

Hampton in Arden Parish Council

Potential Traffic Calming Options

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Figure 1: Proposed Roundabout at Meriden Road and Lapwing Drive

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1 Introduction

Following the recent meeting on 2nd March 2016 with a representative from Solihull MBC Highways this paper has been prepared detailing the various traffic calming measures that are currently available to local authorities. The suitability of each option is described and recommendations have been made as to their application in Hampton in Arden Parish and the village of Catherine-de-Barnes.

Existing traffic on the B4102 through both Hampton in Arden and Catherine de Barnes is heavy at present and is very likely to increase as a result of adjacent developments particularly HS2, UK Central and the proposed motorway service area (MSA). The Parish Council is convinced that additional traffic calming measures are therefore needed both to ease the current situation and to safeguard the parish and adjacent communities against any future traffic increases.

The safety for all road users is of paramount importance and this can best be safeguarded with the implementation of a number of traffic calming measures or place-making features strategically located throughout the parish. We believe that these measures will both reduce traffic speeds and act as a deterrent to through vehicles from using these local roads, with a resultant improvement in safety for local residents such as possible noise, vibration.

2 Neighbourhood Plan

The Neighbourhood Plan includes references to future highway and transport improvements within the parish area. The Neighbourhood Plan includes the following relevant Policies and Key Actions that directly or indirectly relate to traffic:

- Policy TRA1 – Road Safety and Parking:
The Parish Council will seek to ensure improvements to road safety for new housing or other developments including adequate off-street parking at the rate of two places per dwelling or alternative parking arrangements which does not add to on-street congestion or safety issues. On-street parking can also act as traffic calming
- Policy TRA2 – Traffic Management:
Any development will be required to take into account the need for appropriate traffic management measures. Furthermore, in order to manage any traffic changes associated with HS2 and to protect the character of Hampton-in-Arden and Catherine-de-Barnes and the concept of 'village life' the Parish Council will seek to secure the provision of appropriate signage at key road and motorway interchanges through negotiation with both HS2 and Solihull MBC. It should be noted that signage often has minimal benefits and adds clutter which can negatively impact on village life.
- Policy TRA3 – Parking for Commuters:
The Parish Council will continue to seek temporary overflow arrangements with local landowners but remains pessimistic that there is any quick resolution to this problem. New developments will be required to demonstrate adequate parking arrangements which will not exacerbate current parking problems.

- Policy TRA4 – Footpaths:
The Parish Council will be vigilant in seeking protection for any footpaths affected by development, seek appropriate and satisfactory mitigation or diversionary routes if necessary, and look for opportunities with neighbouring parishes and Solihull MBC to enhance the network.

- Key Action TRA5 – High Speed Rail (HS2):
The Parish Council will continue, through lobbying, discussion and co-operation, its pursuit of appropriate and satisfactory outcomes to all outstanding issues of contention. These include impact on residences and businesses, issues of design, management of the construction works to minimise and mitigate impact, flood prevention and management of the environmental and ecological impacts on the Parish. Each of these issues will be important criteria should any residential or business development come forward on the east side of the village, including the planned development at Meriden Road.

- Key Action TRA6 – Safe Cycle and Pedestrian Routes:
The Parish Council's ambition is for a safe cycling route through the Parish linking Meriden and Catherine-de-Barnes, providing a safe through route from Solihull to the east of the Borough. The Parish Council will therefore seek a feasibility study to be completed by Solihull MBC highways engineers and developments will be encouraged which promote improved traffic management by reducing speed and volume, improve safety and accessibility for pedestrians, cyclists and people with disabilities and do so in a way that respects the amenity of the locality.

- Key Action TRA7 – Local and Voluntary Transport Services:
The Parish Council is committed to support and maintain the existing local and voluntary services (including local taxi-bus service, ring and ride and the volunteer driver service) and with the expectation of growing demand, to enhance provision for those with mobility difficulties.

- Key Action TRA8 – Road Safety:
The Parish Council will continue to seek a satisfactory solution to the parking issues within Hampton-in-Arden in conjunction with Solihull MBC Highways department. To alleviate the danger to pedestrians using the narrow High Street pavements in Hampton-in-Arden and in Catherine-de-Barnes village the Parish Council will work with Solihull MBC to seek 20 mph restrictions imposed in the areas of risk and where customer and delivery parking is acute, dangerous but avoidable. We shall also seek a formal highway engineering study of other traffic calming including the use of 'priority lane' bollards such as those adopted elsewhere in the Borough. This may well alleviate the danger to pedestrians using the narrow High Street pavements where large lorries pass close to the pavement edge.

- Policy COMM2 – Developer Contributions:
Developers will be required to make a contribution through a Section 106 Agreement (for a specific development site) or the Community Infrastructure Levy towards appropriate community facilities which may include:

- *Library, sport or recreational facilities;*
- *Community support services to the elderly, infirm or needy;*
- *Child or youth services;*
- *Support for specific church or school activities or facilities;*
- *Improvements to village infrastructure;*
- *Improvements to the local environment;*
- *Improvements to, remodelling of or enhancements of the Hampton Surgery.*

Contributions will be phased or pooled to ensure the timely delivery of infrastructure, services and facilities where necessary.

3 Potential Traffic Calming Options

Given below are details of the various traffic calming measures currently being used throughout the country. Their advantages and disadvantages are briefly discussed and local locations are given as to where examples can be inspected.

3.1 Signs and Speed Detection Devices

3.1.1 Speed Limit Signs

New signs are relatively inexpensive yet have been shown to have a minimal impact on traffic speeds. They should be used sparingly, possibly in combination with other traffic calming features.

3.1.2 Interactive Signs

These signs detect the speed of oncoming traffic using a radar device. If a set threshold is exceeded, a sign indicating a specific hazard or speed limit is triggered. This is the type of signs that are currently located on Meriden Road between the station and the junction with Diddington Lane. It should be noted that interactive signs that show actual speed can have a negative effect on speed as some motorists try to see how fast they can go. Interactive signs are not recommended by SMBC and they are looking to remove all existing signs as soon as possible.



3.1.3 Speed Cameras

The new generation of digital cameras currently being tested are capable of continuously monitoring traffic speeds and, where used in pairs, monitoring average speeds. Average speed cameras have a proven record in keeping speeds down particularly where highway construction works are being carried out. The new cameras are also capable of recording speeds in both directions so a maximum of two cameras would be needed to fully cover a section of road.

Average speed cameras are an excellent traffic calming measure. SMBC's current trial seems to be effective with a full review due in Sept 2017.

3.2 Vertical Speed Mitigation Options

Road humps are used to stop people speeding up rather than slow them down. They need to be accompanied by slowing features at each end of a run of humps. They are suitable for residential areas but are not acceptable on bus routes. Effectiveness decreases as spacing increases, 150m maximum.

Not now recommended for traffic calming.



3.2.2 Speed Cushions

Speed cushions are raised rectangular areas. There can be one, two or three, depending on the width of the road. Like humps they are most suitable for built up areas and need additional slowing features. They do not slow speeds to the same extent as humps but do give emergency vehicles and buses a smoother ride. There is no effect on speeding motorcycles as they simply ride between the cushions. Local examples can be found in Knowle, Marston Green and Leamington Spa (Tatchbrook Park area).

Not recommended for long lengths on through roads.



3.2.3 Speed Tables

Speed tables are similar to road humps but are longer and with a flattened top. They can also be used throughout a junction. They are especially useful where there are a lot of pedestrians as they provide a level crossing between footways and for cyclists where the route crosses the junction. If tables are long enough, they can provide a smoother ride for buses than humps. Local examples can be found in Knowle High Street and Dorridge (adjacent to the new Sainsbury's).

Very effective way of controlling traffic speeds and aiding pedestrians. The design must consider if additional drainage is required upstream of humps.



3.3 Road Width Restrictions

3.3.1 Gateways/Entry Points

Gateways are identified by road markings, build outs, coloured surfacing and/or signs indicating that the driver is entering an area where road conditions change, for example entering an urban area or a change of speed limit. They are most effective on those drivers that only use the road occasionally. Gateways are often provided without the road narrowing if there are additional traffic calming measures ahead such as roundabouts and speed cushions/tables. Local examples include Marston Green and the south side of Knowle on the B4100.

Very good method of both defining village restriction limits and forcing traffic to slow providing that there is sufficient traffic in each direction.



3.3.2 Build Outs

These are localised narrowing of the roadway formed by widening of the footway. Priority is given to traffic flows in one direction. They reduce crossing distance and improve visibility for pedestrians crossing the road. Placed alternately they can provide chicanes. Roads can be narrowed to such an extent that only single file traffic is allowed. They can also be used to provide sheltered parking. Suitable for use in urban or rural locations, as initial slowing features and as part of gateway features. Can include cut-through for cycles along existing channel line. A local example can be found in Knowle close to Plumes Garage in Lodge Road.

Very good urban traffic calming option.



3.3.3 Chicanes

A single-lane working chicane allows traffic in both directions, but there is only room for one vehicle to pass through at a time. Generally a priority is given to one direction, so that the possibility of vehicle conflicts is minimised. Priority should normally be given to vehicles leaving a traffic-calmed area, so that the speed of vehicles entering is reduced. Double chicanes will slow traffic approaching from both directions as shown in the image below. All road users need to be consulted to ensure that the proposed layout can accommodate all vehicles. Local examples include Marston Green and Packwood House. See Mallard's Way, Bicester for variation.



Very good method of reducing traffic speeds at control points.

3.4 Crossings

3.4.1 Pedestrian Crossings

Zebra, pelican or puffin crossings may encourage more people to walk by improving safety and reducing delays crossing busy roads. They can be provided where there is a concentrated crossing movement, however there does need to be adequate visibility and lateral width on the adjacent footways. At proposed locations there needs to be adequate lateral clearance. The justification for controlled crossings is prioritised based on accident records, pedestrian flows and vehicle speeds.

Not feasible for Hampton-in-Arden due to narrow footway widths.

3.4.2 Refuges

Refuges allow pedestrians to cross one stream of traffic at a time. They are useful where the concentration and number of pedestrians is fairly low. By narrowing the road, they reduce speeds, but the road needs to be wide enough to allow for a suitable refuge and the safe passage of vehicles and cycles. Similar to pedestrian crossings, refuges do require adequate lateral width.

Recommended to allow safe passage for pedestrians.



3.5 Roundabouts



Equal priority in all directions can slow traffic. Ideally there needs to be balanced flows on all arms for this to be effective. They can be relatively expensive and also need works to slow traffic down on the approach to the roundabout such as gateways. Adequate deflection angles are required in design to ensure that motorists have to reduce speed in order to negotiate the roundabout. Roundabouts are very good at controlling speeds when motorists are exiting controlled areas. Mini-roundabouts take up less space but need to be in street lit areas. Pedestrian refuges can be provided on one or more legs of the roundabout to aid pedestrians crossing the road.

Excellent way to both slow traffic and define the boundaries of a restricted speed limit zone.

3.6 Other Options

3.6.1 One Way Roads

Control the circulation of traffic but can lead to faster speeds as there is no opposing flow. Traffic can increase on other roads so there needs to be a suitable route for traffic travelling in the other direction. One way streets can attract new traffic so overall traffic may not decrease.

3.6.2 Severed Roads

These provide the ultimate deterrent to rat running. They can prove unpopular with residents as they sometimes cause long diversions and increase traffic on other roads. Emergency access and the needs of services like refuse collection need to be taken into account.

3.6.3 Parking Restrictions

If restrictions are carefully used these can help to manage traffic (i.e. Protected Parking Bays). Double yellow lines maintain traffic flows in urban areas. Time restricted parking allows access to facilities within towns/villages and alleviates the problems associated with long term parking but can be unpopular with residents and businesses. Parking problems can transfer to other roads

4 Proposed Options

The areas in the parish have been split into separate areas and each is considered in turn as regards potential traffic calming measures. Existing traffic conditions are discussed and potential solutions proposed.

4.1 Lapwing Drive/Meriden Road

This part of the village currently experiences high traffic speeds both from traffic entering and leaving the village along the B4102. The primary need therefore is the need to slow this traffic down to the regulatory speed limit. In addition the proposed new housing development of approximately 100 housing units, that is planned off Lapwing Drive will greatly increase traffic turning movements both into and out of the drive from Meriden Road. This by itself necessitates a re-think of the current junction.

The suggested solution is to provide a new roundabout at the Lapwing Drive junction combined with enhanced Gateway signage at the current limit of the 30mph zone on Meriden Road. The roundabout will need to be offset on the Lapwing Drive side to ensure that there are adequate deflection angles for the Meriden Road traffic to ensure that this traffic slows on the approach to the new roundabout. If adequate deflection cannot be achieved then a speed table throughout the junction can also be added. A pedestrian refuge should be provided on the village side of this roundabout to aid pedestrians who wish to cross to the footpath located on the north side of Meriden Road. In addition an extra refuge should be provided to the west of the Diddington Lane junction and opposite the existing path leading from Lapwing Drive as in this location there is no footpath along the south side of Meriden Road.

Funding for this work could be provided under a Section 106 Agreement or alternatively through HS2 Ltd as part of agreed mitigation measures and also through The Community and Environment Fund which has been established to support local projects that bring community and environmental benefits to areas affected by HS2 such as Hampton in Arden.

Figure 1 shows a hand drawn suggested layout to an approximate scale of 1:500. The existing road layout is shown as broken lines and the proposed layout is highlighted. A 6m internal diameter has been provided however this could be reduced in the detail design stage if sufficient deflection angles can be achieved.

4.2 Diddington Lane

The need for traffic calming on Diddington Lane is totally dependent on whether the lane remains open to through traffic as part of the HS2 proposals. If the lane is closed to through traffic then there is no need for any traffic calming. However in the likely event that the lane remains open then traffic calming will be required as the lane will be used as a short cut to the new HS2 station.

The major existing problem is speeding traffic when travelling out of the village towards the A45 Stonebridge. The most effective mitigation measure would be to install a double chicane at the northern limit of the village. **With reasonable flows these can cause congestion.** In addition the section of Diddington Lane outside the village should have its speed limit reduced to 40 mph. These two

proposals will aim to dissuade motorists using the lane as a 'rat-run' to the new HS2 station north of the A45.

Funding for this work if required could again form part of mitigation measures agreed with HS2 Ltd.

4.3 Meriden Road

The section of Meriden Road between the station and Diddington Lane is the widest section of road through the village and currently experiences high traffic speeds in both directions as confirmed during recent speed watch operations regularly carried out by residents.

As described by SMBC at the recent traffic meeting the new generation of digital average speed cameras are currently being tested and are capable of recording speeds in both directions. This would be an eminently suitable option to extensive signing and other measures such as speed tables and cushions, as urban clutter would be minimised.

It is therefore proposed that two average speed cameras be installed at suitable locations near to the two junctions with Shadowbrook Lane and Diddington Lane, close to the existing interactive sign.

4.4 High Street

The High Street, between Belle Vue Terrace and Fentham Road, is the narrowest section of road through the village and therefore traffic calming options are limited. Existing on-street parking, either residential or shopping, does act indirectly to keep vehicle speeds down, however there is still a general disregard for speed limits by road users as evidenced by the number of accidents that have occurred over the years at the High Street junction with Marsh Lane. In addition there are no pedestrian refuges and crossing the road to and from the church and adjacent bus stop is problematic.

We therefore believe that the most practical solution is firstly to impose a 20 mph speed limit, throughout the section from Eastcote Lane to Old Station Road, to combat speeding traffic, and secondly to construct a Build Outs at a suitable locations. Possible locations could be either close by the vicarage and bus stop and close to the Fentham Road junction where the pedestrian pavement is very narrow. Introducing a 'shared space' concept through this section, such as the removal of road centreline markings, would help to encourage slower traffic speeds and encourage sense of place and responsible driver behaviour.

4.5 Solihull Road/Eastcote Lane

There are problems at this junction with relatively poor visibility for traffic exiting Eastcote Lane, and fast-moving traffic both entering and leaving the village on Solihull Road.

The suggested option is to install a new roundabout with Gateway approaches for both Solihull Road and Eastcote Lane. Chicanes would not be necessary on either approach as the roundabout itself acts as the primary traffic calming measure. Land constraints on both the Manor side and the village side of Eastcote Lane, mean that the new roundabout would need to be located on the south west quadrant of the junction requiring additional landtake. Adequate deflection angles should be easily achievable to ensure approaching traffic is sufficiently slowed in order to negotiate the new junction. If necessary a speed table throughout the junction could also be added. Sight line requirements will

mean that a section of the hedge on the south side of Solihull Road will need to be removed. A 20 mph speed limit should be imposed on the village side of this junction as discussed above in Section 4.4.

Figure 2 shows a hand drawn suggested layout to an approximate scale of 1:500. The existing road layout is shown as broken lines and the propose layout is highlighted. A 6m internal diameter has been provided however this could be reduced in the detail design stage if sufficient deflection angles can be achieved.

4.6 Marsh Lane

Marsh Lane is a narrow residential road and currently experiences speeding traffic in both directions. In addition the narrowness of the lane and the parking that occurs between Fentham Road and the High Street further increases the accident risk. The current housing development at the end of the lane will only increase traffic in the lane and therefore the accident risk.

In order to slow the traffic down and lower the risk of accidents it is proposed therefore to introduce speed tables at the junctions with Peel Close and Elm Tree Rise, and possibly also the Fentham Road/Beeches junction.

4.7 Shadowbrook Lane

There is very limited scope to improve this approach into the village. The proposed small housing development at Home Farm will add to the traffic.

The suggestion therefore is to provide an improved Gateway with a single entry chicane at the current 30mph limit, together with a speed table at the entrance to Hampton Manor.

4.8 Old Station Road

Old Station Road is a long 'no through' road that has both residential and commercial premises along its length. Similar to other side roads in the village it currently experiences speeding traffic in both directions.

In order to slow the traffic down and lower the risk of accidents it is proposed therefore to introduce speed tables at suitable locations such as the entrances to the Sports Club and the Timber Yard.

4.9 Catherine de Barnes

The B4012 through Catherine de Barnes experiences high traffic flows and east of the canal this traffic tends to travel at high speed particularly approaching the narrow canal bridge. Scope for mitigation and improvement is somewhat limited but the suggestion is to provide a chicane and enhanced gateway signage immediately west of the junction with Barbers Lane. If necessary a speed table could also be provided at the Barbers lane junction.

Although just outside the Parish boundary but very much part of the issue under consideration, we would recommend a speed table being installed outside the Catherine de Barnes Village Hall to encourage traffic from the direction of Solihull to reduce speed before proceeding over the canal

bridge which will also facilitate increased pedestrian safety both outside the 3 shops , and accessing the Village Hall and the bus stop .

5 Conclusions and Recommendations

On the 11th October 2016 the Transport Secretary, Chris Grayling confirmed the Government's commitment to HS2 and announced that £70m funding will be made available to support local communities and road safety along the route between London and the West Midlands.

We understand that the funding will be made of three separate funds - the HS2 Community and Environment Fund (CEF), the Business and Local Economy Fund (BLEF), which together total £40m, and a £30m road safety fund. The separate £30m road safety fund will be used to make improvements in places along the line of route – for instance to support traffic calming, safer junctions or better pedestrian crossings. We further understand that details on this fund will be announced in due course.

We therefore seek funding for the various proposed traffic calming measures in Hampton-in-Arden through this new HS2 road safety fund. In addition and in parallel we will seek funding through both Section 106 Agreements with local Developers (such as the proposed developments off Lapwing Drive and Marsh Lane as described in Section 4.1 and Section 4.6 respectively), and directly through Solihull MBC.

The Environmental Statements accompanying the HS2 Hybrid Bill predict a substantial increase in traffic passing through the village of Hampton in Arden when the railway is operational. Local opinion considers the predictions to be an underestimate because the B4102 through Hampton in Arden will be the SATNAV preferred route from the south to the Interchange Station.

Hampton in Arden is a busy community and the main road is a significant obstacle for elderly and young residents. The Parish Council considers that HS2 Ltd should fund a traffic management scheme to discourage additional traffic volume and control the speed of vehicles whilst at the same time ensuring the safety of vulnerable road users.

In January 2015 a letter of assurance was agreed between SMBC and HS2 requiring the nominated undertaker to use reasonable endeavours to ensure that any traffic calming measures or traffic restrictions reasonably proposed by SMBC during the detailed design of HS2 for inclusion in any realignment of Diddington Lane are incorporated into The Bill. We are proposing this traffic management scheme for inclusion in the detailed design to mitigate the effect of increased traffic flow through the village.

The Parish Council has already met with The West Midlands Police Crime Prevention Design Officer, Andrew Gregory, who wrote to Alistair Davie on 29th June 2015 requesting a meeting with stakeholders 'to discuss the options of HS2 including some traffic calming measures for Hampton in Arden Village'. As far as we are aware no such consideration has taken place and we would request that this now takes priority for Hampton in Arden as the HS2 scheme is developed.

Notwithstanding any agreements reached with HS2 Ltd, other funding through either Section 106 or SMBC, should be sought whenever development opportunities arise. Any proposed developments in the parish should be expected to contribute to the future prosperity of the community.

A Parish wide public consultation should be held following discussions with Solihull MBC Highways.

Figure 1 Suggested Layout of Roundabout at Meriden Road / Lapwing Drive

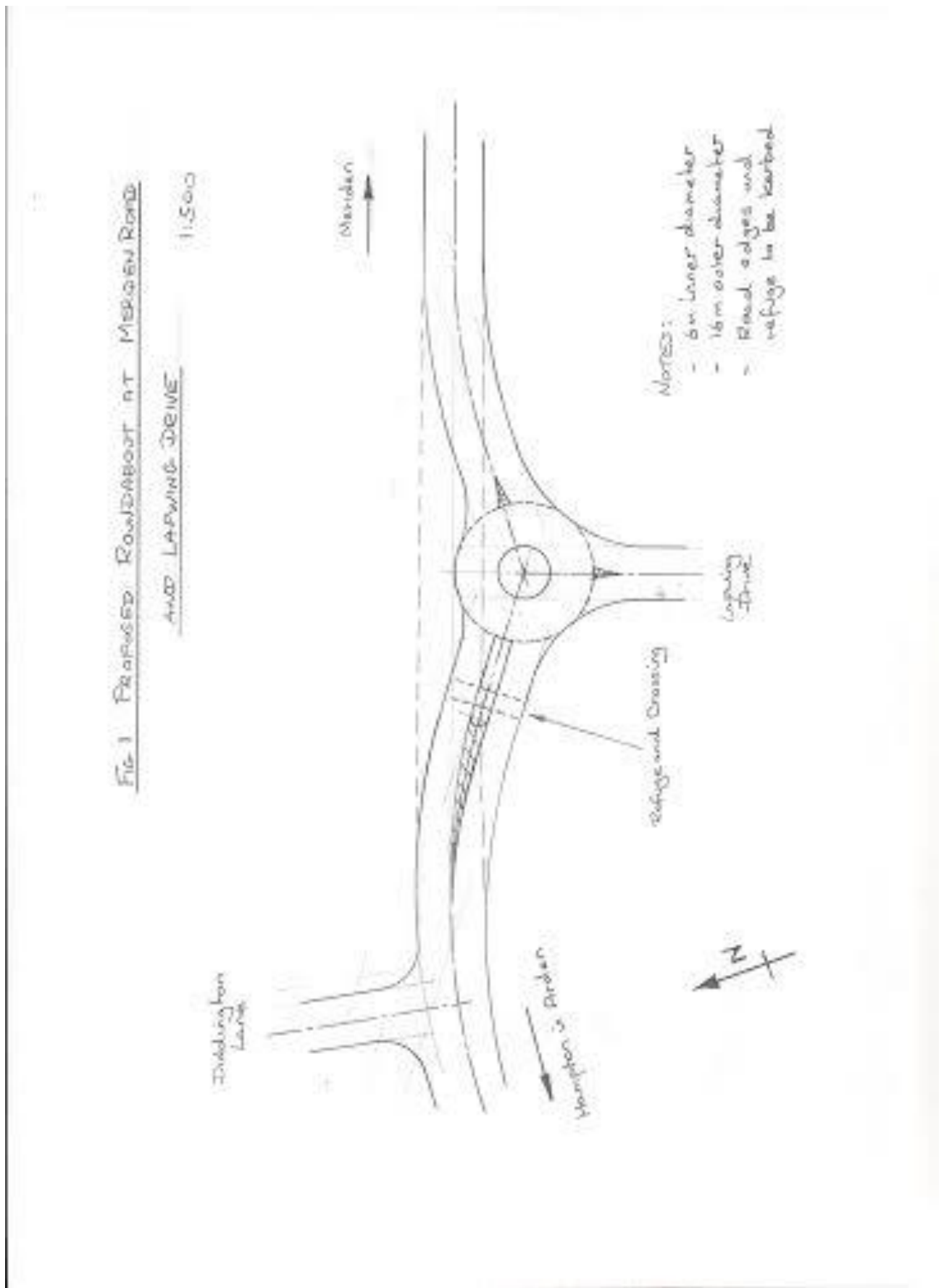


Figure 2 Suggested Layout of Roundabout at Solihull Road / Eastcote Lane

