has been tested with the swept path of a large refuse vehicle which it is shown to accommodate. A plan showing the swept paths is contained in Appendix H.

3.3.3 The proposed access onto Dyer’s Road has also been tested with the swept path of a large Pantechnicon as one would anticipate this would be the largest vehicle to access the site. This also shows the vehicle can be accommodated. The plan is contained in Appendix H.

3.3.4 Pedestrian and cycle accesses will be provided at the site access junction and at the locations shown on the plan contained in Appendix H.

3.4 PARKING
3.4.1 Car and cycle parking for the proposed development will be provided in accordance with the ‘Vehicle Parking Standards’ published by Essex County Council. As the development mix is unknown at this early pre-planning stage, more detailed parking levels can not be provided.

3.4.2 Cycle and Powered Two Wheeler parking will also be provided in accordance with the current planning policy, based on dwelling sizes, which are unknown at this pre-planning stage.
3.5 DEVELOPER CONTRIBUTIONS

3.5.1 In order to provide good pedestrian and cycle access to the development, it is proposed to provide new footways alongside Warren Lane and Dyers Road between the site’s access and the points where the existing footway network terminates.

3.5.2 It is also proposed that a pedestrian access be provided from the northern boundary of the proposed development to join onto the pedestrian route which passes through the residential development to the north of the site. The status of the land adjacent to the northern site boundary is unknown, consequently this access can only be provided if land along this access route is available.

3.5.3 As part of the developer’s commitment to sustainable transportation there may be some scope for possible contributions regarding the following:

- Improvements to bus stop facilities on Blackberry Road;
- Improvements to facilities at Marks Tey and Colchester rail stations; and
- Pedestrian/cycle facilities in the vicinity of the site.

3.6 PUBLIC TRANSPORT

3.6.1 Frequent bus services do not pass along Dyers Road and Warren Lane but are available along Blackberry Road, which is approximately 300m from the northern boundary of the development site.

3.7 PLANNING POLICY

3.7.1 PPG13: Transport, sets out the national planning policies for transport where the principal objectives are to:

- Promote more sustainable transport choices;
- Promote accessibility to local services and facilities by walking, cycling and public transport; and
- Reduce the need to travel by private car.

3.7.2 The proposed development site is well located for residents to be able to walk to day to day facilities such as supermarkets, schools, leisure facilities and employment destinations.

3.7.3 The proposed development is currently being promoted for inclusion within the development plan documents of the Local Development Framework. The site is not currently allocated in the Colchester Local Plan. During the Local Plan Inquiry in 2000 the site was described as sustainable in transport terms.

3.7.4 As the Local Policy Framework for the proposed development is likely to change the existing Local Plan policies significantly before the LDF is adopted, this section has not reviewed policies from the Local Plan.
4  Accessibility by Sustainable Modes

4.1  INTRODUCTION

4.1.1  This section describes the accessibility to the local area from the proposed development, by non-car modes.

4.2  PREDICTED MODE SPLIT

4.2.1  Following comments made by the Highways Agency, the predicted mode split contained in the preliminary Transport Assessment dated July 2007 has been revisited. Previously 6.1% of journeys were assumed to be made by train, but this has now been split between car users and buses recommended by the HA in their correspondence dated 29 August 2007 which is contained in Appendix B. The revised mode share is shown in table 4.1 below.

Table 4.1  2001 Mode Share

<table>
<thead>
<tr>
<th>Mode</th>
<th>Mode Share</th>
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<tbody>
<tr>
<td>Works at Home</td>
<td>8.5%</td>
</tr>
<tr>
<td>Bus</td>
<td>9.8%</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1.2%</td>
</tr>
<tr>
<td>Car Driver</td>
<td>62.4%</td>
</tr>
<tr>
<td>Car Passenger</td>
<td>7.8</td>
</tr>
<tr>
<td>Taxi</td>
<td>0.2%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>3.7%</td>
</tr>
<tr>
<td>Walk</td>
<td>6.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0.4%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

4.2.2  This revised mode split data indicates that around 70% of journeys will be made by car, as car drivers and passengers from the proposed development, whilst walking and cycling will account for approximately 10% of trips, and public transport a further 10% of trips.

4.2.3  The revised mode split shows a slight increase in car use by 2% and a slight reduction in public transport use by 2%.

4.3  PEDESTRIAN ACCESSIBILITY

4.3.1  Paragraph 75 of PPG 13 states:

"Walking is the most important mode of travel at the local level, and offers the greatest potential to replace short car trips, particularly under 2 kilometres."

4.3.2  In order to ensure that walking is a viable mode of transport from a development there must therefore be a variety of local facilities within 2km of the site, which are accessible by good quality pedestrian routes.
4.3.3 The pedestrian isochrones shown in Appendix I have been prepared to assist in the assessment of the facilities within a reasonable walking distance of the development site. The isochrones have been prepared in 400m intervals from the site access points up to a distance of 2km from the site. Based upon an average walking speed of 80m per minute, this requires a 25 minutes walk to travel 2 km from the site.

4.3.4 The pedestrian isochrones indicate that the following facilities indicated in Table 4.2 below are within walking distance of the development site.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Walk Distance</th>
<th>Approx. Walk Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackberry Road shops</td>
<td>400m</td>
<td>5min</td>
</tr>
<tr>
<td>Fiveways Supermarket</td>
<td>650m</td>
<td>8min</td>
</tr>
<tr>
<td>Peartree Road Employment</td>
<td>800m</td>
<td>10min</td>
</tr>
<tr>
<td>Stanway Fiveways Primary School</td>
<td>800m</td>
<td>10min</td>
</tr>
<tr>
<td>The Stanway School</td>
<td>1,200m</td>
<td>15min</td>
</tr>
<tr>
<td>Tollgate Offices</td>
<td>1,500m</td>
<td>19min</td>
</tr>
<tr>
<td>Tollgate Retail Park</td>
<td>1,500m</td>
<td>19min</td>
</tr>
</tbody>
</table>

4.3.5 Table 4.2 indicates that there are a variety of day to day facilities that are accessible from the development site including employment opportunities. This means that future residents of the site would not need to use a car to access these facilities or to travel to nearby work destinations.

4.3.6 The provision of a footway on Dyers Road from the site access northwards, will improve the pedestrian accessibility of the site.

4.4 CYCLE ACCESSIBILITY

4.4.1 Paragraph 78 of PPG 13 states:

“Cycling also has potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.”

4.4.2 Colchester currently has an extensive network of cycle routes, as can be seen on the Colchester Cycle Map, contained in Appendix C. Appendix J shows indicative cycle isochrones at 1km intervals from the site and shows that within 5km of the proposed development site cyclists can reach the south western part of Colchester town centre.

4.4.3 Based upon the cycle isochrone plan, Marks Tey station lies about 4km from the site. This lies within the 5km cycling distance indicated in PPG13, meaning that residents could potentially cycle to Marks Tey station as part of an ongoing public transport journey. There are 25 covered cycle stands at Marks Tey station where potential cyclists could leave their bicycles.
4.4.4 Colchester station is approximately 5km crow fly distance from the site, indicating that cycling could be used as a mode for accessing the station.

4.5 PUBLIC TRANSPORT ACCESSIBILITY

4.5.1 The nearest bus stops are located within around a 300m crow fly distance of the site, which are served by a high quality bus service that operates at a ten minute frequency between the Tollgate Retail Park and Colchester town centre, where it also links to the railway station. This bus service presents a good means of accessing the train services and the town centre.

4.5.2 With regard to travel by train, the nearest station (Marks Tey) is not readily accessible on foot as it is located beyond a reasonable walking distance from the site. Consequently future residents of the site who may use Marks Tey station would need to use either cycle or a car trip to access the station. By contrast trips to Colchester station can also be made by bus.

4.5.3 Colchester Borough Council have outlined plans to improve both Colchester North Rail Station and Colchester Town Rail Station which will further encourage both new residents and existing residents in the wider area to use the train services available.

4.6 TRAVEL PLAN

4.6.1 A framework for a Travel Plan is described below which provides details of the developer's initiatives to promote the use of sustainable transport modes such as those listed below. A copy of the framework Travel Plan is contained in Appendix R.

- Welcome packs including travel information for each new dwelling;
- Details of local cycle routes;
- Cycle purchase vouchers;
- Bus and train timetables and route maps;
- Bus travel vouchers; and
- Details of local facilities.

4.6.2 Changing peoples' travel habits can be quite a lengthy process, but with an emphasis on sustainable transport it is likely that the travel habits of new residents at this development will be accelerated into changing their travel habits through the provision of sustainable travel infrastructure at the outset of the development.

4.6.3 It is too early in the development plan process to provide a more detailed Travel Plan.

4.7 CONCLUSION

4.7.1 In transport terms, a development that is sustainable is one where the residents do not need to use a car for everyday journeys. To achieve this, there needs to be a good range of local facilities within a short and safe walk, good cycling facilities together with a secure facility to store the bicycle, and local bus services that operate at times when people want to use them. Good accessibility by non-car modes of transport is essential for a sustainable development.
4.7.2 With possible developer contributions the availability of sustainable transport methods in the area will be greatly improved which will not only encourage new residents but those living within the wider local area to adopt sustainable travel modes.
5 Development Traffic Generation

5.1 INTRODUCTION
5.1.1 This section addresses the matters raised by Mouchel Parkman (Essex County Council) and Faber Maunsell (Highways Agency) relating to the overall traffic generation.

5.2 STUDY AREA
5.2.1 Following comments from Mouchel Parkman (MP) and Faber Maunsell (FM) the study area has been refined to the following junctions:
- Site Access junction;
- Five-Ways junction;
- Warren Lane/Dyer’s Road junction; and
- A12 Eight Ash Green junction.
5.2.2 The traffic count data obtained on the 18th April 2007 has been accepted by MP and is contained in the CD Appendix to this Transport Assessment.

5.3 ASSESSMENT YEARS AND TRAFFIC GROWTH
5.3.1 The traffic growth factors for the site for the years 2012 and 2017 were submitted to MP and their suggested revised traffic growth factors have been accepted for this assessment. Using TEMPRO and NRTF97 growth factors, growth rates have also been calculated for the year 2022 to ensure robust figures for the next plan period of 2011 to 2021. The likely year in which traffic will be generated by the development is 2012. The traffic growth calculation has been undertaken in line with the guidance contained in the example following paragraph 4.7 in the TEMPRO Guidance Note dated April 2006. Table 5.1 below shows the morning and evening peak hour growth factors.

<table>
<thead>
<tr>
<th>Table 5.1 Traffic Growth Factors</th>
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<tr>
<td></td>
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<tr>
<td>2007 - 2012</td>
</tr>
<tr>
<td>2007 - 2017</td>
</tr>
<tr>
<td>2007 - 2022</td>
</tr>
</tbody>
</table>

5.4 TRIP GENERATION
5.4.1 The TRICS 2007(b) database has been re-interrogated following comments from Mouchel Parkman and the Highways Agency. As the exact mix of housing types is not known for the proposed development site, the sites used in TRICS are all houses privately owned, as to ensure the most robust predictions. The output file from TRICS is contained in Appendix K.
5.4.2 To ensure the most appropriate results for this proposed development site, the areas from which the TRICS sites were taken are as follows: South East, South West, East Anglia, East Midlands, West Midlands, Yorkshire and Lincolnshire, North West and
North. The other areas were excluded as they are likely to be less relevant when considering the proposed site’s location.

5.4.3 The number of households for each TRICS site selected was narrowed down to a range of between 50 and 550. This was done to ensure the sites used were those that are most appropriate.

5.4.4 The days that the TRICS surveys were taken from were Tuesdays, Wednesdays and Thursdays.

5.4.5 The table 5.2 below shows the $85^{th}$ percentile trip rates obtained from TRICS for the predicted peak hour trip generations from 250 houses.

<table>
<thead>
<tr>
<th>Table 5.2</th>
<th>Trip Rates and Trip Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Car Trip Rates/ Household</td>
</tr>
<tr>
<td></td>
<td>Arrivals</td>
</tr>
<tr>
<td>08:00 - 09:00</td>
<td>0.235</td>
</tr>
<tr>
<td>17:00 - 18:00</td>
<td>0.519</td>
</tr>
</tbody>
</table>

5.4.6 The above trip rates are based upon the following TRICS sites;

- BD-03-A-01
- BD-03-A-02
- HC-03-A-01
- LC-03-A-22
- MS-03-A-01
- NT-03-A-03
- SC-03-A-02
- SC-03-A-03
- TW-03-A-01

5.4.7 The TRICS sites used have a similar trend as can be seen in the graph located within the TRICS output.

5.5 COMMITTED DEVELOPMENT

5.5.1 After revising the study area the following five development proposals have been included in this assessment:

- Colchester Garrison Site;
- Stane Park Development; and
- Danny Watts Employment Development.
- O&H Owens Residential Development
- Proposed development north of London Road

5.5.2 The trip assignments/distributions for the Colchester Garrison Site were contained in the Transport Assessment prepared by WS Atkins for the MoD dated June 2001, which WSP received from Essex County Council.
5.5.3 The trip assignments/distribution for the Danny Watts, Stane Park, O&H Owens Developments were found in Intermodal Transportation's TA which was accessible from the Colchester Borough Council’s website.

5.5.4 The trip assignments/distribution for the proposed development north of London Road were contained in the TA which was also accessible from the Colchester Borough Council’s website.

5.5.5 MP have agreed that with the reduced study area only the above committed developments are applicable when looking at the potential impact on the proposed Dyers Road development site.

5.5.6 The Park and Ride development at the Eight Ash Green junction was suggested as a committed development that could impact on the proposed Dyers Road development site. However it has been brought to WSP’s attention that this Park and Ride development will no longer be taking place.

5.6 DISTRIBUTION AND ASSIGNMENT

5.6.1 The distribution of journeys for the proposed Dyers Road development is based upon the journey to work destinations by mode as abstracted from the 2001 census for the Stanway ward. The full census table has been extracted from the 2001 census, and is contained in Appendix L.

5.6.2 The car distribution is based upon the workplace destinations of car driver trips. The thematic plan contained in Appendix L shows the locations of the destination wards for these journeys, and the colours on the plan show the density of trips to these destinations.

5.6.3 These car trips have been assigned to the local road network by inspection of the highway network and journey route planners have also been used where routes may be ambiguous. The table contained in Appendix L shows the percentage distribution of car driver trips by destination ward, and the routes that are likely to be taken. Table 5.3 below summarises the assignment of traffic from the proposed Dyers Road development by its exit point from the study network.

<table>
<thead>
<tr>
<th>Exit Point</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halstead Road (A1124)</td>
<td>2.7%</td>
</tr>
<tr>
<td>A12 (N)</td>
<td>14.3%</td>
</tr>
<tr>
<td>A12 (S)</td>
<td>21.5%</td>
</tr>
<tr>
<td>London Road (E)</td>
<td>1.7%</td>
</tr>
<tr>
<td>Tollgate Drive</td>
<td>0.0%</td>
</tr>
<tr>
<td>London Road (W)</td>
<td>7.7%</td>
</tr>
<tr>
<td>Tollgate West</td>
<td>4.4%</td>
</tr>
<tr>
<td>Church Lane</td>
<td>0.2%</td>
</tr>
<tr>
<td>Churchfields Av.</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
5.6.4 The distribution shown in Table 5.3 has been assigned to the local highway network on the basis that the Stanway Western Bypass is not in place, and that the proposed development is accessed from Dyers Road. It is considered that this is likely to represent a worst case for the local junctions, and further assumes that the proposed development site is not reliant on the Bypass being implemented.

### 5.7 EFFECT OF STANWAY WESTERN BYPASS

5.7.1 The Stanway Western Bypass is proposed to relieve pressure on the local road network within Stanway, particularly around the Tollgate area. The northern section of the Bypass within Tollgate West is already complete, and the southern section of the Bypass will be delivered to provide access to the allocated residential area to the south of Tollgate and provide a connection to Warren Lane via the new roundabout adjacent to the western boundary of the Dyers Road development site.

5.7.2 Traffic Flow diagrams have been prepared for the site showing the traffic flows in the study area with the full Western Bypass in place and are contained in Appendix P.

5.7.3 It is considered that the proposed bypass will have sufficient capacity to accommodate the traffic generated by the proposed development site and that any new junctions on the bypass would be constructed with sufficient capacity to accommodate both the Local Plan allocated developments and future developments allocated under the Local Development Framework.

### 5.8 TRAFFIC FLOW DIAGRAMS

5.8.1 Traffic flow diagrams have been prepared for the site showing the traffic flows in the study area. Traffic flow diagrams showing the proposed Western Bypass are also included:

- Background Traffic Flows - Appendix M
- Background with Development Traffic Flows - Appendix N
- Committed Development Traffic Flows - Appendix O
- Traffic Flows with Western Bypass - Appendix P
6 Traffic Impact Assessment

6.1 INTRODUCTION

6.1.1 This section describes the traffic impact of the proposed development on the road junctions within the study area. Copies of the output files from the junction modelling are contained on the CD Appendix.

6.1.2 As requested by the Highways Agency the junctions have been assessed for the future year of 2022 to give the most robust appropriate modelling.

6.1.3 Plans of the junctions assessed can be found in Appendix Q.

6.2 SITE ACCESS/ DYER’S ROAD

6.2.1 The capacity of the proposed mini-roundabout site access has been assessed using ARCADY and the results are summarised in table 6.1 below.

Table 6.1 Site Access Junction ARCADY Results

<table>
<thead>
<tr>
<th>2022 Background + Development</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC Queue RFC Queue RFC Queue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.283 0.4 0.191 0.2 0.231 0.3 0.115 0.1 0.207 0.2 0.342 0.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A – Dyer’s Road (S), B – Site Access, C – Dyer’s Road (N)

6.2.2 The ARCADY modelling predicts that the site access junction would have ample capacity in 2022 with the proposed development. The junction has not been modelled without the development as the mini-roundabout is only proposed as part of the development proposal.

6.3 WARREN LANE/ DYER’S ROAD

6.3.1 The capacity of the three arm priority junction of Warren Lane and Dyer’s Road has been tested using PICADY, and the results are summarised in table 6.2 below.

Table 6.2 Warren Lane/ Dyer’s Road PICADY Results

<table>
<thead>
<tr>
<th>Arm</th>
<th>2022 Background</th>
<th>2022 Background + Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak RFC Queue</td>
<td>PM Peak RFC Queue</td>
</tr>
<tr>
<td></td>
<td>RFC Queue RFC Queue</td>
<td></td>
</tr>
<tr>
<td>B-C</td>
<td>0.157 0.0 0.178 0.2</td>
<td></td>
</tr>
<tr>
<td>B-A</td>
<td>0.015 0.0 0.0 0.0</td>
<td></td>
</tr>
<tr>
<td>C-AB</td>
<td>0.301 0.6 0.182 0.3</td>
<td></td>
</tr>
</tbody>
</table>

A – Warren Lane (N), B – Dyer’s Road, C – Warren Lane (S)
6.3.2 The PICADY modelling predicts that the Warren Lane/ Dyer’s Road junction would have ample capacity in 2022 with the proposed development.

6.4 ‘FIVEWAYS’ JUNCTION

6.4.1 The capacity of the ‘Fiveways’ junction has been tested using PICADY, as separate three arm and four arm junctions, representing the configuration of the junction on either side of the Blackberry Road zebra crossing. A summary of the PICADY results are given below in Tables 6.3 and 6.4 for the three arm and four arm junctions respectively.

Table 6.3 Summary of PICADY Results (Four Arm Junction)

<table>
<thead>
<tr>
<th>Arm</th>
<th>2022 Background</th>
<th>2022 Background + Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak</td>
<td>PM Peak</td>
</tr>
<tr>
<td>RFC</td>
<td>Queue</td>
<td>RFC</td>
</tr>
<tr>
<td>B-CD</td>
<td>0.099</td>
<td>0.1</td>
</tr>
<tr>
<td>B-AD</td>
<td>0.287</td>
<td>0.3</td>
</tr>
<tr>
<td>A-BCD</td>
<td>0.483</td>
<td>1.5</td>
</tr>
<tr>
<td>D-AB</td>
<td>1.209</td>
<td>34.9</td>
</tr>
<tr>
<td>D-BC</td>
<td>1.158</td>
<td>12.5</td>
</tr>
<tr>
<td>C-ABD</td>
<td>0.041</td>
<td>0.0</td>
</tr>
</tbody>
</table>

A – Peartree Road (E), B – Heath Road, C – Peartree Road (W), D – Winstree Road

Table 6.4 Summary of PICADY Results (Three Arm Junction)

<table>
<thead>
<tr>
<th>Arm</th>
<th>2022 Background</th>
<th>2022 Background + Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak</td>
<td>PM Peak</td>
</tr>
<tr>
<td>RFC</td>
<td>Queue</td>
<td>RFC</td>
</tr>
<tr>
<td>B-C</td>
<td>0.106</td>
<td>0.1</td>
</tr>
<tr>
<td>B-A</td>
<td>0.570</td>
<td>1.3</td>
</tr>
<tr>
<td>C-AB</td>
<td>0.035</td>
<td>0.0</td>
</tr>
</tbody>
</table>

A – Blackberry Road (E), B – Dyers Road, C – Blackberry Road (W)

6.4.2 The PICADY modelling predicts that the ‘Fiveways’ junction would be running slightly over capacity in 2022 before the proposed development traffic is added. The impact of the development traffic is minimal when it is added to the already over capacity junction.

6.5 A12 EIGHT ASH GREEN INTERCHANGE

6.5.1 The capacity of the A12 Eight Ash Green Interchange has been tested using ARCADY and the results are summarised in table 6.5 below.
### Table 6.5  Eight Ash Green Interchange ARCADY Results

<table>
<thead>
<tr>
<th>Arm</th>
<th>2022 Background</th>
<th>2022 Background + Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak</td>
<td>PM Peak</td>
</tr>
<tr>
<td></td>
<td>RFC</td>
<td>Queue</td>
</tr>
<tr>
<td></td>
<td>RFC</td>
<td>Queue</td>
</tr>
<tr>
<td>A</td>
<td>1.560</td>
<td>424.8</td>
</tr>
<tr>
<td>B</td>
<td>1.337</td>
<td>329.5</td>
</tr>
<tr>
<td>C</td>
<td>1.002</td>
<td>34.2</td>
</tr>
<tr>
<td>D</td>
<td>1.129</td>
<td>53.4</td>
</tr>
</tbody>
</table>

Key: Arm A – A1124 (Northern Arm); B – A12 (Eastern Arm); C – A1124 (Southern Arm); D – A12 (Western Arm)

6.5.2 Although the junction is predicted to be over capacity with and without the proposed development, it is predicted that background traffic growth and committed development traffic have a more significant impact on the operation of the junction than traffic arising from the proposed development.

6.5.3 Inspection of the predicted traffic flows indicates that the traffic from the proposed development will account for just 1.3% of total traffic movements in both peak hours. Consequently it is considered that the proposed development has a minimal impact on the operation of the junction and that an improvement scheme for the junction could not reasonably be expected to be provided by the Dyers Road development on the basis that every effort will be made by the developer to implement sustainable transport measures, with the consequential reduction in single occupancy car-bourn journeys.

6.5.4 The Highways Agency suggested modelling this junction with a proposed mitigation scenario from Intermodal Transportation. At the time of the submission of this TA, the mitigation scheme for this junction had not been provided to WSP to test; consequently WSP has not yet been able to comply with the Highways Agency’s request.

### 6.6 EFFECT OF STANWAY WESTERN BYPASS

6.6.1 The traffic flows for the Western Bypass were taken from Intermodal Transportation’s Transport Assessment for the Land North of London Road which was available on Colchester Borough Council’s website. The growth rates were then calculated using TEMPRO and NRTF97 factors to bring them up to the future year scenarios of 2012, 2017 and 2022. The resultant traffic flows do not appear to match fully WSP’s traffic flows and are significantly lower for the Fiveways junction. The Bypass
is very likely to alleviate pressure on the existing junctions on Tollgate Road and other roads to the east of where the Bypass will be situated.

6.7 CONCLUSION

6.7.1 The junction modelling predicts that the priority junction at Dyers Road and Warren Lane as well as the proposed mini-roundabout site access junction will operate well within capacity, even with traffic growth to 2022, committed development and traffic arising from the proposed Dyers Road development site.

6.7.2 The Fiveways junction has been tested both with and without the proposed Dyers Road development site traffic, where it has been identified that the proposed development will have only a minor impact on this junction.

6.7.3 The Eight Ash Green Interchange is predicted to operate over capacity both with and without the proposed development. Interrogation of the traffic flow data indicates that the proposed development gives rise to approximately one additional vehicle a minute at this junction in the peak hours (an increase in flow of 1.3%). Consequently, it is considered to be unreasonable to expect an improvement scheme to be provided at the Eight Ash Green Interchange as part of the proposals, for the developments.
7 Summary and Conclusions

7.1 SUMMARY

7.1.1 The proposed development site is situated in a reasonably sustainable location which, following improvements to the footway network will be easily accessible by walking and cycling to a wide range of local facilities including a variety of job opportunities. The site is also located approximately 300m from a high quality bus service which operates at a ten minute frequency between the Tollgate Retail Park, Colchester town centre, Colchester railway station and Colchester General Hospital.

7.1.2 The junction capacity assessments predict that the priority junction at Dyers Road/ Warren Lane as well as the site access junction will continue to operate well within capacity, even with traffic growth to 2022, committed development and traffic arising from the proposed development on Dyers Road.

7.1.3 The ‘Fiveways’ junction will be operating slightly over capacity by 2022 but the impact of the proposed development site would be minimal.

7.1.4 The Eight Ash Green Interchange at the A12 is predicted to operate over capacity both with and without the proposed development. Interrogation of the traffic flow data indicates that the proposed Dyers Road development would give rise to approximately one additional vehicle a minute at this junction in the peak hours (an increase in flow of 1.3%). Consequently, it is considered to be unreasonable to expect an improvement scheme to be provided at this junction as part of the Dyers Road development proposals.

7.2 CONCLUSIONS

7.2.1 The proposed development is located in a reasonably sustainable location with good access to local services and facilities on foot, by bicycle or by public transport, which means that future residents of the site would not need to use a car to make day to day journeys.
Appendices, Figures & Tables
Appendix A Site Location Plan and Street Map
Location Plan
Scale 1: 50 000

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Licence Number 100016037
Appendix B Correspondence with Essex County Council and Highways Agency
Dear Mr Beaumont

DYERS ROAD STANWAY
TRANSPORT ASSESSMENT SCOPE

I refer to your letter dated 25 May 2007 and enclosures to Martin Mason of Essex County Council about proposals at Dyers Road, Stanway, a copy of which was sent to Robert Nourse of WS Atkins. WS Atkins manage the trunk road on behalf of the Highways Agency in East Anglia. Your letter has been passed to me as I have responsibilities for planning issues in Essex.

Please find attached a technical note produced by Faber Maunsell on the Transport Assessment Scope. You will note the conclusions that the methodology appears reasonable, particularly if the comments made in the note are taken into account.

I am sure you will be aware that the A12 Trunk Road Eight Ash Green interchange is congested at peak times, and with the developments in Stanway area coming on stream conditions are not likely to improve. I would therefore wish to emphasis the points raised in the technical note on managing down demand of either or both forecast development flows or existing traffic so as to minimise the impact of your proposals and the need for infrastructure mitigation measures.

I look forward to seeing your transport assessment in due course. If you require any further information, please let me know.

Yours sincerely

Eric Cooper
Senior Network Manager
Network Strategy East
Email: eric.cooper@highways.gsi.gov.uk

cc Martin Mason Essex County Council
Technical Note

Project: SPCC
Subject: A12 Land at Dyer's Road, Stanway
Made by: Chris Smith
Approved by: Andrew Cuthbert

Job No: 48984TWTE/BX131
Date: 2nd July 2007
Date: 4th July 2007

Introduction
This Technical Note comprises a review of the Transport Assessment Scope dated May 2007, submitted by WSP in respect of proposals by George Wimpey UK Limited for a housing development at Dyers Road, Stanway. The scoping study has been produced by WSP.

HA Policy Requirements Summary
In accordance with 'Circular 02/2007 – Planning and the Strategic Road Network', and DfT's 'Guidance on Transport Assessment' dated March 2007, the Agency will be concerned with any proposal which would have an effect on the Trunk Road. The Agency will therefore require developers to provide sufficient information, whether in the TA or separately, to allow this impact to be properly assessed. Requirements are detailed in Circular 02/2007 and within DfT's 'Guidance on Transport Assessment' dated March 2007.

Development Proposals
The proposed development site is 9 ha in size and WSP suggest that the site will be accessed (by road) via a new mini-roundabout junction on Dyers Road. The development proposals are to construct 250 dwellings with associated transport infrastructure. The site is approximately 1.5 miles from the A12(T) by road. The first point of access being A12 Junction 26 at Eight Ash Green.

Committed Developments
WSP outline that there are no known committed developments in the immediate vicinity of the proposed development site. However, there are a number of developments that are in the process of gaining and have planning permission near to the proposed site. FM suggest that the committed developments in the area which were likely to have an additional effect on the Trunk road and the local road network which needed to be considered in full are:

- Colchester Garrison Development (WS Atkins)
- Churchfields Residential Development - Regent New Homes (800 houses O&H Owens Site)

It is also suggested that the following applications should also be considered:

- Colchester Park and Ride, Halstead Road (ECC) 660 spaces
- Stane Park incubator and business development north of London Road.
- Land to the North of London Road, Stanway (Mixed use development)

The use of TEMPRO factored NRTF is appropriate for the growth of the base traffic flows but when impact assessments are being carried out, traffic from the developments above should also be considered.

Traffic Growth
WSP have outlined that the years that they will assess are as follows:

- 2007 observed traffic – to calibrate baseline traffic models;
- 2012 assumed year of completion (5 years after initial assessment);

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Newlands House
The Newlands
Witham, Essex CM8 2UW

www.fabermaunsell.com
2017 ten years after initial assessment year for trunk road junctions

These intervals appear to be appropriate and should be implemented when carrying out junction assessments. WSP have used the TEMPRO program to adjust the National Roads and Traffic Forecast 1997 (NRTF97) growth factors. The factors outlined by WSP within the scoping study have been calculated using the "Colchester (zone)" TEMPRO factors and "Urban other" roads within the NRTF program tables. This would be the correct method to calculate the growth rates, however the figures outlined by WSP appear to be low which would result in the background growth in the area being underestimated and not a true illustration of the future traffic. We would recommend that these are re-visited by WSP to allow accurate forecasting.

Trip Generation
WSP have interrogated the TRICS 2007(a) database to obtain trip rates for the proposed residential development. Mixed private housing sites have been used by WSP as they suggest that this category outlines that this is the most appropriate representation of the development. FM are unsure that this is the case and could result in the trip generation of the site could be underestimated and result in the developments impact on the local road network being underestimated. We would recommend that WSP interrogate the TRICS database using 'A Private Housing' category until the further details of the development are outlined.

Traffic Distribution
WSP outline that they will be using 2001 census data to distribute the generated traffic from the development onto the network. In the absence of any data from a similar site locally then this is the most appropriate method. It should be ensured that an appropriate ward is used. Additionally, the social make-up of the ward should mirror the likely make-up of the proposed development.

Extent of Study Network
The Study network outlined by WSP within the scoping study appears appropriate for the future TA. In identifying the A12 Eight Ash Green Interchange FM can feel confident that the impact on the Trunk at this location will be assessed and mitigated if necessary. The proposed traffic count to be carried out at each junction within the study is appropriate and should be Manual Classified Counts (MCC). The peak hours of the site are likely to be 0800-0900 and 1700-1800 as identified within the scoping study and unless different peaks are identified within the baseline traffic flows.

Junctions Assessments
The methodology outlined for the assessment of the junctions within the study area appears appropriate. The measures for mitigation to be on a nil-detriment basis, are appropriate. WSP should be also test the junctions with proposed mitigation measures from the committed developments mentioned previously and the impact this the development has upon the new development. It should also be ensured by WSP that the appropriate modelling program is used for the assessment.

Development Sustainability
WSP mention that there are bus routes that pass close to the proposed development that could be used to travel. However, FM would suggest that WSP provide the locations of the nearest:

- bus stops and the frequency of the bus routes that stop there;
- local shops and key services; and
- local primary and secondary schools.

Green Travel Plan
WSP do not outline plans for a Green Travel Plan for the proposed development the new DFT Circular 02/2007 stipulates that:

"Having regard to the guidance set out in PPG13, paragraph 89, developers, working in partnership with local authorities (where appropriate), must submit plans for the implementation and maintenance of measures that will minimise the traffic generated by their development. This is likely to be through travel plans. These will include, but will not be limited to, measures to manage car use, particularly by single occupants. Examples of such techniques may include
Faber Maunsell would expect to see a green travel plan for the site outlining ways in which reliability on the private car can be reduced.

**Mode Share**

WSP outline the mode share for the development is to be taken from the 2001 census journey to work data. This is appropriate and will offer a reasonable comparison of how the residents may travel to work. It is outlined within table 4.4 of the scoping study that 6.6% of trips will be by train, however the nearest station is approximately 4 miles away and would require another form of transport to the station. Additionally no discounting of the trip rates can be done as the trip generation taken from TRICS are car based trips and represents the predicted car based trips from the development not the total number of trips from the development which is the percentage figure in the census.

**Conclusion**

The general methodology outlined by WSP within the Transport Assessment Scope for the proposed development Land at Dyers Road Stanway appears to reasonable. If WSP take into account the recommendations within this technical note it is likely a robust TA could be the result.
Dear Mr Gooding

LAND AT DYERS ROAD, STANWAY, COLCHESTER
TRANSPORT ASSESSMENT

I refer to your letter dated 1 August 2007 addressed to Martin Mason at Essex County Council and copied to my colleague, Eric Cooper, at the Highways Agency.

The Highways Agency and our technical consultants have now looked at the Transport Assessment for the land at Dyers Road and our comments are set out below. We have previously comments on the Scoping Study for the site on 5 July 2007.

Mode Share

WSP have outlined the mode share would be taken from the 2001 census, as stated in the scoping study. The proportion of trips by train was considered to be slightly high and this does appear to have been lowered accordingly.

However, the 6.1% mode share that has been attributed to the train should be re-distributed between car trips and bus trips as the site is located beyond a reasonable walking or cycling distance to the train station.

Traffic Growth

WSP have outlined the same years for assessment in the TA as in the scoping study:

- 2007 observed traffic – to calibrate baseline traffic models
- 2012 assumed year of completion (5 years after initial assessment)
- 2017 ten years after initial assessment year for trunk road junctions

These intervals appear to be appropriate as stated in the response to the scoping study. The methodology appears to be correct and you have used the TEMPRO program to
adjust the Central National Roads and Traffic Forecast 1997 (NRTF97) growth factors. However, the factors outlined in the scoping study and TA appears to underestimate the growth in the background traffic in the PM peak by 3% (2007-2012) and 4% (2007-2017). The difference in growth factor can be seen in Table 1 below. WSP have not provided any of the TEMPRO factors or the NRTF calculations or tables used so that they can be verified. WSP should revisit the calculations carried out and provide the data used so that they can be validated.

Table 1: Growth factors

<table>
<thead>
<tr>
<th></th>
<th>HA/FM AM</th>
<th>HA/FM PM</th>
<th>WSP AM</th>
<th>WSP PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2012</td>
<td>1.093</td>
<td>1.121</td>
<td>1.097</td>
<td>1.099</td>
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<tr>
<td>2007-2017</td>
<td>1.189</td>
<td>1.236</td>
<td>1.193</td>
<td>1.197</td>
</tr>
</tbody>
</table>

Committed Developments

You have outlined that you have taken into account three committed developments within the vicinity of the site:

- Colchester Garrison site;
- Stane Park Development and,
- Danny Watts Employment Development.

These added to the factored base traffic flows should give a reasonable, but not completely robust estimation of future year traffic conditions. The Highways Agency suggests that three further developments should be taken into account as mentioned in the response to the scoping study:

- Churchfields Residential Development - Regent New Homes (800 houses O&H Owens Site)
- Colchester Park and Ride, Halstead Road (ECC) 660 spaces
- Land to the North of London Road, Stanway (mixed use development)

You have stated that you obtained trip assignments/distributions from Essex County Council, but do not outline what trip rates you have used for the committed developments. WSP should provide the trip rates used.

Trip Generation

As stated in the response to the scoping study, WSP has interrogated the TRICS 2007(a) database to obtain trip rates for the proposed residential development. It was previously stated that 'A: Private Housing' category should be used when obtaining the trip generation for the proposed site. However, WSP have continued to use the 'Mixed Private Housing' category.
The TRICS 2007(a) database has been looked at to obtain 85th percentile trip rates from the 'A: Private Housing' category for comparison and are listed in table 2 and 3 below:

<table>
<thead>
<tr>
<th>Table 2: Comparison of FM and WSP Generated Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>**</td>
</tr>
<tr>
<td>Arrival</td>
</tr>
<tr>
<td>08:00 – 09:00</td>
</tr>
<tr>
<td>17:00 – 18:00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3: Comparison of FM and WSP Generated Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>**</td>
</tr>
<tr>
<td>Arrival</td>
</tr>
<tr>
<td>08:00 – 09:00</td>
</tr>
<tr>
<td>17:00 – 18:00</td>
</tr>
</tbody>
</table>

As shown in Table 2 and Table 3 above the 'Mixed Housing' category gives a much lower trip generation figure for the proposed site than the 'Private Housing' category and could underestimate the development's impact on the surrounding road network. Clarification should be provided on the type of housing proposed and if necessary the higher private housing trip rate should be adopted.

**Traffic Distribution**

You have used the journey to work data for the Stanway Ward from the 2001 census. We have checked how the assignment has been applied to the WSP trip rates and can agree with the figures. However, we are unable to accept these trip distributions until the trip rates are agreed. The method used does appear to be appropriate.

No census data has been provided to allow for checking against the distribution. It is not clear from the information provided how the arrivals at the site in the AM peak have been distributed across the network. Clarification is needed on the AM peak distribution.

**Extent of Study Network**

WSP have used the agreed study area and this appears acceptable. Traffic counts were undertaken on 18 April 2007, the peak hours for the study being 0800-0900 (AM) and 1700-1800 (PM). We can confirm these traffic surveys are acceptable and completed during the correct times.

The traffic flow diagrams provided in the WSP TA have been checked. It appears that the PM peak observed traffic flows for both peaks have been duplicated. You should correct the traffic flow diagrams using the correct data for the AM and PM peaks. This error appears to have been carried through to the junction assessments. WSP should use the correct traffic flows when the new modelling suggested below is undertaken.

**Junction Assessments**
WSP outline within the TA that the A12 Eight Ash Green junction will be over capacity before and after the development traffic has been added to the assessment. You outline that this is as a result of committed developments in the area and background traffic growth. However, the junction assessed is the existing layout and does not take account of any mitigation measures proposed by the developers of the committed developments. We are unable to verify the capacity of the junction when these mitigation measures associated with other developments are implemented. If they do not provide adequate capacity, the proposed development could result in further congestion at the junction. WSP should obtain the details of the proposed measures and the TRANSYT modelling from Intermodal Transportation and Essex County Council. They should then carry out the junction assessments using the correct base traffic flows (see above) plus the committed developments outlined along with the trip generation obtained using the 'Private Housing' category within TRICS.

A further scenario should also be considered without the committed developments and with the existing layout. This alternative scenario could be modelled using ARCADY.

**Development Sustainability**

WSP have outlined that there is a bus stop and shops approximately 300m from the northern site boundary as the crow flies. Therefore the distance could be greater when trying to access these facilities on foot or by car. Additionally they outline and illustrate in figure 5 the locations of key services. Some appear to be within reach of sustainable forms of transport. However some will require the use of other means of transport. WSP do not outline plans to extend footways or cycle-ways into or close to the site.

WSP do not outline any proposals for improving the bus routes that run close to the proposed development. Bus stops closer to the site or re-routing of the bus service to include stops within the development could be considered to make the development more sustainable.

Physical measures should be considered to encourage non-car trip making in the area and increase the number of local trips by public transport. WSP have not provided a Travel Plan as suggested in the response to the scoping study. If a comprehensive Travel Plan is implemented reduced traffic flows could be used.

**Conclusions**

To be able to progress the work the following information is still required to fully assess the impact of the proposed development:

- Revisit the traffic growth calculations and provide full inputs and outputs of the calculations

- Re-distribute the 6.1% share of train users into the car driver’s and bus passengers share of the modal split
• Consider the additional committed developments outlined

• Use 'A: Private Housing' category from TRICS to calculate the site trip generation

• Use the correct base traffic flow data within the traffic flow diagrams

• Model the A12 Eight Ash Green junction with appropriate proposed mitigation in place and without the committed developments

• Provide a Travel Plan; and

• Propose measures to make the planned development more sustainable.

Until the issues raised above have been resolved the Highways Agency are unable to recommend acceptance of the Transport Assessment.

I look forward to receiving your revised Transport Assessment in due course so that we can agree its contents.

I am copying this letter to Martin Mason, Essex County Council, for information.

Yours sincerely

[Signature]

Davina Galloway
Network Manager
Email: davina.galloway@highways.gsi.gov.uk
Gooding, David

From: Karen Horder HT Strategic Development Technician [Karen.Horder@essexc.gov.uk]
Sent: 12 September 2007 08:23
To: Gooding, David
Cc: Davina.galloway@highways.gsi.gov.uk
Subject: FW: Land at Dyers Road, Stanway - CHA 801
Attachments: CHA 801.doc

Hi David,
Further to your letter of 1st August 2007 and Transport Assessment for the above site, our consultants MouchelParkman have provided us with their review of the document. Please find a copy of their review attached.

Please can you address the issues raised in the attached TA review, and then resubmit the document to us for further checking.

Regards

Karen Horder
Strategic Development Technician
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Development Highways and Transportation
Essex County Council
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Land at Dyers Road, Stanway, Colchester

Transport Assessment Review

11th September 2007

Produced for
Essex County Council

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Document Control Sheet

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Project Number: 733818/CHA/801/1

Revision: 1

Status: Final

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Record of Issue

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1 Introduction

1.1 Background
A Transport Assessment (TA) to consider the transport implications of the proposed residential development at a site located on land at Dyers Lane, Stanway was submitted to Essex County Council in July 2007 by WSP Development and Transportation (WSP) on behalf of Taylor Wimpey.

1.2 Documentation
The TA was contained within the WSP document entitled "Land at Dyers Road, Stanway Transport Assessment" dated 26th July 2007.
2 Summary of Findings

We have undertaken a review of the Transport Assessment, submitted by WSP Development and Transportation (WSP) on behalf of Taylor Wimpey, associated with the proposed residential development, in Dyers Lane, in Stanway.

Our review has indicated that we would consider the following to be acceptable:

- Raw traffic data and the peak hours assessed;
- Modal Split;
- Traffic growth rates that have been established; and
- The distribution of traffic generated by the proposed development.

However, we would request that WSP provide the following:

- Clarification on whether the development will be wholly private or have some element of social housing;
- Clarification on whether 2012 is the year that the development will be substantially complete.
- Swept path diagrams to illustrate the viability of service vehicles egress and access to the proposed site.
- Information regarding parking at the site for cars, powered two-wheelers and cycles; and

We have also not been able to agree the following:

- The study area;
- Total trips generated by the proposed development;
- Base traffic flow in the year of opening and future assessment year;
- Committed development flows;
• The future assessment year;
• Forecast traffic flows; and

We would therefore, recommend that WSP be asked to revise their study area and undertake capacity assessments of the following:

• Site access junction;
• Five-Ways junction; and
• Warren Lane/Dyers Road junction;

There may also be scope for Essex CC to request developer contributions towards the following:

• Improvements to bus stop facilities on Blackberry Road;
• Improvements to facilities at Marks Tey and Colchester rail stations; and
• Pedestrian / cycle facilities in the vicinity of the site.

We would also suggest that WSP provide further details of the Travel Plan to be provided for the proposed development.
3 Proposed Development

3.1 Development Location
The site is located to the south-west edge of Colchester, in Stanway. It is bounded to the east by Dyers Road, to the west by Warren Lane and to the north by existing residential properties. To the south are a number of quarries and existing agricultural land.

3.2 Development Details
WSP state that the proposed development will comprise the redevelopment of the existing site to accommodate a residential complex consisting of the following:

- 250 residential units;
- Public open space; and
- Children’s play area.

However, WSP have not provided any information regarding the potential mix of the 250 residential units or the tenure of the proposed dwellings. We would therefore, request they clarify whether the development will be wholly private or whether there will be some element of social housing and what proportion of the units will be flats and houses.

3.3 Site Access
Vehicle access to the site will be provided from Dyers Road, and WSP state that the drawing in Appendix D shows a potential mini-roundabout option for this access. They further state that an emergency access to the site could be provided onto Warren Lane, which could be converted into the main access to the site following the completion of the Stanway Western Bypass by other developers. WSP state that Appendix D contains two options for an access from the future roundabout junction between Warren Lane and the proposed bypass.

WSP state that pedestrian and cycle accesses would be provided at the Dyers Road site access junction.
3.4 Study Area

WSP state that during scoping discussions with ECC and the Highway Agency, it was requested that the traffic impact on the local road network between the site and the A12 be assessed, as well as looking at the impact of the Stanway Western Bypass. As a result, WSP state that the following junctions that are in the immediate vicinity of the proposed development have been assessed:

- A12 Eight Ash Green Interchange;
- A1224/London Road/Tollgate Road;
- Tollgate West/Tollgate Road;
- Tollgate Road/Church Lane;
- Tollgate Road/Churchfields Avenue;
- Warren Lane/Villa Road;
- Warren Lane/Blackberry Road;
- Warren Lane/Dyers Road;
- Fiveways junction
- Blackberry Road/Dyers Road

However WSP have not undertaken capacity assessments of the site access junction and we would therefore, request that it be included in the study area.

Furthermore, the IHT’s guidelines for Traffic Impact Assessment recommends that a threshold approach should be adopted when determining the area of influence of a development. It suggests that the study area should include all links and associated junctions where traffic from the development will exceed 10% of the existing traffic (or 5% in congested or other sensitive locations). Unfortunately, WSP have not undertaken the above.

We have reviewed the traffic flow diagrams that have been provided by WSP to determine the area of influence of the proposed development. While we do not necessarily agree with their base and committed development flows in the 2012 assessment year, we would consider that any adjustment that would be necessary
would probably lead to an increase. Therefore, the impact of the proposed development would be even less than is currently shown.

Bearing the above in mind, the WSP traffic flow diagrams would seem to indicate that the increase in link flows as a result of the proposed development would reduce to below 10% on Blackberry Road, to the west of the Five-Way junction and on Warren Lane, to the north of its junction with Dyers Road.

Therefore, we would consider that only the following junctions would be significantly impacted on by the proposed development:

- Site access;
- Five-Ways; and
- Warren Lane / Dyers Road.
4 Traffic Forecasts

4.1 Base Traffic Flows
WSP state that they have undertaken traffic counts at junctions within the TA study area, as shown on Figure 2, on Wednesday, 18th April 2007. From the surveys they have determined that the peak hours are 08.00-09.00 for the AM peak and 17.00-18.00 for the PM peak. WSP then state that the observed traffic count data is contained on the CD appended to the TA.

We have reviewed the raw traffic count data and would consider that these survey times and dates are acceptable.

WSP have transferred the raw Manual Classified Count data onto a flow diagram contained in Appendix I. We have checked the diagrams to make sure the flows have been transferred correctly. The flow diagrams represent the results of the traffic counts. We would therefore, considered these to be acceptable.

4.2 Trip Generation
WSP state that 250 residential dwellings are proposed as part of the proposed development, although no breakdown is provided with regard to the number of flats or houses (private or non-private). WSP then state that they have obtained 85th percentile TRICS trip rates for mixed housing residential units in order to determine the number of trips produced and attracted by the proposed 250 dwellings during the peak hours. The results are displayed within Table 5.2 of the TA.

However, we are unsure of the nature of the dwellings proposed and as such we have considered a robust scenario, assuming that the 250 units are all privately owned houses. We have therefore obtained 85th%tile trip rates from TRICS 2007(b) to calculate the likely trip generation of the proposed development and compared our findings to those obtained by WSP. A summary is shown below:

<table>
<thead>
<tr>
<th></th>
<th>WSP Calculated trip rates</th>
<th>Mouchel Parkman calculated trip rates - 2007(a)version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Trip rates (per dwelling)</td>
<td>PM trip rates (per dwelling)</td>
</tr>
<tr>
<td></td>
<td>Arr</td>
<td>Dep</td>
</tr>
<tr>
<td>0800-0900</td>
<td>0.152</td>
<td>0.500</td>
</tr>
<tr>
<td>1700-1800</td>
<td>38</td>
<td>125</td>
</tr>
</tbody>
</table>
The above comparison shows that our trip rates are moderately higher than those proposed by WSP, which would produce higher flows. While we would consider that the difference in flows would probably not affect the calculations to determine the area of influence of the proposed development, we would consider that they might affect the capacity assessments of the three junctions that do experience an increase in traffic flow of greater than 10%. We would therefore, request that WSP use our trip generation rates.

Alternatively, WSP could provide a breakdown of the residential dwelling mix of the proposed development so that more specific trip rates can be determined.

### 4.3 Modal Split

WSP state that, in order to identify the potential modal split of the site, they have used the 2001 Census Journey to Work data for the Stanway Ward. A summary is shown below:

<table>
<thead>
<tr>
<th>Travel by mode</th>
<th>% by mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car driver</td>
<td>62.0</td>
</tr>
<tr>
<td>Car passenger</td>
<td>6.2</td>
</tr>
<tr>
<td>Bus</td>
<td>5.7</td>
</tr>
<tr>
<td>Work from home</td>
<td>8.5</td>
</tr>
<tr>
<td>Train</td>
<td>3</td>
</tr>
<tr>
<td>Taxi</td>
<td>0.2</td>
</tr>
<tr>
<td>Walk</td>
<td>6.0</td>
</tr>
<tr>
<td>Cycle</td>
<td>3.7</td>
</tr>
<tr>
<td>M/C</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

We would consider the above to be acceptable.

### 4.4 Trip Distribution

WSP state that they have based the distribution of development traffic according to the journey to work destinations by mode as abstracted from the 2001 census for the Stanway ward. They state that the car distribution is based upon the workplace destinations of car driver trips. They further state that the car trips have been assigned to the local road network by inspection of the highway network and journey route planners have been used where routes may be ambiguous. WSP have then
provided the assignment of traffic from the proposed development by its exit point from the study network as shown below:

<table>
<thead>
<tr>
<th>Exit Point</th>
<th>Assignment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halstead Road (A1124)</td>
<td>2.7</td>
</tr>
<tr>
<td>A12 (N)</td>
<td>14.3</td>
</tr>
<tr>
<td>A12 (S)</td>
<td>21.5</td>
</tr>
<tr>
<td>London Road (E)</td>
<td>1.7</td>
</tr>
<tr>
<td>Tollgate Drive</td>
<td>0.0</td>
</tr>
<tr>
<td>London Road (W)</td>
<td>7.7</td>
</tr>
<tr>
<td>Tollgate West</td>
<td>4.4</td>
</tr>
<tr>
<td>Church Lane</td>
<td>0.2</td>
</tr>
<tr>
<td>Churchfields Avenue</td>
<td>0.2</td>
</tr>
<tr>
<td>Villa Road</td>
<td>3.0</td>
</tr>
<tr>
<td>Winstree Road</td>
<td>5.6</td>
</tr>
<tr>
<td>Peartree Road</td>
<td>33.5</td>
</tr>
<tr>
<td>Warren Lane</td>
<td>3.9</td>
</tr>
<tr>
<td>Heath Road</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

WSP state that the distribution shown in the table above has been assigned to the local Highway network on the basis that the Stanway Western Bypass is not in place, and that the proposed development is accessed from Dyer Road.

We have reviewed their trip distribution assumptions shown above and their traffic assignment drawings contained in the TA and would consider that they are acceptable.

4.5 Pass-by, Diverted and Combined Trips
WSP make no reference to any potential Pass-by, Diverted or Combined trips. We would consider that such an approach is acceptable for a development of this nature.

4.6 Assessment Year and Traffic Growth
WSP state that assessment years of 2012 and 2017 have been assumed. However, it is not apparent from the TA whether the proposed development will be completed by 2012 or if this is when the applicant expects the first properties to be occupied. We would therefore, request that WSP clarifies that 2012 is the year that the development will be substantially complete and all of the dwellings will be occupied.
If this is not the case then the future assessment year should be adjusted accordingly. WSP then state that they have determined the 2012 and 2017 traffic growth rates for the weekday AM and PM peak hours. Their results are shown in Table 5.1. of their TA.

We have undertaken a review of the traffic growth rates that have been determined by WSP by carrying out a similar estimation using the TEMPRO / NRTF Table 3 method described in the TEMPRO Guidance Note, April 2006. A summary of the growth rates that we have obtained compared to those provided by WSP is shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>WSP growth factors</th>
<th>MP growth factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM peak</td>
<td>PM peak</td>
</tr>
<tr>
<td>2007 - 2012</td>
<td>1.097</td>
<td>1.099</td>
</tr>
<tr>
<td>2007 - 2017</td>
<td>1.193</td>
<td>1.197</td>
</tr>
</tbody>
</table>

Our assessment shows that the traffic growth rates established by WSP are similar to those that we have obtained and consequently we would consider that they would be appropriate.

4.7 Committed Developments
WSP state that they have identified three committed developments that should be included within the TA. These are:

- Colchester Garrison site;
- Stane Park development; and
- Danny Watts Employment development.

WSP then state that committed development trip assignments/distributions have been obtained from Essex County Council and are shown on the traffic flow diagrams contained in Appendix F.

Unfortunately, the committed development flow diagrams provided by WSP for the AM and PM peak are identical, which is unlikely, and therefore, we would consider that this could an oversight by WSP.
Furthermore, Essex CC will be aware, the trips generated by the proposed development in Stanway have not yet been agreed and therefore, the specific number of committed development trips has not yet been quantified.

However, we would suggest that, even if the committed development flows were to be amended, by the time they reached the reduced study area for the proposed development, any significant change would be diluted. This, combined with the robust background traffic growth rates used by WSP, would probably result in the committed development flows being proposed by WSP being acceptable. We would still request that WSP revisit their traffic flow diagrams though, as the AM and PM committed development flows are shown to be identical, which is probably not correct.

4.8 Forecast Traffic Flows
WSP have provided flow diagrams of the following scenarios for both the AM and PM peak periods;

- Background traffic flows (Appendix I) with committed development; and
- Background with development traffic flows (Appendix J).

However, as we still have some concerns regarding the trip generation and assessment years, we have not been able to agree the forecast traffic flow proposed by WSP.

Furthermore, there appears to be a fundamental error with WSP's traffic flow diagrams in both assessment year scenarios as the AM and PM peak flows are shown to be the same. We would therefore request that WSP revisit their traffic flow diagrams.
5 Traffic Impact

5.1 Junction Capacities
WSP have carried out PICADY and ARCARDY capacity assessments for the design year (2012) in both the AM and PM peaks, including development generated traffic, for each junction within the study area.

However, as we stated earlier, we have not been able to agree the traffic flows proposed by WSP. Therefore, we have not been able to review WSP’s junction capacity assessments.

Furthermore, we would suggest that assessments of some of the junctions in their study area would not be warranted, although WSP have not assessed the proposed site access. We would therefore recommend that WSP undertake the following junction capacity assessments; if they can confirm that 2012 is the year of substantial completion and occupation of the proposed development:

- Site access – AM and PM peaks, 2012 and 2017 assessment years, background with committed development and background with committed development plus proposed development traffic.

- Five-Ways - AM and PM peaks, 2012 assessment year, background with committed development and background with committed development plus proposed development traffic; and

- Warren Lane / Dyers Road – AM and PM peaks, 2012 assessment year, background with committed development and background with committed development plus proposed development traffic.

5.2 Link Capacities
WSP have not provided any information regarding link capacity assessments in their TA report. We would suggest that this is acceptable in this instance.

5.3 Heavy Vehicles
WSP have not provided any information on the accessibility of service vehicles onto the site. It is recommended that WSP provide turning diagrams to illustrate the viability of service vehicles egress and access to the proposed site. In addition it will be necessary for refuse vehicles to be able to access the site and therefore, we
would recommend that WSP demonstrate that the site access junction is capable of accommodating such vehicles.

6 Engineering Audit

An engineering assessment was not requested as part of this TA review.

7 Parking Provision

7.1 Car
WSP state that car parking will be provided within the plan to the levels expected by ECC. However they do not confirm the level they propose to provide. As such, we would recommend that WSP are asked to confirm the number of spaces the developer plans to provide. We recommend that WSP follows the Essex Planning Officers Association ‘Vehicle Parking Standards’ guidance on the level of provision.

7.2 Powered Two-Wheelers
WSP make no specific reference to powered two-wheeler parking allocation/facilities. We recommend that this be address in accordance with the Essex VPS.

7.3 Cycles
WSP state that cycle parking will be provided within the plan to the levels expected by ECC. However they do not confirm the level they propose to provide. As such, we would recommend that WSP are asked to confirm the number of spaces the developer plans to provide. In addition they should clarify the type of parking facility to be provided. We recommend that WSP follows the Essex Planning Officers Association ‘Vehicle Parking Standards’ guidance on the level of provision.


8 Provision for Pedestrians and Cyclists

8.1 Pedestrians

WSP state that within Stanway, the local road network is generally flanked by footways. However, they note that there are currently no footway linkages between the proposed development site and the residential areas to the north. They state that the existing footways currently end near the edges of the existing residential areas to the north east and north west of the proposed development site.

WSP note that to the north of the site the footways are of generally good quality. They also note that there is also a metalled pedestrian route through the housing estate immediately to the north of the proposed development site which provides a pedestrian route to Blackberry Road, emerging opposite a parade of shops. They also state that there is a zebra crossing on Blackberry Road providing access to pedestrians wishing to cross over from the south side of the road to the shopping parade. They further state that, at the northern end of Dyers Road, the Fiveways junction also incorporates a zebra crossing for pedestrians wishing to head north into Winstree Road. WSP also note that there are a number of footpaths which start at Warren Lane that can be used for leisure walking from the proposed development site.

WSP have provided Figure 6 in the TA which shows pedestrian isochrones at 400m intervals from the site access points up to a distance of 2km from the site and Table 4.1 shows all the facilities available to the residents of the new developments within 0.4 – 2km distance from the site. The table highlights the new development in relation to other amenities such as food shops, schools, employment centres and leisure facilities, all of which fall within a 2km radius of the site.

8.2 Cyclists

WSP have provided Figure 3 in their TA, which shows the extent of the cycle network in Colchester. While the map is a bit difficult to read, it appears to show that advisory cycle routes currently pass along both Dyers Road and Warren Lane, which connect to routes to Stanway and Colchester Town Centre.

We would therefore, consider that facilities should be provided to encourage this mode of transport. This should entail secure parking provision and cycle paths that ideally connect with the existing network of routes.
If any existing facilities are considered to be in poor condition it might be appropriate to request developer contributions to upgrade them.

### 8.3 Proposed

WSP state that in order to provide good pedestrian and cycle access to the development, the developer proposes to provide new footways alongside Warren Lane and Dyers Road between the site’s access and the points where the existing footway network terminates.

WSP further state that it is also proposed that a pedestrian access be provided from the northern boundary of the proposed development to join onto the pedestrian route which passes through the residential development to the north of the site. However, they state that the status of the land adjacent to the northern site boundary is unknown, and therefore this access can only be provided if any land along this access route is available.

WSP state that the provision of a footway on Dyers Road from the site access northwards, will also improve the pedestrian accessibility of the site.

We would consider that ECC could reasonably request a contribution of funds from the developer to upgrade the local footpaths and cycleways, where appropriate. Without sufficient provision of walking and cycling routes, residents may be encouraged to use their car.

### 9 Powered Two-Wheelers

#### 9.1 General

No details of facilities for powered two-wheelers are included in the TA. This should be addressed.
10 Public Transport

10.1 Existing

Bus
WSP have provided Figure 4 showing the local bus routes that operate in the vicinity of the proposed development site. WSP state that the proposed development site has no public transport route operating through it and the nearest bus stops are located on Blackberry Road, approximately 300m crow fly distance from the northern site boundary, which are served by bus service 65 that operates at a ten minute frequency between Tollgate Retail Park and Colchester town centre, where it also links to the railway station.

However, the drawing shows that if residents were required to walk to the site entrance and along Dyers Road to the existing bus stops on Blackberry Road, their route would be significantly greater, in the region of 600-700m. Given that WSP have stated that the status of the land required to provide a pedestrian link to the residential area to the north is unknown then this shorter route can not be guaranteed. It could therefore, be the case that residents would be required to walk significantly further to the nearest bus stop than the 300m stated in the TA.

They also summarise the other routes in the area as follows;

<table>
<thead>
<tr>
<th>No</th>
<th>Route</th>
<th>Frequency (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mon - Fri</td>
</tr>
<tr>
<td>4</td>
<td>Stanway (Tollgate) – Westlands – Prettygate – Shrub End – Colchester Town Centre</td>
<td>60</td>
</tr>
<tr>
<td>176</td>
<td>Mersea – Great Wigborough – Layer – Stanway – Colchester – Highwoods</td>
<td>One journey (Monday only)</td>
</tr>
</tbody>
</table>

Unfortunately, they have not provided any information regarding the facilities at the bus stops or their condition.

We would consider therefore, that Essex County Council could reasonably ask the developer to contribute to improvements on the Blackberry Road bus stops, particularly the addition of raised kerbs, shelters and bus timetable displays, if they
consider that this is appropriate. There may even be a need to extend a bus service
to Dyers Road, in order to provide an adequate service for residents.

Rail
WSP state that the nearest train station is located in Marks Tey, to the west of
Colchester. They also state that Colchester station is marginally further away but is
served by bus service 65. Both train stations are served by Great Eastern mainline
train services between London and East Anglia.

WSP state that both train stations are accessible by cycling from the proposed
development site where there are cycle parking facilities, and Colchester station is
additionally accessible by bus from the proposed development site.

10.2 Proposed
The plans for the developments do not report any proposal for new public transport
facilities.

However, we would consider that in order to encourage further use of public
transport services the applicant could be requested the provide contributions towards
facility improvements at the bus stops and rail stations.
11 Environmental Impact

11.1 Noise Assessment

A noise assessment was not requested as part of this TA review.

12 Travel Plan

WSP have included outline details of a travel plan that they propose to provide for the development site. It states that the principal objectives are to:

- Discourage low occupancy car use; and
- Promote the use of sustainable forms of travel;

To achieve the above objectives they state that they will employ the following measures:

- Welcome packs including travel information for each new dwelling;
- Details of local cycle routes;
- Cycle purchase vouchers;
- Bus and train time tables and route maps;
- Bus travel vouchers; and
- Details of local facilities.

However, we have not been able to undertake a preliminary review of the Travel Plan as they state it will not be prepared at this stage of the planning process. We would therefore, suggest that Essex CC seek further clarification from the applicant in this regard and satisfy themselves that the above is acceptable.
Appendix C  Local Cycle Network