

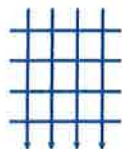
BANNERS GATE

HIGHWAYS & TRANSPORTATION

RESIDENTIAL DEVELOPMENT OF 78 PROPERTIES
AT WARBLINGTON PLAYING FIELDS, (SITE HTC3.31)
NEW LANE, HAVANT, HAMPSHIRE

TRANSPORT ASSESSMENT
(NOVEMBER 2012)





BANNERS GATE TRANSPORTATION

**Development of allocated site HTC3.31
New Lane, Havant, Hampshire**

**Transport Assessment
(November 2012)**

Banners Gate Transportation Ltd has prepared this report in the course of an assignment for **Bloor Homes** the conditions of which were set out in its appointment for consulting engineering services by the Client. Banners Gate Transportation Ltd shall not be responsible for the use of the report or its contents for any purposes other than those for which it was prepared and provided.

Job P764	Revision	Prepared and checked by	Date
	First Issue	Nigel Vening BSc CEng MICE MCIHT	9 March 2011
	Updated with new layout	Nigel Vening BSc CEng MICE MCIHT	1 December 2011
	Updated with new layout for planning application	Nigel Vening BSc CEng MICE MCIHT	29 February 2012
	Updated with new layout for planning application	Nigel Vening BSc CEng MICE MCIHT	2 November 2012

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TRANSPORT ASSESSMENT

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Appendix B	Traffic flow data, New Lane (March 2011)
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References:

Manual for Streets (2007) / Manual for Streets 2 (2010)
Movement, Access, Streets and Places, Hampshire County Council (2001)
National Planning Policy Framework
By Design, Better Place to Live
Guidance for Transport Assessment (March 2007)

TRANSPORT ASSESSMENT

1 INTRODUCTION

- 1.1 Banners Gate Transportation Limited has been instructed by Bloor Homes to study transport and highway engineering issues in support of a planning application for residential development on land off New Lane in Havant.



- 1.2 The site is located on the edge of the town centre boundary of Havant and is allocated for residential development within the Local Plan. A planning application for residential development on the site was submitted earlier this year for 79 dwellings. This *Transport Assessment* was written in February 2012 in support of the planning application.
- 1.3 This report has been edited and updated to reflect the current proposals for 78 dwellings. The loss of one property from the layout would have a negligible affect on the transport implications of the project. However, in recent months negotiations with the Highway Authority have secured an approval in principle to developer funded improvements to the route of New Lane including road widening. This report seeks to clarify these improvements which would be delivered in the event that planning permission is secured.

1.3 This report considers all transport planning matters as they apply to promoting the residential project at New Lane as follows:

- Traffic generation of the residential development
- Suitability of existing infrastructure of New Lane / Fairfield Road
- Safety of surrounding junctions of New Lane / Fairfield Road
- Operation of the surrounding road network
- Design of the new access, layout and servicing
- Suitability of the existing pedestrian and cycling environment
- Sustainability credentials of the site

1.4 The existing road network is described in Section 2. Planning policy and the development are discussed in Sections 3 and 4 whilst the highway matters are described in Section 5.

2 EXISTING CONDITIONS

2.1 **The development site** The site includes an area of 1.89 hectares of land that has been used as playing fields for the adjacent Warblington School. The playing fields are surplus to the requirements of the school and therefore the revenue raised from the sale of the land can be used to invest in education. A site location plan is included at [Appendix A](#).

2.2 The site does not benefit from a vehicular access. Therefore, land adjacent to the playing fields with frontage onto New Lane is included with the development site. The Portsmouth to Brighton railway line defines the northern boundary of the site whilst the residential area of Havant is located to the south and west. The retained playing fields are located on the eastern boundary to the site. The picture opposite illustrates a view looking north across the frontage of the site towards the level crossing on New Lane.



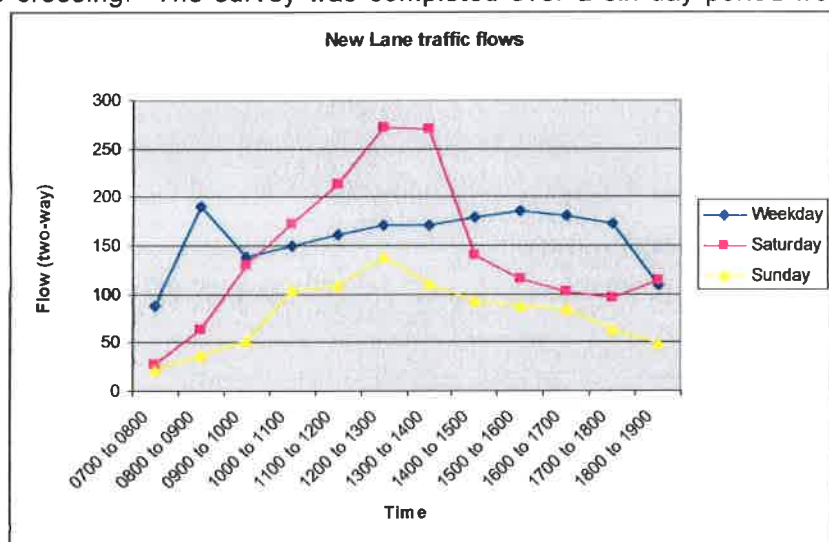
A continuous footway is provided along the east side of New Lane adjacent to the site. Continuity of this route, when the level crossing is closed, is maintained by the provision of a footbridge. A visitor to the site will notice that wooden bollards are provided along the eastern edge of the footway adjacent to the site. These bollards are designed to prevent all-day parking created by travel at the nearby railway station and also prevent U turns from rutting and damaging the verge.

2.3 **Road network** The site has frontage onto New Lane which is a conventional residential distributor road. New Lane, as illustrated above, is 4.5 – 4.8 metres wide with footways to the east side on the carriageway and street lighting is provided. The route of New Lane and most surrounding streets such as Waterloo Road are subject to a speed limit of 20mph. The 20mph starts, at its northern boundary at the junction with Eastern Road. The zone includes New Lane, Fairfield Road, Beechworth Road, Prince George's Street and East Pallant. The area does not include traffic calming but congestion created by the level crossing and the geometry of the road network has the affect of reducing average speeds.

2.4 Havant Railway Station acts as a park and ride site for commuting into Portsmouth and therefore parking discipline is imposed on the surrounding streets to encourage use of the car parks and avoid on-street parking. Double yellow lines are provided on the surrounding streets and therefore parking on-street is infrequent.

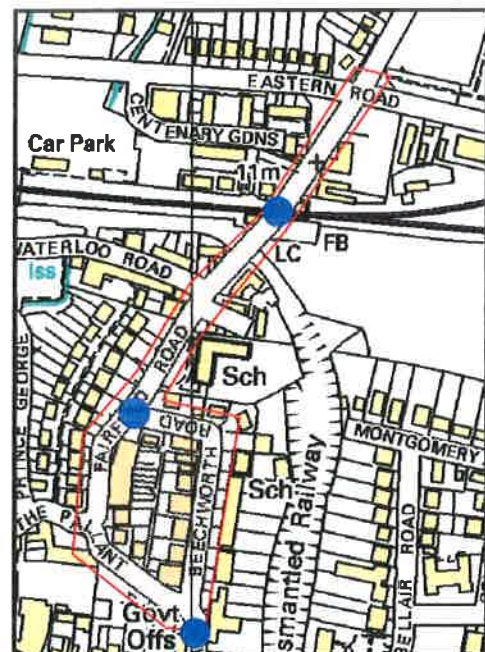
2.5 The route of New Lane provides access to the extensive residential area on the eastern side of the settlement of Havant. In addition, the route provides access to the industrial estates to the north of the railway. The movement of heavy goods vehicles is controlled by weight restrictions (7.5 tonnes) which apply from the junction of New Lane and Eastern Road throughout the area of New Lane and Fairfield Road. The restriction applies from the A27 junction with East Street such that all heavy goods vehicles (except for access) would use the route of the B2149 Park Road South and Park Road North.

2.6 Statistics on traffic data has been obtained from an automatic counter placed on New Lane on the south side of the crossing. The survey was completed over a six day period from Tuesday 1 March to Sunday 6 March. The constraints of the level crossing reduce flows and 'flatten' the periods of higher flow at peak times. Flows are of the order of 180 vehicles per hour two-way throughout a typical weekday. It is interesting to note that



flow significantly increase on a Saturday lunchtime prompted by less closures of the level crossing and shopping demand in the town. The average daily weekday flow on New Lane through the crossing is 2,200 vehicles. Traffic data is included at [Appendix B](#).

2.7 **Safety** - The operation and safety of the surrounding road network can be assessed by the consideration of personal injury accident statistics. Details of accidents have been obtained from the Hampshire Constabulary for the residential area identified opposite. Statistics have been obtained for the most recent five years for which information is available which dates from 1 January 2006 to 31 December 2010. For confidentiality reasons full details of a total of 3 accidents in the study area are not included in this report. All accidents included a slight injury only. A brief summary of these accidents is provided below.



New Lane	Vehicle travelling southbound attempted to negotiate through the closing barriers at the level crossing and lost control.
Fairfield Road	Collision involving a cyclist and car at the junction of Fairfield Road and Beechworth Road
Beechworth Road	Collision involving two cars on the tight right hand bend in the alignment of Town Hall Road close to junction with Beechworth Road

2.8 Additional comment includes

- No accidents have occurred at the cross-roads junction of New Lane and Eastern Road in five years
- No accidents have occurred at the priority junction of Waterloo Road and New Lane in five years
- No accidents have been reported in five years that included pedestrians
- No glancing-blow accidents, attributed to the narrow width of the road, have been reported on New Lane in five years.

2.9 It may be perceived that this section of road has a poor safety record but it is apparent that this is not the case. It is known that level crossings are dangerous with 14 incidents of cars hitting trains with 13 deaths in 2009. Britain has some 7,500 level crossings. Some safety statistics are provided below:

Level Crossing Accidents	Year	
<u>What happened?</u>	2009	2008
Recorded incidents of misuse or error	3244	3495
Collisions between vehicles and trains	14	19
Accidental deaths (both vehicle occupants & pedestrians)	13	14
Near misses between motor vehicles and trains	145	169

Source: Network Rail

2.10 However, it is estimated that more than 95% of incidents at level crossings are attributed to driver error. Some incidents may be attributed to vandalism or equipment failure. The two other road traffic incidents in the local area can be attributed to poor and inattentive driving.

2.11 The development promotes an access close to a level crossing but both sets of warning signs would be plainly visible to drivers emerging from the development. There is no reason to suggest that a development access close to a level crossing would compromise safety. Additional comment on the design of the junction is included at Section 4.

2.12 **Accessibility to local services by walking and cycling** Walking is a realistic mode of transport for short journeys of the order of 2 kilometres. Also Better Places to Live, By Design states that typically a 10-minute walk or 800 metres represents a good starting point to define whether or not a site has adequate access to local facilities. Guidelines published by the Institution of Highways and Transportation refer to 1000 metres as an acceptable walking distance for those without mobility impairment.

2.13 Cycling is a realistic mode of transport for short journeys of the order of 5 kilometres. The site lies adjacent to a disused railway that now acts as a shared footway / cycleway route. The cycleway links Havant with Hayling Island and provides connectivity throughout the area. Also the site in Havant lies close to the connection between National Cycle Route 22 and Route 2 thereby providing travel options.



2.14 Local shops: The town centre of Havant is located along the routes of Elm Lane, North Street and Market Parade. Numerous shops are available throughout the area, food retailers, non food retail, clothes and comparison shopping as well as convenience store, chemists and post office. The nearby area includes the Meridian Shopping Centre which is 500 metres from the site. It is not appropriate to list the retailers since, suffice to say that the site has very good sustainability credentials and this has contributed to the reasons why the site has been allocated for residential development. The residential allocation of HTC3.31 is discussed further at Section 3.

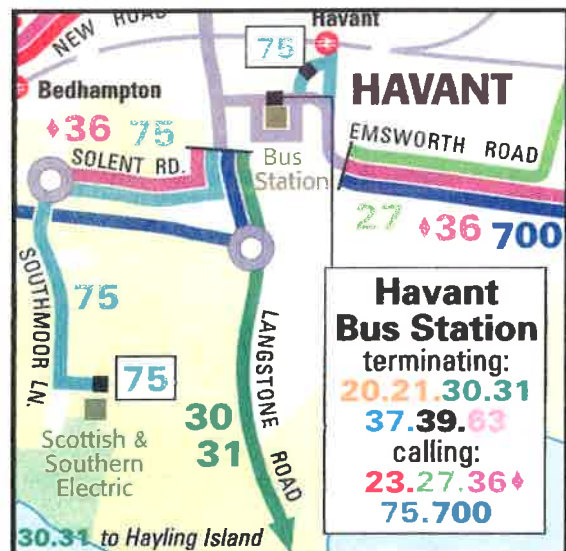
2.15 Schools: Havant Fairfield Infant School is located on Fairfield Road. This school is a walking distance of 120 metres from the entrance to the site. A direct and convivial route is provided along New Lane.

2.16 Employment: An extensive area including numerous employers is located on the north side of the level crossing on the continuation of New Lane. A direct pedestrian route is provided to this area, including employers such as Sumika, Kenwood, Wyeth pharmaceuticals and Hampshire County Council and the NHS. These areas are located within walking distance of the site. Clearly, the retail areas of Havant provide employment opportunities and such areas are also within walking distance. These employment areas are located between 200 and 1200 metres of the entrance to the site.

2.17 **Leisure:** The site lies on the town centre boundary but adjacent to a footway / cycleway that provides a leisure route to open country side to the south. Also, the site lies approximately 960 metres from the Havant Leisure centre on Civic Centre Road. A direct and convivial pedestrian or cycling route is provided by Eastern Road and Elmleigh Road.

2.19 **Health:** Havant has a modern health centre located off Civic Centre Road. This health centre is a walking distance of 1,120 metres from the entrance to the site.

2.19 **Buses** Bus services in the Havant area are generally provided by Stagecoach. Bus services do not use the route of New Lane but the central bus station is located within an acceptable walking distance. The bus station on Elm Lane is located 560 metres from the entrance to the site. Therefore new residents have the options for travel across the region on numerous services provided by Stagecoach. Frequent services are available to all parts of southeast Hampshire. The number 23 service connects Havant with Portsmouth with services every 10 minutes. Services such as the number 30 and 31 operate every 30 minutes on clockwise and anticlockwise routes on Havant Island. Information is available at www.hampshire.gov.uk, www.stagecoachbus.com and www.transportdirect.info.

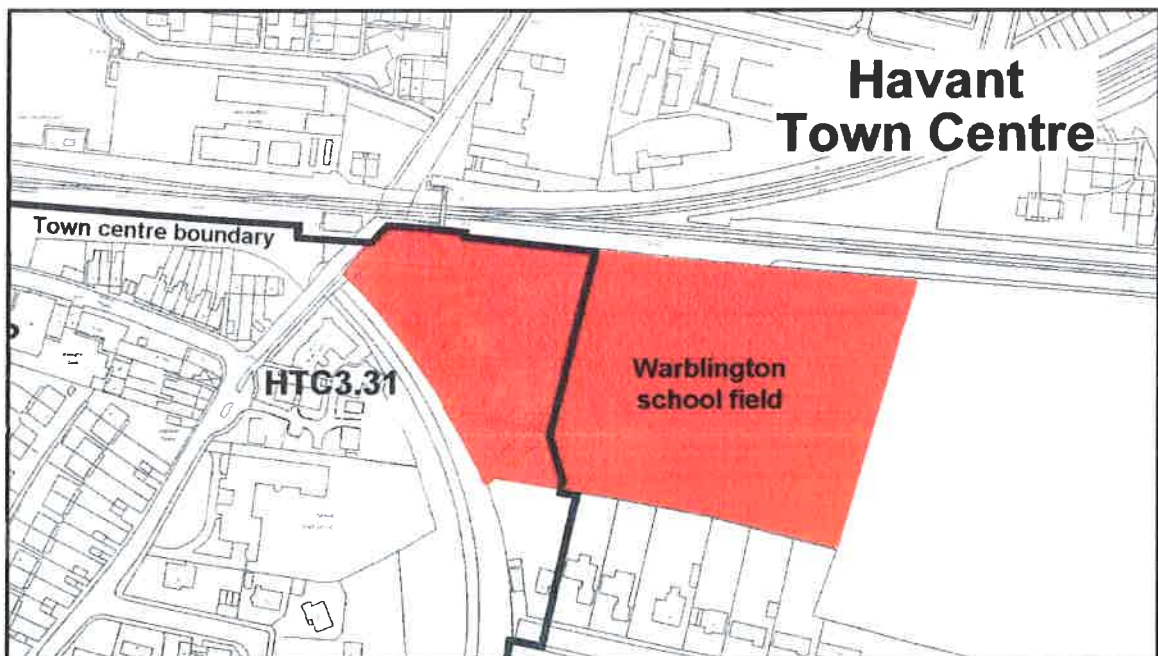


2.20 **Rail** Rail travel is highly plausible using services at Havant Station. This station is located only 200metres from the site and provides travel options to Portsmouth, Brighton, Woking and London Waterloo without the need to change trains. It is estimated that 15 trains stop at the station in a typical peak hour. It is not considered necessary to reproduce timetable information for rail travel. Suffice to state that trains with a frequency of approximately 10 - 15 minutes, are provided to the Portsmouth stations with a journey time of 17 minutes.

3 TRANSPORT PLANNING IN HAMPSHIRE

3.1 Residential development

3.1.1 Development across the region is managed using the policies and objectives of Havant Borough Council and Hampshire County Council. Transport policy is described in the Local Transport Plan April 2011 to March 2016 (LTP). These documents provide an emphasis on the importance of land-use planning and promoting sustainable development. Emphasis in this report is given to the objectives of the Local Transport Plan.



- 3.1.2 Economic growth creates the demand for new private and affordable housing but there is also the need to replace demolished stock. Therefore, over the next 10 or 15 years the district is expected to experience significant growth in housing and employment related projects. The policies of Havant Borough Council seek to address and manage this growth
- 3.1.3 An extract of the local plan for Havant is provided above. It is important to note that the land at New Lane is allocated for residential development as site HTC3.31. The site lies partly within the town centre boundary of Havant and partly within land to the east that includes the playing fields of Warblington School. Wording of the policy applicable to the site is repeated below.

Warblington School playing field is well-located close to the centre of Havant. It is intended to invest the proceeds from the sale of the site to upgrade existing recreational facilities at Warblington School and to create a new and improved environmental teaching resource at Fairfield School. Access to the housing development is required from New Lane. The inclusion of the land to the west of the playing field up to this frontage is therefore needed although the nature conservation value of this area should be effectively safeguarded.

- 3.1.4 The land has an area of 1.89 hectares and the site has been identified as suitable for a development of 85 properties. The current development promotes a layout of 78 new properties.

3.2 Accessibility and land-use planning

- 3.2.1 Numerous factors contribute to deciding whether or not a site is suitable for residential development such as environmental impact, nature or historic conservation designations, highway access and infrastructure, ground contamination and viability as well as accessibility or the precedent of previously developed land. This report does not make comment on other development constraints such as drainage implications or the environmental impact of the project. This report focuses on the access and transport matters related to the development. In this respect it is important to study the Hampshire County Council Local Transport Plan (LTP) 2011 to 2016 and National Planning Policy Framework. Clearly, it is not appropriate to repeat numerous policies within this report. Suffice to summarise the key objectives as follows:

- To maintain the county's highway assets in the most economically and environmentally sustainable long-term manner;
- To reduce the number and severity of casualties in road accidents
- To reduce the congestion experienced by road users essential to the prosperity of Hampshire;
- To improve access to workplaces, education, health, shopping and other facilities for all the population;
- To provide the transport system necessary to support and manage growth in the county, ensuring it is integrated with the planning system to create a sustainable and viable future environment;
- To minimise and wherever possible reduce the effect of traffic and transport on the built and natural environment; and
- To encourage healthier travel choices by the people of Hampshire.

- 3.2.2 Clearly there is a sensitive balance between the need for growth and increased demand for housing whilst suppressing the inevitable need to travel and improving safety on the road network.

- 3.2.3 The Local Transport Plan includes a section entitled Theme E Transport and Growth areas. This section introduces the need to appropriate land-use planning to reduce the need to travel. *"New development provides opportunities to deliver better streetscapes, decarbonise transport and reduce the need to travel. These aims can also be achieved within new development through the provision of more services locally, which people can access easily by walking or cycling".*

- 3.2.4 Importantly, Policy L of the Local Transport Plan states that development should be readily accessible to local services to reduce the need to travel. The Local Transport Plan states that *“A proactive approach to land-use planning will allow people and services to be sited close to each other, assisted by delivery of a high-speed broadband network, provision of home and e-offices and flexible working practices”*. Employment sites should be located close by and be readily accessible by public transport. If developments are located close to regularly used facilities and public transport then it is likely that the objectives listed above will be achieved not least by reducing the reliance on the use of the private car.
- 3.2.5 Due consideration has been given to the policies of the Local Transport Plan and the general objective of effective land-use planning in providing new housing in sustainable locations. Such issues have identified the site as suitable for allocation in the Havant Borough Local Plan. The site is suitably located within walking and cycling distances of a local shopping centre. Public transport, in the form of bus and rail travel, is located very close to the site. Therefore, it is considered appropriate to promote a residential development and this report considers the suitability of the site in the light of the objectives for sustainable transport as described above.

4 PUBLIC CONSULTATION

- 4.1 Public consultation, when considering planning applications is becoming increasingly important. The developer of the site at New Lane views the public consultation exercise very seriously and invited a general viewing of the proposals on Tuesday 29 March 2011 from 2pm to 7pm at the St Faith's Church Hall in Havant. The exhibition illustrated the scheme with details of architecture, access and landscaping. The exhibition included an illustration of a development of 75 new residential properties with a vehicular access from New Lane.
- 4.2 The planning team acting for the developer attended the exhibition. The developer Bloor Homes, planning consultant and transport planner attended to answer questions on all topics. Key transport issues that were raised by members of the public included:
- The location of the access close to the level crossing is not appropriate. An access on New Lane is not appropriate and another access should be found, preferably using Montgomery Road.
 - There are safety concern if traffic turns right from the site and blocks flows southbound which may create a queue across the level crossing
 - The crossing is unmanned and if any difficulties arise then there may be a delay in emergency measures
 - Access to the site with emergency vehicles would be problematic.
 - The level crossing should be closed permanently or alternatively a bridge should be constructed.
 - The width of New Lane is too narrow to accommodate additional traffic. Cars travelling southbound regularly mount the kerb and footway to pass queuing or slow moving traffic northbound.
 - Right turns to the site would block the northbound flow and create queues even when the level crossing is open. A right turning lane junction should be considered.
 - Parking on the residential roads will be a problem.
- 4.3 Many visitors to the exhibition perceived that one house can generate two cars leaving each and every morning peak hour between 8am and 9am creating traffic congestion. Others stated that the development would create one departure per house in the peak hour. The reality is somewhat different and, depending on the type of housing, traffic generation can be of the order of 30-35 departures in the morning peak from 78 new properties. This topic is discussed in further detail at Section 6.
- 4.4 Potential traffic generation and consideration of the views described above are discussed in this report.

5 DEVELOPMENT PROPOSALS

5.1 The housing development

5.1.1 The application site area of 1.89 hectares provides the opportunity for a **development of 78 new properties**. The infrastructure on the site would be constructed with a width of 5.5 metres reducing to 4.8 metres. The layout of the proposed development is included at [Appendix C](#). The layout would include a mix of affordable dwellings (under the jurisdiction of a Registered Social Landlord) and private housing. Proposals are summarised as follows;

Affordable		No	Parking
A	1 bed apartment	3	1 space
B	2 bed apartment	6	1 space
C1	2 bed coach house	2	1 space
D, E, F	2, 3, 4 bed houses	12	> 1.5 spaces
Private		No	Parking
G	2 bed apartment	12	1 space
H, J, K, L, M1, M2	2 & 3 bed houses	43	2 spaces
Total		78	

- Access road, 5.5 metres / 4.8 metres / footways of 1.8 metres / verges of 2 metres
- Footways adjacent to frontage of residential development
- Turning areas adequate for a refuse wagon.
- Travel Plan to encourage residents to use transport alternatives to the private car
- Balanced parking provision.
- Parking restrictions on the site access roads to discourage indiscriminate parking
- Road widening to New Lane to a width of 5.5 metres and a yellow box junction on New Lane (Section 5.4)

5.1.2 Further comment on transport issues are provided in the subsequent sections.

5.2 Site layout

5.2.1 The site layout has been prepared following consultations with the Planning Department and Highway Authority. The layout promotes a conventional cul-de-sac where the initial road width would be 5.5 metres. A 6.0 metre shared surface is provided to serve the east side of the development. Traffic calming is not considered necessary. The layout is considered compatible with the existing 20mph zone on New Lane.

- 5.2.2 The geometry of the roads including the use of internal junctions would reduce speeds to the order of 20mph. Footways are provided to both sides of the access road. The layout includes adequate manoeuvring areas such that a large refuse wagon, up to 11.5 metres, can complete a three point turn safely within the site. The details of the layout have been prepared by the project architect.
- 5.2.3 Parking restrictions are imposed throughout New Lane and Waterloo Road to maintain safety and impose some discipline on drivers who may wish to park in the area. Parking at the railway station is popular and it is possible that some drivers may use the road network of the new estate as an extended and free car park. Such parking would be unwelcome and the Highway Authority have given their support to a combination of double yellow parking restrictions and residents permits to control indiscriminate and inconsiderate parking on the site.

5.3 Access and safety issues

- 5.3.1 Currently, the site does not benefit from a vehicular access. Therefore, a new access would be constructed onto New Lane to serve the development. In normal circumstances a new simple priority junction onto New Lane would not cause difficulty. The site frontage is located on the outside of a slight bend in the alignment of New Lane and therefore adequate visibility can be provided. The traffic flows would not justify the introduction of a right turning lane to serve the site.
- 5.3.2 The principle concern with a residential development at this location is related to the proximity of the level crossing to the adjacent railway.
1. The road is construed to be too narrow to accommodate two-way traffic and there will be occasions when southbound traffic bumps onto the footway
 2. There will be occasions when residents, wishing to turn right towards the north, will be unable to do so if the crossing is closed. By definition the driver will need to wait and therefore there is the risk that a car or two may block others leaving the site or southbound vehicles wishing to turn left into the site.
 3. In addition, northbound traffic travelling towards the site would, on occasions, be delayed due to the level crossing. In such circumstances residents may be tempted to drive northbound on the wrong side of the road of New Lane to gain access to the site. This creates an accident risk with other residents who may be leaving the site at the same time. Cars may meet on this section of road or worse still collide in a head-on collision.
- 5.3.3 The items listed above are not new and were considered some 6 years ago in the early planning related to the project. A Stage 2 Safety Audit of a drawing illustrating a simple priority junction was prepared and presented by MB Projects Ltd in March 2006 to

Hampshire County Council in their consideration of the allocation of the site. This report prompted a dialogue and a response from the Highway Authority that concluded:

"Having considered the contents of the safety audit report and the exception report for the above scheme presented to me my decision is that the scheme proceeds"

5.3.4 A second opinion was sought from TMS Consultancy which is a highly regarded company working in this field of highway safety. Their conclusion can be quoted as *"the level of risk is low and the arbitrator's decision is reasonable"*. The Audit, exception report and letter from TMS is included at [Appendix D](#).

5.3.5 Banners Gate Transportation Ltd is aware of the concerns that have been voiced on this subject including a newspaper article in the Portsmouth News dating from 27 October 2010. Many are of the opinion that the additional traffic would cause congestion on New Lane in a sensitive area where a 20mph zone has been imposed. These highway matters have been studied in detail by the Highway Authority and it has been concluded that the site is suitable for a residential allocation. This report can provide an additional commentary on this allocation based on three options and issues that have not fully been considered in the earlier reports.

- Option 1 The site is not allocated and residential development is not promoted.
[Response: The County Council has concluded that access can be achieved. There is a demand for residential development and therefore, if development was not promoted on New Lane, additional land would be required elsewhere that would be less sustainable. Finance would not be raised for local education.](#)
- Option 2 A development is promoted with a left-in / left-out arrangement.
[Response: additional journey distances and times would be created. Drivers may abuse the one-way system and the layout would create difficulties for servicing and emergency vehicles \(e.g. delays for an ambulance or fire appliance\)](#)
- Option 3 Promote a conventional priority junction to allow all turning movements.
[Response: The risks of traffic associated with a new junction are considered to be "low" in an independent review by the TMS Consultancy. The new junction itself would provide a turning area for vehicles and therefore the queue northbound would be reduced thereby significantly reducing the perceived risk of a driver utilising the wrong side of the road to gain access to the site](#)

5.3.6 The level crossing at Havant is different to many crossings due to the waiting time that applies at this location. The rail line at Havant connects to Brighton, London and Portsmouth with frequent services.

Portsmouth to Woking & London / Woking & London to Portsmouth
Portsmouth to Brighton / Brighton to Portsmouth
Southampton to Brighton / Brighton to Southampton

- 5.3.7 The various different rail lines mean that the crossing can be closed not just for two minutes but for 10 or 15 minutes. The risk of long delays would mean that many drivers would seek alternative routes. Importantly, it is possible, when approaching northbound on Fairfield Road, for drivers to be able to see the closed crossing at a point close to the junction of Waterloo Road. This means that drivers can divert from Fairfield Road to use the alternative route via the bridge and Park Road North. This diversion would save time.
- 5.3.8 In many instances, therefore, there will be a queue of generally fixed length from the crossing to the junction of Waterloo Road. The road in this section is narrow with a footway on one side only. There are no convenient areas which facilitate a U turn manoeuvre and therefore drivers tend to wait.
- 5.3.9 Observations on New Lane on the north side of the crossing reveal that many southbound drivers manoeuvre within the frontage access and seek an alternative route such that queuing is less. This pattern will occur on the south side of the crossing in the event of development and the layout of the junction has been designed to allow a full lock U turn.
- 5.3.10 Additional points of interest include:
- The warning signs for the level crossing would be clearly visibility to any driver from the development approaching New Lane and wishing to turn right
 - The journey distance from the site access to the signal-controlled junction of Petersfield Drive with Crossland Drive using the level crossing is 0.7 miles (2 minutes). The journey distance using Elm Lane and avoiding the level crossing by using the Park Road North is 1.1 miles (4 minutes). Clearly different routes are chosen by drivers but this simple assessment of journey times suggests that drivers will turn to save time.
 - It is not expected that a new resident, when leaving the site in a car, would wait to turn right but alternatively turn left and seek to use the longer route via Park Road North. The possibility of a right turner from the site blocking a left turn would be minimal. It is not proposed to add an area with "keep clear" road markings close to the crossing on the northbound approach. In practice, this feature will have little purpose.
 - No accidents have occurred on the route of Fairfield Road and New Road in five years
 - The route of New Lane adjacent to the site is relatively narrow from the junction of Waterloo Road to the crossing. A queue of stationary vehicles is clearly less manoeuvrable in event that the development generates additional traffic southbound. It is believed that the ability of vehicles to U turn in the site access would mean that queues are reduced and the conflict between vehicles, such as a

refuse wagon would be significantly less frequent that may be perceived.

- The perceived difficulties and local congestion would discourage short vehicle trips from the site to the local shops of Havant.

5.3.11 It is concluded that a simple priority junction to serve the site would not create a safety problem but conversely provide an opportunity to reduce the queues and congestion on New Lane in the vicinity of the site and the adjacent building to the south known as Maple House.

5.3.12 It may be viewed that the turning vehicles within the access creates a risk for pedestrians. Observations reveal that some cars currently bump up the footway or use the cycleway on the old railway to complete a three point manoeuvre. Manoeuvring within the junction is preferable since this is where pedestrians would expect turning traffic. The dropped crossing would be set back to a reasonable desire line to minimise the conflict with U turning traffic.

5.3.13 One recorded accident in five years has involved a collision created by a driver wishing to manoeuvre through the closing barriers. It is likely that there have been a few near misses. It is quite plausible that the tendency to accelerate to get through the crossing would be reduced knowing that a turning area was available.

5.3.14 There are ever increasing pressures on utilising land in sustainable areas compared to the use of green field sites on the outskirts of towns and villages. In this case, on balance of the constraints, a development at New Lane is acceptable. Illustrated opposite is an example of a partially built access to a new residential development at Spondon, Derby. This access is located close to a railway level crossing and operates satisfactorily.



5.4 The narrow carriageway of New Lane and planned improvements

5.4.1 When the level crossing is closed queues develop northbound on New Lane back to the Waterloo Road junction and beyond. Observations reveal that after the crossing is reopened cars travelling southbound are often impeded at a point some 10-20 metres north of Waterloo Road junction due to stationary traffic and a narrow carriageway of roughly 4.5 metres in width. This existing constraint has been highlighted in the dialogue with the Highway Authority and there is a perception that the development would exacerbate this

difficulty for road users. In order to address this existing problem it is proposed to widen the carriageway of New Lane to 5.5 metres between the site access and Waterloo Road. In addition, a yellow box junction would be added on the narrowest section of New Lane where widening is not possible very close to Waterloo Road. By this method the risk associated with a temporary blockage of the carriageway, and drivers crossing onto the footway, would be significantly reduced. These benefits would apply equally to the departures from the development. An illustration of the proposals is included as drawing P764/S278/01 at [Appendix E](#).

- 5.4.2 The widening would improve the free flow of traffic at all times. The road widening would be complemented with footway widening. The proposal for a yellow box is widely understood by road users. Fundamentally, if a driver is unable to move through a yellow box, perhaps when priorities change, then congestion may result and this applies to the situation at New Lane. There are examples where a yellow box is used in similar circumstances. This measure, combined with road widening, is an additional item over and above that which was considered to be acceptable to the consultancy team acting for the Highway Authority in consideration of the allocation of the development. Therefore, it is reasonable to conclude that the combination of these measures to address the traffic flows from the site suggest that residential development is entirely plausible and would not compromise safety.

5.5 Junction visibility

- 5.5.1 Initial work related to the visibility from the access considered a setback of 4.5 metres. This preliminary planning was completed at a time in 2006 prior to the publication of Manual for Streets in 2007. This new standard, and a second publication Manual for Streets2 (2010), gives guidance on visibility and standards appropriate for residential roads and streets which can be applied to the route of New Lane.
- 5.5.2 The access to the development would be located on the outside of a slight bend in the alignment of New Lane. The presence of a verge and footway on New Lane allow generous visibility from the access point. Therefore, visibility of at least 70 metres, from a setback of 2.4 metres is readily achieved to each direction of traffic. A visibility distance of 59 metres is suitable for residential roads where the 85th percentile speeds of up to 37 mph are expected. The setback of 2.4 metres is quoted in Manual for Streets as appropriate for visibility purposes in residential areas. As a reminder the development is located within a 20mph zone. The speed of traffic is reduced by the prevailing speed limit and level crossing. Therefore, the visibility is considered appropriate.

6 THE TRAFFIC AND TRANSPORT IMPACT OF THE DEVELOPMENT

6.1 Pedestrian / cycling movements generated by the development

- 6.1.1 The number of additional pedestrian movements created by the residential project can be predicted using the TRICS database. The database provides a guide to the amount of walking trips, or trips using public transport and cycling. The pedestrian activity is expected to be roughly 1.5 (two-way) trips per household. A trip rate of 0.20 applies to public transport and cycling.

Transport choice	Rate	Departures per day	Arrivals per day
Pedestrian	1.5 per day	60	60
Public transport users	0.2 per day	8	8
Cyclists	0.2 per day	8	8

- 6.1.2 The local pedestrian environment is in good condition and there are no obvious problems with the existing pedestrian environment and the local footways can adequately accommodate expected usage of this development. The location of the site would encourage walking trips to the town centre. A pedestrian / cycle route is provided adjacent to the site and crosses New Lane to follow a route through the station car park. This connection, including a crossing 4 metres wide on New Lane also provides a direct and convivial pedestrian route from the site to the town centre, local bus services and areas of employment. In addition, the dialogue with the Highway Authority has centred on the need to improve the pedestrian environment between the site and the town centre along the route of New Lane. The boundary to the adjacent development of Maple House (to the south of the site) has been setback from the footway to New Lane. This additional width has been used for road widening and footway widening to the Waterloo Road for the benefit of all road users. This improvement would be funded by the developer and is also illustrated on drawing P764/S278/01.



6.2 Traffic generation of the residential development

6.2.1 Traffic flows to the residential development can be predicted using the TRICS database. This database offers a choice of trip rates for residential development depending on a possible mix of apartments or perhaps non-private housing with a higher density. In this instance the development would consist of 78 residential properties in private and non-private ownership.

6.2.2 Trip rates can, of course, vary depending on the provision of local shops, schools and public transport. Therefore, it remains important to provide a reasonably accurate estimate of traffic generation. Houses Privately Owned (within TRICS) includes “*Housing developments where at least 75% of units are privately owned. Of the total number of units, 75% must also be houses (sum of non-split terraced, detached, semi-detached, bungalows, etc), with no more than 25% of the total units being flats. Includes properties that are privately owned and then privately rented*”. This choice is considered to give a reliable indication of traffic generation from the site.

6.2.3 The sample below includes 18 sites in ‘edge of town centre’ or ‘suburban areas’ (up to 136 units) within England only and excludes sites in Greater London.

<u>Houses Privately Owned</u> <u>Edge of town centre / suburban areas</u>	AM peak (0800-0900)		PM peak (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
Trip Rate (per property)	0.175	0.385	0.341	0.220
Trips for 78 properties	14	30	27	17

Table 1

6.2.4 Based on these figures it is reasonable to assume the two-way traffic generation in a peak hour would be roughly 40-45 vehicles. Extracts from the database for *Houses Privately Owned* are included at [Appendix F](#).

6.3 Traffic impact of the development

6.3.1 The general public often perceive that residential development creates traffic congestion. Clearly traffic is created by new housing but the figures are lower than may be expected. Some people may suggest that one house can generate two cars leaving each and every morning peak hour between 8am and 9am or at least one car per household in an hour. The reality is somewhat different and is dependent on housing type and location such that a site of 78 houses would generate less than 30 departures in the morning peak. Traffic flows are spread throughout the day and are less intensive than other land uses such as a primary school, office development or doctor's health clinic. The database does not include sites of “houses privately owned” within a town centre. However there are three sites (less than 140 units) described as ‘edge of town centre’. The trip rates for these houses are summarised below

Houses Privately Owned Edge of town centre only	AM peak (0800-0900)		PM peak (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
Trip Rate (per property)	0.179	0.264	0.336	0.143
Trips for 78units	14	21	27	11

Table 2

- 6.3.2 The distribution of traffic would vary depending on the impact of the adjacent level crossing. It is expected that many trips would focus on the routes offered by the A27. The route to the A259 / A27 dumbbell junction via Emsworth Road and Fairfield Road is 1.0 mile with a journey time of 3 minutes. Many trips from the site would focus on destinations offered by either the A27 and A3(M) perhaps towards Portsmouth. This junction is located 1.3 miles to the southwest of the site. The development may generate 20-25 departures in the morning but trips can be readily dissipated across the road network.
- 6.3.3 Existing weekday hourly flows are of the order of 180 vehicles on New Lane. A figure of 36 two-way trips generated by the site constitutes an increase of approximately 20% on these flows. Prevailing flows are low and therefore the development creates a notable increase but such development flows only equate to a vehicle every two-minutes and therefore it is not considered that the project would have a material impact.
- 6.3.4 Delays at the level crossing can be numerous every hour and up to 10 minutes each time. The question arises as to whether or not 27 evening arrivals (Table 1 & 2) would have a material affect on congestion locally including the route of Fairfield Road to the south. Congestion locally is created by the level crossing which, as discussed in Section 4.3, is mitigated by the development by promoting road widening and the introduction of a yellow box junction. Flows northbound are of the order of 90 vehicles in the evening peak. Therefore, if approximately 25-30% of traffic U turns within the site access when the level crossing is closed then the overall impact on the queue would be neutral. It is our view that there will be a similar number of U turns prior to the level crossing as arrivals northbound at the development site and therefore the project would, at least, have a neutral impact.
- 6.3.5 Further afield, the development would create additional traffic and by definition would create a slight increase in junction delays on the surrounding road network. Observations reveal that many junctions in the area operate with spare capacity. However, within the context of the delays imposed by the level crossing it is clear that such congestion created by the development would be negligible. Therefore, a comprehensive assessment of many junctions in area is not considered necessary.

6.4 Section 106 contributions

- 6.4.1 Historically, the impact of traffic from projects has been studied and developers have been asked to address specific problems in the vicinity of the sites. This method can produce disparity in the investment made by developers simply due to the congestion or problems local to a site. Some developers may pay a substantial sum to overcome a constraint whereas other developers may pay little.
- 6.4.2 Many Authorities have published Supplementary Planning Guidance which introduces the need to provide a financial contribution towards local improvements. Consultations with the Highway Authority have confirmed this approach. The contributions from various development projects across the region can be combined to allow appropriate infrastructure improvements to be constructed thereby providing an equitable way of mitigating the traffic impact. In this instance, the cost of road widening to New Lane, providing benefits to existing traffic patterns, would be included in negotiations. The level of contributions would be considered in a dialogue prompted by the planning application.

6.5 Travel Plan

- 6.5.1 The objective of reducing the dependence on the private car is supported by the developer of land at New Lane. Therefore, it is proposed to promote a Travel Plan, as part of the residential development, to further encourage new residents to either walk, cycle or use public transport.
- 6.5.2 The *Travel Plan* would include a local business directory coupled with public transport information. The directory is designed to bring local businesses to the attention of new residents. For example, residents may not be aware of local shops or businesses and would have otherwise utilised businesses further afield propagating the need to travel. This directory can be compiled by the developer at no charge to listed businesses.
- 6.5.3 In addition, the *Travel Plan* would include details of travel information such that residents are made aware of plausible and practical transport alternatives to the private car. A *Travel Plan* is outlined below and promotes sustainable travel patterns and behaviour without reducing mobility or accessibility.
- Provide an information pack to new residents providing information on bus companies and services in the local area of Havant. The pack will contain details of up-to-date bus maps illustrating routes that are available combined with bus timetables.
 - Timetable details are provided at www.stagecoachbus.com. Further information and links are available at www.hampshire.gov.uk and such information will be included in the Travel Pack.
 - Directory of local businesses providing products and services.
 - Provide a plan illustrating local pedestrian links and cycle routes in the area.
- 6.5.4 Monitoring of car usage at the site over time can be beneficial to maintain emphasis on sustainable travel. In this instance, it is clear the site is placed in a sustainable location where shops, schools and services are located within walking distance. Inherently, the site will not create an over-reliance on the private car and would be more sustainable than other more suburban sites. The modest scale of the project suggests that on-going monitoring of car usage at this site is not necessary.

7 CONCLUSION

7.1 Banners Gate Transportation Ltd has been instructed to consider the traffic impact arising from development on land at New Lane, Havant. Key highway planning issues are summarised below.

- The site consists of unused land partly located within the settlement boundary of Havant. The site is allocated for residential development in the Havant Borough Local Plan for 85 units. The current proposals promote a development of 78 new dwellings.
- Adequate visibility and spacing to nearby junctions can be achieved. A well connected and convivial pedestrian environment is available.
- The residential development would create approximately 25 departures in the morning peak. This traffic would be readily distributed across the local road network.
- The consultancy team appointed by the Highway Authority has concluded that the traffic and transport implications of the residential development are acceptable is so far as the risk to the users of the public highway is very low.
- Northbound hourly flows on New Lane are of the order of 90 vehicles. The provision of the new access is likely to encourage U-turns at the level crossing. A U-turning proportion of 25% is equivalent to the typical number of arrivals to the development in the evening peak. It is expected that more vehicles will U-turn than arrive at the site and therefore the project would, at least, have a neutral impact.
- The local road network has a good safety record. The local road network does not exhibit characteristics that would lead to a poor safety record and a modest amount of additional traffic from the development would not have an adverse impact on safety.
- The operation and safety of traffic would be improved by road widening on New Lane to create a carriageway width of 5.5 metres between the site access and Waterloo Road. This widening would combine with a yellow box junction close to Waterloo Road to significantly improve the free flow and safety of traffic at this location. In addition, the footway alongside New Lane would be widened.
- The site is conveniently located to the numerous facilities of the town of Havant. A ten minute walk from the site includes the Meriden Shopping Centre, Central Bus station and Havant Railway station. Schools, employment opportunities and a leisure centre are all located within a 10-15 minute walk of the site. The location of the site would reduce the reliance on the use of the private car for routine needs.
- A *Travel Plan* would be promoted to encourage the sustainable travel.

7.2 It is our view that traffic from the residential project would not adversely affect the operation of the highway network and there are no sustainable highway reasons why planning permission should be withheld for the development on land at New Lane, Havant.

Banners Gate Transportation Ltd / (November 2012)

APPENDIX A
SITE LOCATION PLAN



Banners Gate

Civil, Structural & Transportation Engineers

Cavendish House, 10-11 Birmingham Street, Halesowen B63 3HN
Tel: 0121 687 1500 Fax: 0121 687 1501
E-mail: mail@bannersgate.com

BLOOR HOMES

LAND AT NEW LANE, HAVANT, HAMPSHIRE

LOCATION PLAN

1:5000

APPENDIX B

**TRAFFIC FLOW DATA
NEW LANE, MARCH 2011**

Site No: 14564001

Grid Reference: SU72036,06524

New Lane, Havent (Barrier Sign)

Vehicle Count Report

Week Begin: 01-Mar-11

Channel: Northbound

Time	Tue	Wed	Thu	Fri	Sat	Sun	Mon	5-Day	7-Day
Begin	01/03/11	02/03/11	03/03/11	04/03/11	05/03/11	06/03/11	07/03/11	Av	Av
00:00	0	4	2	0	11	10	7	3	5
01:00	0	1	1	2	7	5	0	1	2
02:00	0	1	2	3	0	2	0	1	1
03:00	0	0	0	0	0	2	1	0	0
04:00	0	1	2	1	2	1	1	1	1
05:00	0	7	8	11	5	1	10	7	6
06:00	0	15	10	16	7	1	12	11	9
07:00	0	49	37	42	14	10	44	34	28
08:00	87	82	84	89	23	16	85	85	67
09:00	66	72	73	63	59	21	65	68	60
10:00	71	66	79	93	78	50	0	62	62
11:00	61	84	71	67	108	52	0	57	63
12:00	82	90	76	76	115	53	0	65	70
13:00	93	96	94	94	89	45	0	75	73
14:00	79	78	77	75	74	54	0	62	62
15:00	92	90	91	107	74	40	0	76	71
16:00	93	90	83	86	59	43	0	70	65
17:00	94	85	92	89	47	33	0	72	63
18:00	50	52	61	63	52	15	0	45	42
19:00	31	28	36	49	39	28	0	29	30
20:00	18	26	34	41	30	17	0	24	24
21:00	17	17	23	37	13	13	0	19	17
22:00	20	15	18	12	21	10	0	13	14
23:00	9	6	12	15	13	4	0	8	8
12H,7-19	868	934	918	944	792	432	194	772	726
16H,6-22	934	1020	1021	1087	881	491	206	854	806
18H,6-24	963	1041	1051	1114	915	505	206	875	828
24H,0-24	963	1055	1066	1131	940	526	225	888	844
Am	08:00	11:00	08:00	10:00	11:00	11:00	08:00 -	-	
Peak	87	84	84	93	108	52	85	87	85
Pm	17:00	13:00	13:00	15:00	12:00	14:00	23:00 -	-	
Peak	94	96	94	107	115	54	0	78	80

AXIOM TRAFFIC LIMITED

Created at 12:01:55 on 8 Mar 2011

Site No: 14564001

Grid Reference: SU72036,06524

New Lane, Havent (Barrier Sign)

Vehicle Count Report

Week Begin: 01-Mar-11

Channel: Southbound

Time	Tue	Wed	Thu	Fri	Sat	Sun	Mon	5-Day	7-Day
Begin	01/03/11	02/03/11	03/03/11	04/03/11	05/03/11	06/03/11	07/03/11	Av	Av
00:00	0	5	2	3	7	9	1	2	4
01:00	0	1	1	0	6	3	2	1	2
02:00	0	0	0	0	1	2	0	0	0
03:00	0	0	0	0	1	1	0	0	0
04:00	0	2	2	1	3	0	2	1	1
05:00	0	10	6	3	5	1	5	5	4
06:00	0	13	13	12	5	6	13	10	9
07:00	0	40	44	51	13	13	40	35	29
08:00	109	110	98	101	40	22	107	105	84
09:00	58	73	70	80	71	31	77	72	66
10:00	82	72	68	69	95	54	0	58	63
11:00	92	94	84	93	105	58	0	73	75
12:00	96	77	84	101	157	85	0	72	86
13:00	82	76	71	76	181	66	0	61	79
14:00	94	95	87	135	67	39	0	82	74
15:00	67	94	67	134	42	48	0	72	65
16:00	89	92	95	99	43	42	0	75	66
17:00	63	93	109	66	50	31	0	66	59
18:00	55	58	46	52	62	34	0	42	44
19:00	37	38	36	48	42	24	0	32	32
20:00	10	26	32	27	21	16	0	19	19
21:00	15	15	25	25	14	11	0	16	15
22:00	15	12	10	13	7	7	0	10	9
23:00	11	10	5	6	15	3	0	6	7
12H,7-19	887	974	923	1057	926	523	224	813	788
16H,6-22	949	1066	1029	1169	1008	580	237	890	863
18H,6-24	975	1088	1044	1188	1030	590	237	906	879
24H,0-24	975	1106	1055	1195	1053	606	247	916	891
Am	08:00	08:00	08:00	08:00	11:00	11:00	08:00 -	-	
Peak	109	110	98	101	105	58	107	105	98
Pm	12:00	14:00	17:00	14:00	13:00	12:00	23:00 -	-	
Peak	96	95	109	135	181	85	0	87	100

AXIOM TRAFFIC LINTIED

Created at 12:01:55 on 8 Mar 2011

APPENDIX C
PROPOSED SITE LAYOUT

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH
SEPARATE GROUP / SITE SPECIFIC CONSTRUCTION
NOTES AND MATERIALS SPECIFICATION.

Notes

HOUSE TYPE SCHEDULE (AFFORDABLE UNITS)	
TYPE A	1 BED APARTMENT
TYPE B	2 BED APARTMENT
TYPE C	3 BED SEMI-DETACHED HOUSE
TYPE D	2 BED COACH HOUSE
TYPE E	2 BED TERRACED HOUSE
TYPE F	3 BED TERRACED HOUSE
TYPE G	4 BED TERRACED HOUSE
TYPE H	2 NO.
HOUSE TYPE SCHEDULE (PRIVATE DWELLINGS)	
TYPE I	2 BEDROOM APARTMENT
TYPE J	3 BED SEMI-DETACHED HOUSE
TYPE K	3 BED SEMI-DETACHED HOUSE
TYPE L	3 BED SEMI-DETACHED HOUSE
TYPE M	3 BED SEMI-DETACHED HOUSE
TYPE N	3 BED SEMI-DETACHED HOUSE
TYPE O	3 BED TERRACED HOUSE
TOTAL	78 NO.

Revision

- 1 HOUSE TYPE SCHEDULES LIMITED TO 100 UNITS
- 2 HOUSE TYPE SCHEDULES LIMITED TO 100 UNITS
- 3 HOUSE TYPE SCHEDULES LIMITED TO 100 UNITS
- 4 HOUSE TYPE SCHEDULES LIMITED TO 100 UNITS
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Job
Proposed Residential Development
Off New Lane, Havant.

Title
Site Layout Plan.

Scale
1:500@A2.

Date
24.10.12.

Drawn
MSS

Checked

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Drawing No.
NW-0002-09-MAS.01G



NEW LANE, HAVANT

APPENDIX D

**STAGE 2 SAFETY AUDIT, EXCEPTION REPORT &
LETTER FROM TMS DATED 7 AUGUST 2006**

CLIENT:- HAMPSHIRE COUNTY COUNCIL

HIGHWAY ACCESS TO RESIDENTIAL DEVELOPMENT

WARBLINGTON SCHOOL

HAVANT

**ROAD SAFETY AUDIT
STAGE 2 REPORT**

March 2006

M B Projects Ltd.

Job No. 106.017

Issue: FINAL

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Page No.

1	INTRODUCTION	2
2	ITEMS RESULTING FROM THIS STAGE 2 AUDIT	3
3	AUDIT TEAM LEADERS STATEMENT	6
	APPENDIX A	7
	APPENDIX B	8

1. INTRODUCTION

- 1.1 This report results from a request by the design engineers, Hampshire County Council Engineering Consultancy, to undertake a Stage 2 Road Safety Audit on the detailed design of the highway access works to a proposed residential site off New Lane in Havant, Hampshire. This proposal comprises the introduction of a simple T-junction in New Lane just south of the level crossing to provide vehicular and pedestrian access to the site which will comprise 85 residential units. The object of this audit is to identify any existing road safety problems that would be exacerbated, or new problems that would be introduced, by the proposed works.
- 1.2 The audit was carried out during March 2006 and the site was visited during the morning of 6 March 2006 when weather conditions were dry and fine.
- 1.3 The audit team comprised Martin Brownsey and Ted Smith, Senior Highways Engineers specialising in Highway Safety and Traffic Engineering.
- 1.4 The terms of reference for this audit is the Department of Transport document HD19/03 Road Safety Audit. The checklists within have been used to conduct this audit, and the findings generally follow the order laid down in the lists.
- 1.5 The audit comprised an examination of the drawings and documents listed in Appendix A to this report.
- 1.6 Each problem identified has been given a location reference and these are shown on the location plan in Appendix B.
- 1.7 A Stage 1 Audit was undertaken by WS Atkins in October 2002, and the recommendations made have been reviewed as part of this audit.

2. ITEMS RESULTING FROM THIS STAGE 2 AUDIT

B1 GENERAL

B1.1 No Departures from Standards have been provided by the Design Organisation.

Recommendation

B2 LOCAL ALIGNMENT

B2.1 No problems identified in this category at this stage.

B3 JUNCTIONS

B3.1 Problem Location A (see location plan in Appendix B).
Summary: Traffic problems exacerbated by development

The recent traffic survey describes several existing traffic problems arising from the closure of the level crossing. Particularly in the morning peak long queues extend southwards past the Waterloo Road junction, causing congestion. The proposed development will generate significant additional movements and cause additional problems:

- New Lane just north of Waterloo Road is barely wide enough to permit two vehicles to pass, which might encourage a southbound vehicle from the site to bump up on to the footway to pass queuing northbound traffic.
- Two right turning vehicles (assuming the first has managed to exit into the yellow hatched area) waiting to exit out of the site will prevent a left-turner from exiting. Gate closures of up to 10 minutes have been recorded. Left turners are therefore likely to bump up the footway in order to exit rather than wait or drive up the right side of the road and attempt to turn left, which could be hazardous for pedestrians crossing the side road.
- A vehicle coming from the south, wishing to turn right into the site, might overtake queuing traffic and meet a left turning vehicle or cyclist exiting the site.
- A vehicle coming from the south, wishing to turn left into Waterloo Road, has been seen to overtake queuing traffic and could now meet a southbound vehicle or cyclist that has exited the site.
- Motorcycle conflicts in general

None of these problems were identified in the Stage 1 Audit, but all will potentially lead to vehicle/pedestrian or vehicle/vehicle or vehicle/cycle conflicts.

Recommendation An access serving this number of units would appear to be unsuitable in this location due to the likelihood of conflicts occurring. There would appear to be little scope for mitigating these problems through design.

- B3.2 Problem** Location B (see location plan in Appendix B).
Summary: Difficulty left-turning into side road

The width of the side road into the site is shown as 5.5m, and New Lane 5m at this point. Concern arises that if vehicles are queuing to exit the site road, a large van for example might have difficulty making the left turn in. Queuing back on to the crossing would be very hazardous, as would over-running the footway.

Recommendation The width of the side road to be locally widened to accommodate turning movements of likely vehicles.

- B3.3 Problem** Location C (see location plan in Appendix B).
Summary: Ensuring visibility splay is suitable for vehicle speeds

It is noted that the visibility splay from the proposed side road is shown as 33m x 4.5m to accord with a 20mph zone, although no speed reducing measures are present, such that vehicles may be traveling faster.

Recommendation Check what visibility splay can be provided for a 2.4m set back distance, to allow for faster vehicle speeds on New Lane.

B4 NON-MOTOR VEHICLE PROVISION

- B4.1 Problem** Location D (see location plan in Appendix B).
Summary: Cyclists on footways

Running northwest-southeast adjacent to the site is a shared surface (Hayling Billy Cycleroote). Cycles from the development may well be tempted to gain access to the shared surface by using the footway.

Recommendation Review the need for a short connecting cycleway link into the site in order to minimise pedestrian/cycle conflicts.

- B4.2 Problem** **Location E** (see location plan in Appendix B).
Summary: **Stationary vehicle obstructs pedestrians**

A significant pedestrian flow along the New Lane footway was observed. Concern arises that a vehicle waiting to turn right out of the side road during closed gates will obstruct the dropped crossing point.

Recommendation Exact location of dropped kerbing to be reviewed, balancing desire line and a waiting vehicle.

B5 SIGNS AND LIGHTING

- B5.1 Problem** **Location F** (see location plan in Appendix B).
Summary: **Operation of Keep Clear area**

The 'Keep Clear' marking as shown, introduced following the Stage 1 Audit, will not assist a right-turning vehicle to exit from the site in queuing conditions.

Recommendation To do so, the stop line would need to be about where the 'Clear' wording is, and the area in front yellow-hatched out. This advanced hatch area could also benefit waiting cyclists.

- B5.2 Problem** **Location G** (see location plan in Appendix B).
Summary: **Missing road marking**

A sign to diag no. 602 is proposed at the site access.

Recommendation This sign requires to be accompanied by a triangle road marking to diag 1023.

3. AUDIT TEAM LEADERS STATEMENT

I certify that this audit has been carried out in accordance with HD19/03.

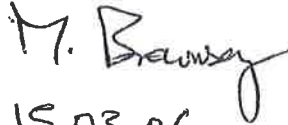
AUDIT TEAM LEADER:

Name: MARTIN G BROWNSEY BSc DipEM MICE CEng

Position: Director

Organisation: MB Projects Ltd

Address: Farthings, Grants Lane, Oxted, Surrey, RH8 0RH

Signed: 

Date: 15.03.06

AUDIT TEAM MEMBER:

Name: TED SMITH

Position: Traffic Safety Consultant

Address: .1A The Parade, East Wittering, Chichester, West Sussex, PO20 8BN

APPENDIX A

LIST OF DRAWINGS AND DOCUMENTS EXAMINED IN THIS AUDIT

Drawing No.	Scale	Description
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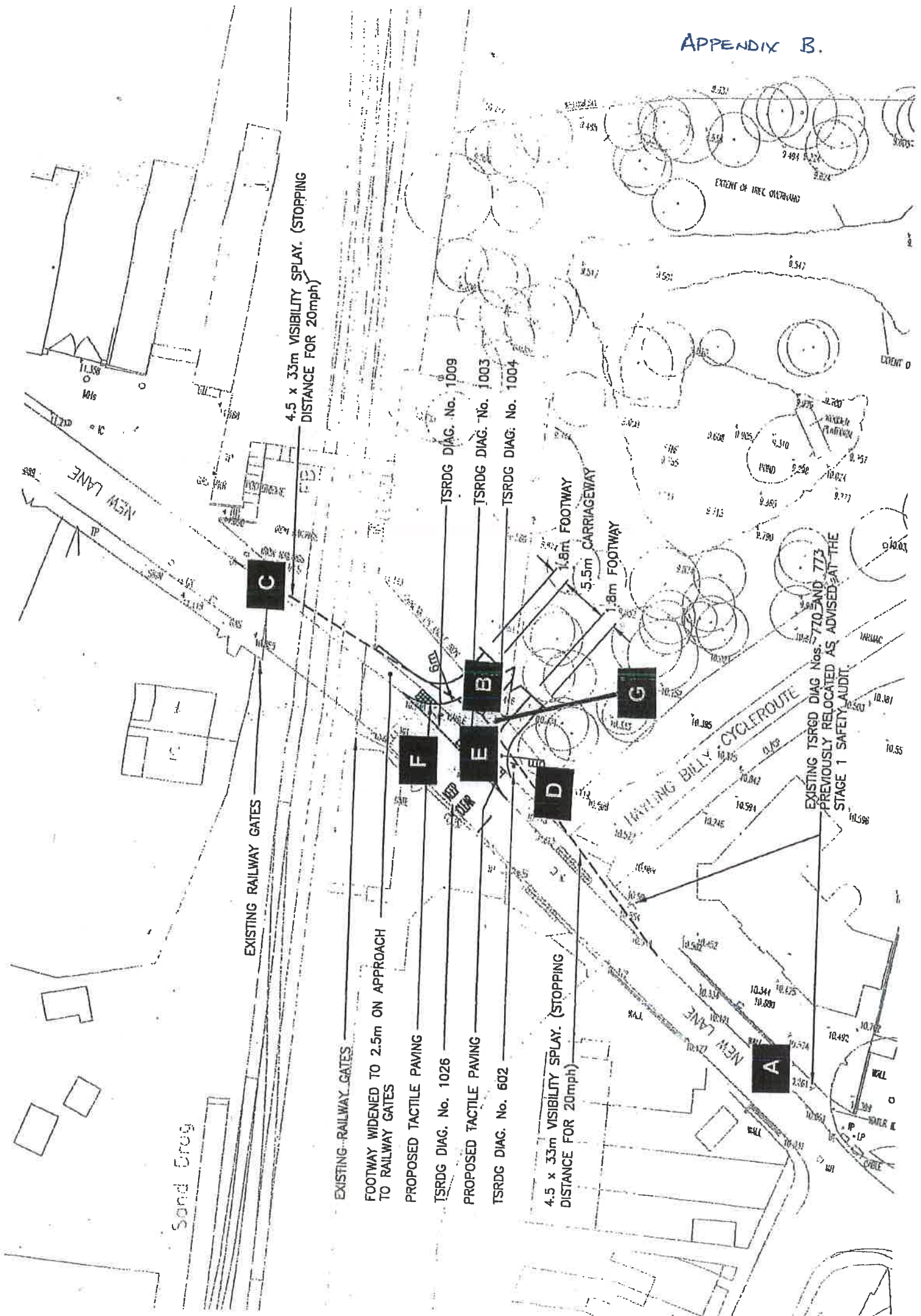
Hampshire County Council

17/C428/1/004 B	1:500	'T' junction Access on to New Lane
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Documents:

Traffic Survey and Observations	MVA	Feb 2006
Stage 1 Road Safety Audit	W.S.Atkins Ltd	October 2002
Letter from Railtrack to MVA dated 2.08.2002		

APPENDIX B.





NOTE

To: Terry Williams,
Head of Engineering
Consultancy

From: James Rennie
Senior Engineer, Highways

Copies to: Rachel Williams

Ext: 7753

Date: 4 May 2006

Ref: 17/C428/1/100

Warblington School – Proposed highway access onto New Lane Stage 2 Safety Audit – Exception Report

Further to our meeting of 4 April 2006 regarding the above Stage 2 Safety Audit carried out by M B Projects Ltd, please find attached comments on that report requesting an exception from the Stage 2 Audit. The Reference numbers referred to below refer to the Final Issue report dated March 2006.

B3.1 The carriageway width at this location is a little over 4.1m wide. It is an existing situation of which there is no evidence at present that any over running of the footway occurs. If anything, it is felt that as the northbound vehicles would be stationary it would be easier for a southbound vehicle to pass without the fear of two opposing vehicles clashing.

- This potentially hazardous manoeuvre would be impossible to design against. It would of course be possible to erect bollards on the footway to deter vehicles from mounting the footway if this situation became apparent.
- This potentially hazardous manoeuvre would be impossible to design against without installing a central island on New Lane. The width of New Lane would make this impossible to implement.
- As described, this scenario is an existing situation. It is felt to be unjustified to attach this comment to the proposed t-junction. This potentially hazardous manoeuvre would be impossible to design against.
- Motorcycle conflicts in general would appear to be an irrelevant comment to the proposed "T" junction on New Lane.

Comments on Recommendation to B3.1:

The number of units would seem to be irrelevant as the conflicts described could possibly occur with just one or two vehicles. HD 19/03, Clause 2.14, states "*strategic decisions on matters such as route choice, junction type, standard provision and Departures from Standards already reflect the best balance of a number of factors including road safety. Recommendations requiring major changes in these areas are unlikely to be acceptable when balanced with other aspects of the scheme and the Audit Team should not make such proposals*". In this case it is felt that the capacity issues raised should not form part of the Safety Audit.



- B3.2** It is agreed that queuing traffic potentially stopping on the level crossing must be avoided and that the existing situation is not compromised. The attached plan showing the AutoTRACK swept paths demonstrates that a large van could still pass a stationary vehicle waiting to exit the development site. Therefore the proposed 'T' junction should have a limited impact on the safe operation of the level crossing.

Comments on Recommendation to B3.2:

The width of the entrance bellmouth has been increased to allow to accommodate turning movements of vehicles.

- B3.3** Following the Safety Audit, a speed and volume count over a 7 day period was carried out. The results returned an 85%ile speed of 25.1mph. Therefore the visibility splay was adjusted to 4.5m x 45m in accordance with the stopping sight distance for 25mph. A copy of the speed count data has been attached to this note for reference.

Comments on Recommendation to B3.3:

In addition to the 4.5m x 45m visibility splay being added to the drawing, a 2.4m x 70m visibility splay has been added to demonstrate the available visibility.

- B4.1** The development brief has a footway/cycle link between the development and the Hayling Billy footway/cycle route.
- B4.2** The location of the proposed tactile paving and crossing point is felt to be in the most appropriate location given the desire line. No real advantage can be seen by moving the crossing point further into the development to avoid a vehicle waiting to turn right.
- B5.1** The 'Keep Clear' shown on the northbound lane is not intended to assist vehicles turning right out of the development but to assist vehicles turning left. It is recognised that New Lane is narrow and the road markings will allow vehicles to utilise both sides of the carriageway while exiting the proposed development site when the railway gates are closed.

It is felt that the recommendation to move the stop line for the level crossing further south will only be ignored as it would make the stop line in excess of 15m from the railway gates. Cyclists already have a 4m long area between the stop line and the railway gates.

- B5.2** Agreed, Diagram No. 1023 has been added to the drawing.

Having considered the contents of the above exception report, if you agree with the contents would you please complete and sign the attached Safety Audit Arbitration Report accordingly.

Regards,

James



Hampshire
County Council

Safety Audit Arbitration report

Scheme: Warblington School – Proposed Highway Access

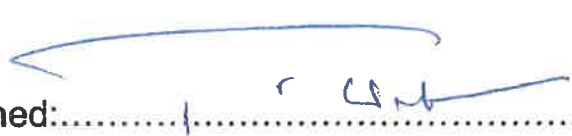
Job Number: A107

File reference: 17/C428/1/100

~~Feasibility (F)* Preliminary (1)* Detailed (2)* As-Built (3)*~~

*Delete as appropriate

Having considered the contents of the safety audit report and the exception report for the above scheme presented to me.
My decision is that the scheme proceeds as described in paragraphs B1 and B2 of the safety audit report, and paragraphs B3.1 to B5.2 of the exception report.

Signed: 

Name(print): Terry Williams

Position: Head of Engineering Consultancy

Tel No: 01962 847046 Date: 18/05/06

James Rennie
Engineering Consultancy
Hampshire County Council
Environment Department
The Castle Winchester
SO23 8UD

7th August 2006

Dear James,

Highway Access to Residential Development, New Lane, Havant

Safety Audit Stage 2

I refer to the Stage 2 Road Safety Audit prepared by MB Projects Ltd and the Exception Report prepared by yourself and would comment (*in italics*) on each problem as follows:-

Problem B3.1

It is possible that any of the events described could occur but it would not be unique to New Lane.

- New Lane just north of Waterloo Road is barely wide enough to permit two vehicles to pass, which might encourage a southbound vehicle from the site to bump up on the footway to pass queuing northbound traffic.

This could occur at any time that the gates are open. It is an existing problem caused by the road width, not the site access.

- Two right turning vehicles waiting to exit out of the site will prevent a left-turner from exiting. Left turners are likely to bump up the footway in order to exit rather than wait or drive up the right side of the road and attempt to turn left, which could be hazardous for pedestrians crossing the side road.

The extra road width proposed in the response to Problem B3.2 together with increasing the radii to 10m would allow at least one left turner to get out. The suggestion that drivers would drive along the wrong side of the road to pass a vehicle waiting to turn right is far-fetched but probably relatively safe as transgressing drivers do tend to take more care.

ENVIRONMENT DEPARTMENT	
10 AUG 2006	
PASSED TO	SEEN
Eng Con	
DE. 2	



Vanguard Centre
University of Warwick Science Park
Sir William Lyons Road
Coventry CV4 7EZ

Tel: 024 7669 0900

Fax: 024 7669 0274

Email: info@tmsconsultancy.co.uk

Website: www.tmsconsultancy.co.uk



SPECIALISTS
IN ROAD SAFETY
AND TRAFFIC
MANAGEMENT

- A vehicle coming from the south, wishing to turn right into the site, might overtake queuing traffic and meet a left turning vehicle or cyclist exiting the site.

Is this the above left-turning vehicle that cannot get out? Transgressing drivers tend to make sure that their route is clear before carrying out manoeuvres. At worst, two vehicles will meet face to face and have to wait until the gates open and the queue clears.

- A vehicle coming from the south, wishing to turn left into Waterloo Road, has been seen to overtake queuing traffic and could now meet a southbound vehicle or cyclist that has exited the site.

Is this the above southbound vehicle that cannot get out? It is difficult to see how the vehicle will get through the queue into Waterloo Road, but this has been observed by the Safety Auditors and the Traffic Counters. Transgressing drivers tend to make sure that their route is clear before carrying out manoeuvres. At worst, two vehicles will meet face to face and have to wait until the gates open and the queue clears.

- Motorcycle conflicts in general.

This is a general problem with motorcycles and queues. Motorcyclists overtaking a queue tend to take care.

Problem B3.2

You have addressed this problem.

Problem B3.3

You have addressed this problem.

Problem B4.1

You have addressed this problem. This also addresses the concerns with regard to cyclists expressed in Problem B3.1

Problem B4.2

- A significant pedestrian flow along the New Lane footway was observed. Concern arises that a vehicle waiting to turn right out of the side road during closed gates will obstruct the dropped crossing point.

If it's the two right turning and one left turning vehicles of Problem B3.1, it is difficult to decide how far into the side road to move the crossing. Leaving the crossing as shown allows able-bodied pedestrians to cross in front of the first

vehicle or between vehicles. Mobility impaired pedestrians needing the dropped kerbs will be able to cross in front of the first vehicle.

Problem B5.1

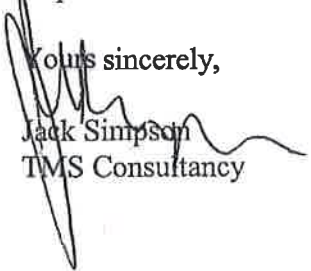
You have addressed this problem.

Problem B5.2

You have addressed this problem.

Whilst the Safety Auditors have covered all bases, the level of risk is low and your response to the audit and the Arbitrator's decision are reasonable.

Yours sincerely,



Jack Simpson
TMS Consultancy

APPENDIX E

ACCESS ARRANGEMENTS AND HIGHWAY WORKS
(DRAWING P764/S278/01)

APPENDIX F

EXTRACT FROM TRICS DATABASE
HOUSES PRIVATELY OWNED

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

VEHICLESSelected regions and areas:

02 SOUTH EAST		
BD	BEDFORDSHIRE	2 days
HF	HERTFORDSHIRE	1 days
SC	SURREY	1 days
03 SOUTH WEST		
CW	CORNWALL	2 days
DC	DORSET	1 days
GS	GLOUCESTERSHIRE	1 days
04 EAST ANGLIA		
SF	SUFFOLK	1 days
06 WEST MIDLANDS		
SH	SHROPSHIRE	1 days
ST	STAFFORDSHIRE	1 days
WM	WEST MIDLANDS	2 days
WO	WORCESTERSHIRE	2 days
07 YORKSHIRE & NORTH LINCOLNSHIRE		
NY	NORTH YORKSHIRE	2 days
08 NORTH WEST		
CH	CHESHIRE	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 10 to 138 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/02 to 05/09/10

Selected survey days:

Monday	1 days
Tuesday	6 days
Wednesday	4 days
Thursday	4 days
Friday	3 days

Selected survey types:

Manual count	18 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	15

Selected Location Sub Categories:

Residential Zone	15
No Sub Category	3

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	18	65	0.070	18	65	0.292	18	65	0.362
08:00 - 09:00	18	65	0.175	18	65	0.385	18	65	0.560
09:00 - 10:00	18	65	0.178	18	65	0.233	18	65	0.411
10:00 - 11:00	18	65	0.172	18	65	0.200	18	65	0.372
11:00 - 12:00	18	65	0.184	18	65	0.181	18	65	0.365
12:00 - 13:00	18	65	0.208	18	65	0.187	18	65	0.395
13:00 - 14:00	18	65	0.206	18	65	0.190	18	65	0.396
14:00 - 15:00	18	65	0.189	18	65	0.193	18	65	0.382
15:00 - 16:00	18	65	0.284	18	65	0.226	18	65	0.510
16:00 - 17:00	18	65	0.310	18	65	0.199	18	65	0.509
17:00 - 18:00	18	65	0.341	18	65	0.220	18	65	0.561
18:00 - 19:00	18	65	0.291	18	65	0.218	18	65	0.509
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.608			2.724			5.332

Parameter summary

Trip rate parameter range selected: 10 - 138 (units:)
 Survey date date range: 01/01/02 - 05/09/10
 Number of weekdays (Monday-Friday): 18
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0