

Blythburgh Traffic Study

Study Details:

Blythburgh Traffic Study

Title:

A12 London Road, B1125 Angel Lane/Dunwich Road & B1387, Blythburgh, Suffolk

Location:

Evaluation of Proposed Traffic Management Measures and Recommendations

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# Introduction

This report seeks to respond to concerns raised about the volume and speed of traffic in the village of Blythburgh.

The measures proposed in a report entitled ‘Traffic Management in Blythburgh – A Strategic Plan – May 2013’ produced by Blythburgh Parish Council have been analysed and evaluated.

This report will recommend suitable traffic calming measures for the village based on the evaluation of the proposed measures.

Proposals for a temporary Vehicle Activated Sign (VAS) have been evaluated and locations recommended.

On Saturday 23rd November 2013 a vehicle heading north along the A12 lost control and collided with a brick wall adjacent to the White Hart pub resulting in 2 fatalities. Police investigations into the cause of the accident are on-going and it is considered premature to draw any conclusions that affect the views within this report. However Suffolk County Council will want to ensure that any recommendations by the police will be taken into account.

# Site Description

The area of study consists of A12 London Road, B1125 Angel Lane/Dunwich Road, B1387 Blind Lane and other roads in the village of Blythburgh in Suffolk. The village features a number of residential properties, a church, a village hall, a public house and a village store.

The A12 London Road is the main route between Ipswich and Lowestoft carrying in excess of 16,000 vehicles per day\*. The B1125 Angel Lane runs from the A12 on the eastern side of the village and continues onto Dunwich Road towards the villages of Dunwich, Westleton and beyond. There are concerns that the majority of traffic on this road is through traffic. The B1387 Blind Lane links the A12 at Toby’s Walks (south of the village centre) to the B1125 Dunwich Road.

The routes are all single carriageway in this area and the residential areas of the village are subject to a 30 mph speed limit by virtue of road signs and carriageway markings. On the A12 40 mph ‘buffer’ speed limits are provided to the north and south of the village centre. The roads in the village do not have street lighting.

\*Total two way traffic flow figures on A12 at Blythburgh Bridge recorded in August 2013 supplied by Suffolk Police.

# Evaluation of Proposed Measures

This section evaluates the 10 measures proposed in section 8 of ‘Traffic Management in Blythburgh – A Strategic Plan – May 2013’ produced by Blythburgh Parish Council in order to determine if they are viable options for Suffolk County Council to consider. Where estimates are provided these include design and construction of the measure at the current (2014/15) rates.

## 3.1 Flashing 30 mph signs on the A12 north and south of the village:

Vehicle Activated Signs (VAS) have been an effective measure in Suffolk to inform motorists of the speed limit. A variety of types are available that either simply display the motorists current speed and/or a message such as SLOW DOWN.

As described in the Department for Transport’s TAL103 document they must only be used in appropriate situations where there are accidents associated with inappropriate speeds and standard road signs are not considered effective on their own.

Suffolk County Council’s current policy is described on its website. This shows a preference for either (a) temporary VAS’s, owned by SCC, that remain in place for a few weeks before being relocated elsewhere in Suffolk. The VAS would return on a regular basis and provide the driver with a refreshed reminder. This policy is in preference to permanent VAS’s as the County Council has concerns about the proliferation of too many VAS’s and the dilution of their effectiveness. Or (b) for the parish council to purchase its own VAS(s) to be moved between sites in the village.

It is proposed that temporary vehicle activated signs are provided in Blythburgh. Potential locations have been considered in section 5.

There is also the option of placing a further sign on the B1125 Dunwich Road south of the junction with Blind Lane to detect northbound vehicles entering the village.

If the parish wished to purchase its own signs the estimated cost of providing these signs is approximately £1,200 - £3,500 per sign for supply and construction plus a total of approximately £4000 for investigation, design and safety audit regardless of the sign quantity. In this option it is recommended that up to 2 units are purchased to be rotated between 3 sites, at a cost of between £7,000 and £11,500.

## 3.2 More prominent ‘gateway’ 30 mph signs at the village entrances:

Gateway village entry signs are a popular speed reduction measure in rural Suffolk. Their effectiveness is difficult to quantify but Department for Transport studies have found that they are effective in reducing speeds especially when used in conjunction with other measures such as ‘Dragon’s Teeth’ road markings, lane narrowing (physical and virtual – by coloured surfacing/markings) and speed limit roundel and SLOW markings. Some of these measures are already in place in Blythburgh so gateways could compliment these.

They are usually located at the 30 mph speed limit terminals as vehicles enter a village. Consideration is given to verge width and vegetation as in some cases the gateways have to be so narrow or concealed that they are ineffective.

The 30 mph speed limit terminals on the A12 appear to have sufficient verge widths for gateways (subject to further site investigation). However, the 30 mph speed limit terminal on the B1125 has narrow verges and vegetation that may obscure gateways. It may be possible to clear the vegetation and design some suitable gateways subject to further site investigation.

Various bespoke gateway designs can be provided to suit the local environment, however similarly to the vehicle activated signs initial ecology and development checks/consultation would have to be carried out due to the AONB and SSSI designations.

The estimated cost of providing gateways and new signs is approximately £2400 per pair of large Oak gateways (for one terminal) for supply and construction plus a total of approximately £3000 for investigation, design and safety check regardless of the quantity. Therefore, the total cost of two gateways on the A12 would be approximately £7,800 or around £10,200 if the B1125 was also treated.

## 3.3 Consideration of a pedestrian crossing on the A12 at the White Hart/Village Hall:

Villagers do not currently have a pedestrian crossing on the A12. This is a particular problem because the road dissects the village so it is necessary for many villagers to cross it to reach local amenities.

Pedestrian crossings can be in the form of Zebra or signal controlled crossing, the former relying on motorists seeing and stopping for waiting pedestrians and the latter utilising traffic signals to stop motorists when demanded by the pedestrian. Zebra crossings are most commonly used in urban environments where traffic speeds are likely to be less than 30 mph and traffic calming can be provided to slow vehicles if required. Furthermore, very good motorist/pedestrian inter-visibility is necessary and the location needs to be where motorists would expect to find such a crossing. Therefore, a Zebra crossing would not be suited to a main route such as the A12 in a rural environment so a signal controlled crossing has been evaluated below.

The preferred location for a signal controlled crossing is close to the White Hart public house, village hall and shop where it is reported most people need to cross the A12.

However, there are a number of issues why this would be very difficult to implement from a road safety perspective:

* The location is on a bend so forward visibility would be poor for motorists approaching the crossing which may result in motorists failing to notice the crossing and subsequently failing to stop in time;
* Shunt type accidents may occur due to the limited forward visibility of motorists approaching queuing traffic;
* The location is close to a junction which means that motorists approaching the crossing from a side road have poor inter-visibility with crossing users and is a further distraction for motorists approaching on the A12;
* Pedestrians waiting at the crossing may have a poor view of approaching traffic so those tempted to cross during a break in the traffic (to avoid waiting for the signals) may have a false sense of security due to the crossing;
* It is possible that vehicle speeds would exceed those recommended for a crossing. In most cases, traffic calming such as speed humps would be considered to reduce approach speeds, however, these options would also require street lighting which would be unsuitable for this location, for the reasons below. This would be in addition to the practical difficulties of providing traffic calming features on the A12.

Furthermore, street lighting would have to be provided at the crossing which may not be approved due to the AONB and SSSI designations and reported opposition from local residents. Also, the narrow footways at this location may make it unsuitable for a signalised crossing unless they could be widened to accommodate it.

Locating the crossing in the proposed alternative location of close to the bus stop at the southern end of the village would remove some of the issues identified above but would introduce other issues. However, the bend and junction north of the bus stop mean that the crossing would have to be located south of the crossing where there is no footway on one side and is not on the desired route for pedestrians from the bus stops to the village centre. Furthermore, the crossing would be adjacent to bus stops which may result in visibility issues when the bus stops are in use.

It is also envisaged that this would not be used as frequently due to it being away from the village amenities and would be too far from the desired crossing location for pedestrians to consider taking an alternative route to their destination. This would make it difficult to justify the potentially very high cost of such a scheme.

It is difficult to accurately estimate the cost of providing a signalised crossing at this location due to the need to assess the carriageway condition and consider the electrical supply costs. However, based on similar schemes a very approximate total figure would be £75,000 including £15,000 for investigation, design and safety audits.

## 3.4 The provision of pedestrian refuges on the A12 at the bus stops and the White Hart/Village Hall:

An alternative option to a signalised crossing is the provision of pedestrian refuges to assist pedestrians in crossing the A12. The proposed location at the White Hart/Village Hall would be unsuitable due to the visibility issues highlighted previously in the signalised crossing assessment. It may be possible to locate the refuge that serves the White Hart/Village Hall to a nearby straight section north of these facilities although this may be too far from the desired crossing location to be fully utilised.

The proposed location at the bus stops would require the refuge to be located south of the bus stops due to the bend and junction to the north. There is no footway on one side and it is not on the desired route for pedestrians from the bus stops to the village centre. Furthermore, locating the refuges close to a bus stop would cause road safety issues due to the risk of vehicles colliding with them or oncoming traffic if they attempted to overtake a bus entering the adjacent layby.

The Department of Transport’s LTN 2/95 document states that a pedestrian refuge must be an absolute minimum of 1.2 metres wide (2 metres is preferred in Suffolk) and the carriageway width should be 4 – 4.5 metres either side. This is to prevent vehicles from passing too close to pedestrians waiting in the refuge. The approximate carriageway widths in the desired (and proposed alternative) locations are 7.3 metres or less. This means that substantial widening of the carriageway by around 3 metres would be required. Potential utility diversions and land ownership issues could make this measure prohibitively expensive.

The estimated cost of providing pedestrian refuges is approximately £2500 per refuge for construction plus a total of approximately £3500 for investigation, design and safety check. Therefore, the total cost of two refuges on the A12 would be approximately £8,500 although realistically this would be significantly higher as extensions to footways and carriageway widening would also be necessary. As such it is considered that this option would be prohibitively too expensive.

## 3.5 The declassification of Angel Lane/Dunwich Road:

Removing the B road status of the B1125 Angel Lane/Dunwich Road within the village (from its junction with the A12 at the northern end to its junction with the B1387) to encourage vehicles to use the B1387 to the A12 instead is proposed in the Parish Council’s report to reduce traffic flows through this narrow developed section of the B1125. However, it is unlikely that it would prevent local motorists (who are aware of the route regardless of its status) from using this route. Furthermore, the large road sign on the southbound approach to Angel Lane and the signs at the junctions with the B1387 Blind Lane already do not state B1125 so it is unlikely that this measure would have a noticeable effect.

Non-local motorists may be following their satellite navigation systems onto the B1125 as it is the most direct route to a number of coastal villages from north of Blythburgh. The Department for Transport’s Road Network Policy Consultation of 2011 stated that satellite navigation companies *‘do not rely on road classifications’* and *‘changes to these arrangements will not affect routes chosen by satnav devices’.*

The process of declassifying a road is now (since 2012) carried out by local highway authorities without the need for central approval and is a relatively simple process provided all parties are in agreement.

It is difficult to see how this change alone would decrease traffic flows on the Angel Lane/Dunwich Road route within the village.

The estimated cost of declassifying this section of the B1125 would be approximately £2500 for completion of application, consultation and updating the Gazeteer.

## 3.6 The provision of a footpath at the north end of Angel Lane:

The Parish Council’s proposal for a footway for 100 metres from the junction of the A12 in a southerly direction on Angel Lane would require the route to be made one way due to the very narrow width of the road in this location. As reported in ‘Traffic Management in Blythburgh’ a scheme to prohibit southbound traffic was considered in 1991 and was rejected due to *‘almost universal objection’*. If this was proposed again and these objections were not received there would still be issues regarding which alternative routes the traffic would use (it could move the problem to The Street or Chapel Road), different (potentially less safe) movements onto the A12 and the extra distance and time involved for residents due to having to take a longer route home.

These are issues that would need to be discussed and voted on amongst villagers prior to a formal scheme beginning. A questionnaire delivered to all households may be required, for example. Furthermore, access and garden issues of two homes in Angel Lane would need to be resolved at an early stage.

The estimated cost of such a scheme is difficult to estimate due to the often long and complicated consultation and legal processes involved. The physical works of providing signs, a footway, kerb changes and drainage are likely to cost around £25,000 plus around £20,000 figure for the consultation, legal, design and safety audit work making a total of around £45,000. It would also require an additional contingency figure for land purchase; this value would require further study to come up with a realistic figure, based on the amount of land required, its current use and the market value.

An alternative proposal of a shorter footway that may not require a one way order (subject to further investigation) may provide a more widely approved scheme. However, this would require the purchase of a section of a resident’s garden and not provide a continuous length of footway. Again, early investigation and consultation would be required prior to a scheme being formally started. An estimated works scheme cost would be around £15,000 plus around £20,000 for consultation, legal and buying (purchase of land), design and safety audit work making a total of around £35,000.

## 3.7 The provision of a chicane in Dunwich Road south of the village:

A chicane located on Dunwich Road at the 30 mph speed limit terminal has been proposed by the Parish Council in order to slow vehicles entering the village and deter them using the route (instead it is envisaged that they would use the B1387 to access the A12).

The lack of street lighting and rural feel of this location would make it unsuitable from a road safety perspective due to the risk of motorists not seeing or expecting the chicane. This risk increases in poor weather conditions and once the reflective road signs and markings have become dirty.

If these safety issues could be overcome by providing street lighting and tree clearance at this location (which would increase the scheme cost considerably) then the estimated costs would be as follows: Construction of chicane and provision of street lighting at approximately £30,000 plus investigation, design and safety audit at £10,000 gives an estimated total of around £40,000.

Furthermore, required street lighting and tree clearance may not be possible due to the AONB and SSSI designations.

## 3.8 The creation of a safe alternative route for through traffic by improving the B1387 from the Water junction to its junction with the A12 at Toby’s Walks:

To encourage motorists to use the B1387 to access the A12 from the B1125 (rather than continue on Angel Lane/Dunwich road) the Parish Council propose that the B1387 is improved to make this route more attractive and safer.

The B1387 between its junctions with the B1125 and A12 is approximately 1km in length and the average carriageway width is approximately 4.75 metres. The speed limit is derestricted (60 mph). Two small motor vehicles are able to pass one another with caution but when a large lorry or agricultural vehicle is encountered vehicles must encroach onto the verge and pass with extreme caution. The route also features a number of minor accesses, some of which are not obvious to passing motorists. The junction of the B1387 as it crosses the B1125 has poor visibility and would benefit from some form of improvement to cater for the traffic accessing Walberswick from the A12.

In order to upgrade the route to cater for increased vehicle use most of its length would require widening by around one metre to enable a centre line to be provided so that vehicles could pass one another with more confidence. Furthermore, improved signing of the accesses, drainage and additional kerbs may also be required.

The A12 junction with the B1387 at Toby’s Walks has received road safety treatments in recent years due to continued accidents at this location. These have been relatively minor improvements such as improved road signs, road markings and high friction surfacing. It is unlikely that major changes (such as a roundabout or a right turn lane) would occur at this junction due to the very high costs involved relative to its use and accident history.

Without carrying out an extensive survey of the highway verge widths and topography, roadside features and utility locations it is difficult to say whether this proposal would be possible. Therefore, the estimated cost is very approximate at around £85,000 for the total scheme cost.

## 3.9 The making of The Street ‘Access Only’:

The Street is a narrow (approximately 4.5 metres wide) residential street that runs from Priory Street at its northern end across the A12 in a south easterly direction to Chapel Road which in turn leads to Dunwich Road. It is currently subject to a 7.5 tonne weight limit.

A traffic regulation order to prohibit motor vehicles except for access in The Street has been proposed by the Parish Council to deter motorists from using the route as a shortcut to reach the adjacent roads. This may benefit the residents of The Street by reducing traffic flows but the prohibited traffic may be displaced onto Angel Lane, Chapel Road and Priory Road which may lead the residents of these roads to object to the traffic regulation order and prevent its implementation.

From a road safety perspective an issue may arise when A12 motorists (unaware of the prohibition) attempt to enter The Street and then see prohibition signs and continue along the A12, which may result in shunt accidents on the A12 or the other adjacent roads.

It is envisaged that this proposal would only be a worthwhile consideration if Angel Lane was made one way in order to prevent displaced traffic from using it as an alternative route.

The estimated cost of the traffic regulation order and road signs as well as associated design costs would be approximately £7,000.

## 3.10 The study of other traffic management options including traffic calming:

The other proposals considered in the ‘Traffic Management in Blythburgh’ report such as a 20 mph speed limit and vertical traffic calming measures (such as speed humps or cushions) would not be appropriate for the A12. It is presumed that these suggestions are intended for the B1125 Angel Lane to slow and deter motorists from using this route.

A 20 mph speed limit would require traffic calming measures to ensure that it is self-enforcing and vehicles speeds were appropriate for the lower speed limit. Speed humps or cushions along the route would require street lighting to ensure that motorists could see them in all weather conditions.

If the residents (and ecology and planning officers) were prepared to allow street lighting on Angel Lane it would enable traffic calming measures to be provided. Without illumination, it is unlikely that road safety auditors would approve traffic calming measures in this location.

If lighting was provided then other potential traffic calming solutions such as chicanes or footways with passing places may also be considered. However, it is considered that no other measures, to those already discussed, are considered feasible or appropriate.

# Recommendations

This section recommends which of the ten proposals evaluated in section 3 could be provided and why. It also states which proposals may not be suitable or achievable.

***Flashing 30 mph signs on the A12 north and south of the village:***

Subject to a successful trial of temporary Vehicle Activated Signs (VAS), ecological and development consent and consideration given to the future VAS policy permanent VAS’s could be installed on the A12 approaches to the village. Furthermore, if required a further VAS could be installed on the B1125 subject to further funding.

**Verdict:**

Recommended subject to a successful trial, consents and future VAS policy.

**More prominent ‘gateway’ 30 mph signs at the village entrances:**

Subject to ecological and development consent gateways could be installed at the 30 mph speed limit terminals on the A12 approaches to the village. Upgraded village signs and refreshed and additional road markings could also be provided to compliment the gateways. It is unlikely that they would be appropriate for the B1125 30 mph speed limit terminal unless a significant amount of tree clearance (and possibly verge widening) was carried out.

**Verdict:**

Recommended for the A12 approaches with further investigation required to assess whether they would be suitable for the B1125.

**Consideration of a pedestrian crossing on the A12 at the White Hart/Village Hall:**

A number of potential road safety and location issues indicate that a signalised pedestrian crossing would not be suitable for the A12 in Blythburgh. The locations where it would be most desired are unsuitable and to provide it away from these locations would result in underuse.

**Verdict:**

Not recommended.

**The provision of pedestrian refuges on the A12 at the bus stops and the White Hart/Village Hall:**

A number of potential road safety, location and practical issues indicate that pedestrian refuges would not be suitable for the A12 in Blythburgh. The locations where it would be most desired are unsuitable and to provide them away from these locations would result in underuse and the need to construct additional footway. Furthermore, the requirement to substantially widen the carriageway may make them prohibitively expensive.

**Verdict:**

Not recommended.

**The declassification of Angel Lane/Dunwich Road:**

Despite being a relatively inexpensive and simple process since the government decentralised the local road classification process (providing all parties are in agreement) it is difficult to see the benefits that this change would bring to this part of Blythburgh. This is due to the road signs already not stating B1125, local knowledge being a factor in the use of this route and the likelihood that it would not deter satellite navigation guided motorists

**Verdict:**

Not recommended.

**The provision of a footpath at the north end of Angel Lane:**

The two options proposed for a footway to be constructed involve either a one way route being introduced or the purchase of a strip of private garden. Given the response to a similar proposed scheme around twenty years ago, the first option may not be viable unless resident’s views have changed significantly and the second would depend on the willingness of a resident to sell land at a cost that would make the scheme a viable proposition.

**Verdict:**

If funding is available for such a scheme conduct a feasibility study that involves collecting the views of residents and contacting the owner of the property whose garden would be required.

**The provision of a chicane in Dunwich Road south of the village:**

The lack of street lighting and rural feel at this location mean that road safety issues related to motorists visibility of the proposed chicane may make it prohibitively expensive to provide (as well as potential ecological and development issues).

**Verdict:**

Not recommended unless street lighting can be provided at the proposed location.

**The creation of a safe alternative route for through traffic by improving the B1387 from the Water junction to its junction with the A12 at Toby’s Walks:**

Widening a 1km length of the B1387 between the B1125 and the A12 to enable two vehicles to pass safely (and other associated improvements) may be achievable depending on funding (due to the potentially high cost) and the outcome of a thorough investigation into the verges. However, if this improvement was carried out other measures on Angel Lane/Dunwich Road would have to be carried out to ensure motorists used the new route. This could push the total cost of the scheme past £100,000 which may be prohibitively expensive.

**Verdict:**

Recommended only if funding is available for a wider scheme (including the B1125 in Blythburgh village).

**The making of The Street ‘Access Only’:**

It is difficult to see how this would benefit the community as any displaced traffic from The Street would use other residential roads in Blythburgh. It would make sense to carry out this proposal only if Angel Lane was made one way to prevent displaced traffic from using it to cut across to Dunwich Road because the narrow nature of it makes it unsuitable for high traffic volumes.

**Verdict:**

Not recommended unless part of a one way scheme for Angel Lane.

**The study of other traffic management options including traffic calming:**

Other proposals such as a 20 mph speed limit and road humps on the B1125 would need to be provided together in order for the speed limit to be self-enforcing. In most cases humps and chicanes would be dependent on street lighting which is currently not provided. The rural feel of this location may well make lighting necessary.

**Verdict:**

Not recommended unless street lighting is provided.

# Temporary Vehicle Activated Sign Locations

Vehicle speeds recorded and monitored by the Parish Council’s Community Speedwatch team indicate that speeding is an issue in Blythburgh. Data collected by Suffolk Police in August 2013 in the 40 mph zone north of the village (south of the A1095 junction) showed the average two way traffic speed was 37.6 mph with 25.9% of vehicles travelling above the speed limit.

 The plan overleaf shows proposed locations for temporary Vehicle Activated Signs following a site visit by Bob Clench of Suffolk County Council and Chris Wilder of Suffolk SafeCam in October 2013.

It was concluded that the most suitable locations are those listed below and shown on the plan overleaf:

1. On the east verge of the A12, north of the White Hart public house and junction with the B1125. VAS will be attached to existing ‘Blythburgh Village Only’ advanced direction sign. To detect vehicles travelling southbound only;
2. On the west verge of the A12, just south of the junction with Church Road to detect vehicles travelling northbound only;
3. On the east verge of the B1125, just south of the junction with Blind Lane to detect vehicles travelling in both directions.

