Creation and Impact of Quiet Roads

Mechanisms to support alternatives to car use in rural areas

Enquiry No. 2020/1126

Eoin McLoughlin, Senior Parliamentary Researcher, Economics

18 December 2020

Abstract

This paper examines the use of Quiet Roads and other mechanisms to support alternatives to car use in rural areas. Examples of where such mechanisms have been implemented before is provided in order to inform their potential application in an Irish context.

Contents

Legal Disclaimer

Creation and Impact of Quiet Roads

What are Quiet Roads

'Quiet Roads' or 'Quiet Lanes' are designated rural roads where traffic volumes and vehicle speeds are already low and are aimed at encouraging people to travel by foot, by bike and on horseback.

The main features of designated quiet roads are:

- Reduced speed limits (to either 40mph or 30mph)
- Gateway signage (to remind vehicle drivers of the likely presence of non-motorised users on the road)

Their aim is to help preserve the character and tranquillity of rural areas and encourage an increase in non-motorised users, whilst maintaining vehicular access. These routes can also support local economic development by attracting visitors, and generally support access to the outdoors for everyone.

Criteria that other local authorities in the UK have used to designate quiet roads include:

- narrow, unlined rural roads, on average no more than 4m wide
- daily traffic volumes of less than 1,000 vehicles
- speed limits to be implemented in line with existing speeds, that is, 85th percentile measurements or where perceived speeds are already below 30mph or 40mph
- routes already used by pedestrians, cyclists and equestrians

There are three key elements to a Quiet Road scheme:

1. community involvement to encourage a change in user behaviour;
2. area-wide direction signing to discourage through traffic; and
3. Quiet road entry and exit signs to remind drivers that they are entering or leaving a Quiet Road, a place where they may expect people to be using the whole of the road space for a range of activities.

UK Legislation

Section 268 of the Transport Act 2000 gave Local Authorities in the UK the ability to designate country lanes as 'Quiet Lanes'. During 2006, the Department for Transport (DfT) described the process for introducing Quiet Lanes (and Home Zones) in circular 02/2006 and a regulation was introduced called the Quiet Lanes and Home Zones (England) Regulations 2006.

The [Traffic Signs (Amendment) Regulations 2006](#) amended the Traffic Signs Regulations 2002 (part I of SI 2002/3113) to allow for the introduction of new traffic signs, for use in England only, to indicate entry and exit points of a road designated as a Quiet Lane.

In respect of designation, the Quiet Lanes and Home Zones (England) Regulations are essentially procedural as they prescribe the procedures that local traffic authorities must follow for designating, varying and revoking Quiet Lanes and Home Zones (broadly following the procedures for traffic regulation orders), including provision for a substantial level of public involvement. In addition, they enable local traffic authorities to make use orders and speed orders, and specify procedures for making, varying and revoking them. Without these regulations, use orders and speed orders cannot be made.

Example of Quiet Lane Signage (NB the motor car is the last pictogram on the sign suggesting where it fits in the hierarchy of use).

Existing Schemes

Kent and Norfolk

There have been two Quiet Lanes National Demonstration Projects in the UK, in Norfolk and Kent, which were supported by the Countryside Agency working in association with Norfolk and Kent County Councils. The Norfolk Quiet Lane Pilot Scheme was implemented in April 2000 and the Kent scheme between March 2000 and May 2001.

The Norfolk Quiet Lanes scheme comprises 30% of the local road network, 59 kilometres in total. The network lies within the North Norfolk Area of Outstanding Natural Beauty and is an element of the Norfolk Coast Transport Strategy. The Kent project was designed to link towns, villages, public rights of way and the existing cycle routes in Tonbridge and West Malling. The network is made up of 40 kilometres of Quiet Lanes and off-road links.

Community Involvement

The aim of the Quiet Lanes initiative was to achieve positive changes in user behaviour on minor rural roads, without reliance on speed limits or traffic calming. Community involvement was decided on as the mechanism to encourage this change by developing community ownership of the network.

In Norfolk the scheme was widely publicised by using exhibitions, the local media, the circulation of leaflets, and meetings. An implementation group was set up with local stakeholders including: Norfolk County Council, North Norfolk District Council, local Parish and Town councils, farmers,

businesses, politicians, emergency services, the police, disabled representatives, and interest groups. Pubs, hotels, transport associations, schools and local firms were asked to encourage their employees to adopt the aims of the project.

In Kent the residents were consulted through meetings and public workshops; they were asked to offer their views on the proposed scheme and suggest which roads should be included in the network. A user group of parish council representatives, local business representatives and residents was set up to discuss progress, and a newsletter circulated to 40,000 households.

Traffic Calming Measures

In both Norfolk and Kent, discussions with the community led to the view that traffic calming was considered "urban" in character and was not desirable along Quiet Lanes. The cost of implementing measures across the whole network were also considered to have been prohibitive. Changes to the speed limit were rejected due to likely enforcement problems. As a result, no traffic calming measures were introduced along the Norfolk Quiet Lanes; however some measures were implemented within the villages.

Kent implemented low key calming measures at selected points on the Quiet Lanes network where vehicle speeds were thought to be a problem. For example, a false cattle grid, made up of 5 rumble strips, was implemented. At another point, a pinkish surfacing material was laid with an uneven edge pattern along the centre of the road to give the impression that the road was narrower.

Monitoring

Cost effective monitoring was difficult due to the large areas involved and the extremely low flows of both motorised and non-motorised users. Before and after surveys were carried out by TRL Limited and the County Councils which comprised automatic speed/flow surveys and manual classified counts (11 sites in Norfolk, 17 in Kent), attitudinal surveys, and video surveys.

Speeds were low in both National Demonstration Projects prior to scheme implementation, largely due to narrow widths and limited forward visibility. The monitoring showed negligible changes in speed on the Quiet Lanes compared to the control roads (see Table 1). Both mean and 85th percentile speeds were lower on the Quiet Lanes than on the control roads. There was little change in two-way mean speeds compared with the corresponding 'before' periods, the differences, both overall and on individual links, being mostly less than 2mph. Similarly, changes in 85th percentile speeds, overall and on individual links, were mostly less than 3mph.

Table 1: Mean Speeds (mph) before (1998/9) and after (2002/3) scheme implementation (both directions combined

Location	Mean Speeds				85th Percentile Speeds			
	Before	After	Change	Change relative to control	Before	After	Change	Change relative to control
Norfolk – July								
Control roads	34.6	34.7	+0.1		41.2	40.2	-1.1	
Quiet Lanes	30.2	30.1	-0.1	-0.2	36.8	36.0	-0.8	+0.3
Norfolk – Nov.								
Control roads	34.1	33.3	-0.8		40.1	38.6	-1.5	
Quiet Lanes	30.5	30.2	-0.3	+0.5	36.4	36.2	-0.2	+1.3
Kent								
Control roads	39.9	37.2	-2.8		46.3	43.1	-3.2	
Quiet Lanes	29.2	26.9	-2.3	+0.5	35.2	32.6	-2.6	+0.6

Source: Department for Transport

The total two-way traffic flows on the Quiet Lanes and control roads are shown in Table 2, together with the percentage changes before and after scheme implementation. The range of flows on Quiet Lanes was similar in Norfolk and Kent in both 'before' and 'after' surveys.

In Norfolk, the weekday 'after' flow in July was 10% lower on Quiet Lanes and 2% lower on the control roads than in the 'before' survey, a net reduction of 8% on Quiet Lanes. Corresponding changes in weekend flow were a 9% reduction on the Quiet Lanes and an 8% reduction on the control roads, a net reduction of 1% on Quiet Lanes. November 'after' flows on Quiet Lanes were down by 3% on weekdays and by 12% at weekends, compared to a 10% increase on both weekdays and weekends on the control roads. This equates to a reduction of 13.4% and 22.5% in motorised traffic on the Quiet Lanes relative to the control roads on weekdays and at weekends respectively.

In Kent, flow on weekdays was down 1% on the Quiet Lanes in the 'after' survey compared with a 16% increase on the control roads. Corresponding changes in weekend flow were an 8% reduction on the Quiet Lanes and a 4% increase on the control roads. These figures represent a decrease on Quiet Lanes of 17% on weekdays and 12% at weekends relative to the control roads, which was seen as encouraging, but could have been affected at least in part by the extensive roadworks. Most of the increase on the control roads occurred on those with the highest flow; two roads in particular had increase of around 50%, over the three-year period.

Table 2: Total two-way traffic flows before (1998/99) and after (2002/03) scheme implementation

Location	Weekday				Weekend			
	Before	**After**	**Change**	**Change relative to control**	**Before**	**After**	**Change**	**Change relative to control**
Norfolk – July								
Control roads	4407	4323	-1.9		4232	3898	-7.9	
Quiet Lanes	1984	1785	-10.0	-8.1	1732	1582	-8.7	-0.8
Norfolk – Nov.								
Control roads	4125	4542	+10.1		3427	3772	+10.1	
Quiet Lanes	1943	1879	-3.3	-13.4	1245	1091	-12.4	-22.5
Kent								
Control roads	5503	6395	+16.2		3842	4004	+4.2	
Quiet Lanes	2137	2122	-0.7	-16.9	1577	1453	-7.9	-12.1

Source: Department for Transport

Non-Motorised Travel

The non-motorised flows were very low both before and after scheme implementation. The numbers fluctuated throughout the monitoring period but the changes are mostly not statistically significant. The majority of people asked in both Kent and Norfolk said that the scheme had made no difference to their level of non-motorised use of the lanes. However 17% in Norfolk and about 14% in Kent said they were now more likely to walk, cycle or ride a horse on the Lanes.

The lanes, especially in Kent, are subject to flooding because of poor drainage; this is likely to discourage nonmotorized use during the winter months. Longer distances and lack of street lighting in rural areas make commuting or shopping by bicycle or on foot impractical for most. The main purposes of non-motorised use of the lanes were for leisure e.g. walking, cycling, or riding a horse for pleasure / exercise and walking the dog.

Reported Attitudes

Attitudes were monitored using focus groups, postal and telephone questionnaires, and opinion surveys at local amenities and attractions. Surveys among horse riders and carriage drivers, cyclists and walkers were also carried out.

Support for the schemes in both counties remained strong in both "before" and "after" surveys with at least three-quarters of respondents in favour of the schemes. However a considerable number (circa 1/3 in Norfolk and 1/2 in Kent) did not believe the scheme was working in practice. Concerns such as rat running and the speed of vehicles were cited as reasons for the schemes not working.

Almost 40% of respondents in Kent and almost half of those in Norfolk reported that they now drive more carefully along the lanes. This effect was self-reported and was not supported by measured changes in speed. However it could be that the points where more care is needed (for example at bends or where other users are seen) are not the same as the monitoring locations (for example these tended to be sited away from bends).

Lessons Learned

Some of the high-level results from the pilot included the following:

- The monitoring of the Norfolk and Kent Quiet Lanes schemes indicated that vehicle flows had decreased slightly compared to control roads and vehicle speeds had remained largely unchanged;

- The numbers of non-motorised users had fluctuated but had not been seen to increase significantly;

- Support for the Quiet Lanes initiative was high in both areas but a high proportion of respondents thought that it was not working.

Based on these results, a number of lessons can be learned that could be applied in relation to further schemes of this nature:

- Attention needs to be paid to the suitability (particularly busy or higher speed limit roads) to being turned into quiet lanes unless traffic calming is also included in the schemes;

- Larger signage whilst appearing intrusive is essential to ensure visibility to drivers, especially non-locals;

- Canvassing the support of the local population and business community is essential, especially to ensure local businesses assist in traffic calming;

- Consultation with the local community should lead to consensus on the lanes to be designated and the objectives for the scheme as a whole. Objectives should be realistic and not raise expectations beyond a level that can be achieved with the planned measures and the available funds.

- The Quiet Lane network should fit into the local route hierarchy with suitable diversion routes available. Public rights of way should be included in the networks wherever possible.

- Monitoring of the schemes should be undertaken to ensure the scheme is meeting its objectives; methods will vary depending on the objectives set.

- Consideration should be given to the needs of disabled people using the road. For example, wheelchair users may consider rumble strips undesirable, whilst the size and colour contrast of signs is important for visually impaired people.

Suffolk

Suffolk County Council implemented 13 Quiet Lanes as part of the pilot project 'Quiet Lanes Suffolk' in 2013/2014. These designated lanes were chosen because of their quiet nature, their proximity to other public rights of way and because there is an alternative or more suitable road close by for motorised transport to use. Cyclists, walkers and horse riders are actively encouraged to use Suffolk's Quiet Lanes in the knowledge that the exercise is benefiting both them and the environment. Suffolk's Quiet Lanes do not impose speed limits or reduce access by vehicles, and instead encourage vehicles to use more suitable routes.

This initiative has been led by Quiet Lanes Suffolk, a voluntary organisation seeking to extend the network of Quiet Lanes across the county. The group is quite active, holding public meetings, media promotion, and setting up a website and Facebook page.

More recently, an investment of £235,000 has been granted towards the further development of Quiet Lanes in the county under the Suffolk 2020 Fund. The fund is run by Suffolk County Council and supports projects that address a number of policy priorities. Currently, there are ten trial Quiet Lanes identified to test a new community-led process towards designation – three in Snape, three in Glemsford and four in Bentley. These Parishes will soon be consulting with their local residents and businesses before decisions are made on official Quiet Lane designation.

Essex

Essex County Council commenced a Quiet Lanes pilot in Essex in 2004/5 in Felsted. The aim of this Quiet Lanes scheme was to preserve the character of minor roads and make them more attractive for walkers, cyclists and horse riders to share with motorised vehicles by seeking to contain rising traffic growth that is widespread in rural areas. At the time, three key elements were defined for the scheme:

1. Community involvement to encourage a change in user behaviour
2. Area-wide direction signing to discourage through traffic (this was to be a replacement of existing signage rather than additional signage)
3. Entry signing to those entering the area to highlight that they may encounter a variety of road users.

It was also stated that Quiet Lanes would not be designated in order to:

- Calm traffic on busy roads
- Reduce the number or speed of heavy vehicles
- Solve traffic problems on individual isolated roads
- Use urban traffic calming measures
- Attempt to deny access to motorised users or hinder residents, visitors and business from going about their daily lives
- Manage development and diversification in the rural environment

It is not clear if a final report of the pilot project was ever produced though approval for the scheme was provided by the Department of Transport in 2007.

More recently, in February 2015, Essex County Council launched a county-wide initiative that aimed to encourage a greater number of Quiet Lane designations on existing country lanes which

met the Quiet Lane criteria. As part of this initiative, the County Council asked each of the county's 12 Local Highways Panels to identify and propose two roads to be considered Quiet Lanes.

Applicability to Ireland

As in the UK, there may be scope to apply the concept of Quiet Roads to Ireland whereby a rural lane or Boreen could be formally designated by an amendment to existing transport legislation such as the Roads Act. Previously, an action was included in the Speed Limits Review 2013 that called for proposals in this area to be developed and trialled although it is not clear if this was ever implemented.

In considering the applicability of such schemes for Ireland, important factors to take into account, as evidenced from the UK experience include:

- Suitability of roads for designation as Quiet Lanes
- Use of signage
- Community involvement and stakeholder engagement
- Monitoring of the scheme

Other Mechanisms

There are a number of other mechanisms that can help support alternatives to car use in rural areas. These are now considered below with examples provided of existing initiatives and projects. It is important to note that there is no one solution to providing more sustainable rural transport that can be implemented immediately although much can be learned from different approaches adopted elsewhere.

Shared Mobility

'Shared Mobility' services include both "Ride Sharing" (e.g. carpooling and e-hitchhiking) and "Asset Sharing" (e.g. bike or carsharing) services. Shared mobility can be part of the solution set to deal with mobility issues in rural environments, where conventional public transport struggles to meet the actual needs of passengers, and where people are highly dependent on the private car.

The European Commission is currently supporting an initiative called the SMARTA project that is focused on rural mobility and, in particular, rural shared mobility. This plans to showcase best practice in rural mobility from Europe and beyond. A variety of initiatives underway in different countries is showcased in their report on rural Good Practices.

In the UK, where a new strategy on rural transport is currently being developed by the Department for Transport, shared e-scooter trials are currently underway in Tees Valley, Norfolk and Great Yarmouth, among other places.

Box 1: Example of Shared Mobility Service

<div style="background-color:#8787b8; border-radius:20px; padding:20px; color:white;">

RezoPouce – France

RezoPouce is an organised hitch-hiking service that was created in 2009 by 10 municipalities, including one grouping of municipalities (Le Grand Montauban), North of Toulouse. It was an alternative to a municipal bus service that failed in early 2000. In 2012, these municipalities created an association (RezoPouce Association). Each municipality deploying the service became part of the association.

Users (over 16) register with the municipality engaged in the scheme or on the website and sign the Rezo Pouce Charter to signify their agreement with the community's values (trust, conviviality, efficiency, eco-responsibility). Drivers and passengers carry a sticker on the windscreen and have a badge. They meet at pre-defined hitch spots to share short trips between key locations. This is either done the traditional way (users just go and wait at the hitch stops) or by booking a ride via the app.

The scheme has expanded rapidly from 80 participating municipalities in 2013 to a predicted 2,000 by the end of 2020, covering 20% of rural France. It shows the potential of local communities in helping each other through a simple and well-organised hitch-hiking service, supported by the RezoPouce Association.

RezoPouce is used for all kinds of trips including commuting for work or education. Average waiting time is around 6 minutes with 50% less than 5 minutes and 90% less than 10 minutes.

More information is available here.

</div>

Demand Responsive Transport

Demand Responsive Transport (DRT) are services scheduled to pick up and drop off people in accordance with the actual needs of the passengers. The service is adapted to accommodate or better meet customers' requests. DRT is best viewed as a range of intermediate transport solutions that span the wide space between taxi and public transport.

The potential of DRT has already been highlighted by previous studies. Since the late-1990s, collaborative European projects (e.g. SAMPO, SAMPLUS, FAMS and FLIPPER) gained much understanding of all aspects of DRT. This was done by structured evaluation of pilots implemented in rural areas, sharing the results from different countries. Over this period, the ability of DRT to

provide efficient and affordable transport services has been greatly enhanced by the use of technology.

There are already examples of DRT operating in Ireland such as Ring-a-Link which offers bus services for rural areas in Carlow, Kilkenny, Tipperary and Wicklow, and to schools in Kilkenny. Originally established in 2001 as a grassroots organisation of local transport services, it has expanded its coverage area over time.

Box 2: Example of Demand Responsive Transport

<div>

ProntoBus – Italy

ProntoBus is an on-demand bus service which aims to integrate urban and extra-urban public transport services with the neighbouring villages and rural areas in the Italian Province of Modena.

The service is a general-purpose DRT (the service is open to the general public) where passengers can board only at the dedicated bus stops, that are marked with the service logo and an identification number that must be communicated at the time of booking.

The vehicles have to stop in the predefined stops only if a request has been made. To use the service, it is necessary to book the ride at least 30 minutes before the time of departure and it is possible to book a ride for the same day, for the following days or for the following week; the service must be booked by phone call at the dedicated call centre.

A new software system provides real-time information to the user via a web portal or smartphone app and allows the booking of the service; management of the reservations with a dedicated web interface, collection of information about each single reservation (origin and destination stop, hour, duration and length of single trips, etc) and communication of information with the bus drivers via a tablet device.

More information is available here.

</div>

Expansion of Rural Transport Programme

The Department of Transport, Tourism and Sport provides funding for the Rural Transport Programme (RTP) through the National Transport Authority (NTA). The RTP now operates under the name 'Local Link'.

The NTA was given national responsibility for integrated local and rural transport, including managing the RTP and its restructuring, with effect from 1st April 2012. The RTP operates two types of bus services:

- Door-to-Door Routes

- Regular Rural Services

Currently, 'Local Link' services are provided by over 400 private operators for 1.9 million passenger journeys a year of which 47% are availed of by 'free travel passengers'. In 2019, new initiatives were announced to improve rural transport, including two new pilot schemes.

A recent report by the Oireachtas Joint Committee on Rural and Community Development made a recommendation to *"develop expansion plans for Local Link services and undertake research on the location of relevantly-sized population groups and their interconnectivity"*.

A further related recommendation in the same report was to *"increase the resources of Local Link companies through the provision of additional assistance with administration staff to ensure that they are in a position to deliver as services become expanded, and ring-fence resources for three to five years in order to provide certainty in forward planning"*.

The report also notes how the NTA and Bus Éireann at their committee hearing raised the importance of the interaction of Local Link services with general public transport services in order to provide greater levels of connectivity for rural areas.

Local Transport Plans

Local Transport Plans are forward looking plans covering a number of years and have been an important part of transport planning in England. The Transport Act 2000 requires each local authority to prepare a local transport plan and present them to the Department for Transport.

Generally, each local transport plan must:

- Outline the current baseline with regard to transport, accessibility and pollution

- Set out challenging but achievable objectives

- Set out the programme for achieving these objectives

- Outline 'bids' for funding from the Department for Transport

Some counties in England, such as Hertfordshire, have also published rural transport strategies to help deliver policies in their local transport plan which specifically relate to rural transport.

In Ireland, the NTA has a statutory planning role in relation to the development of Regional Spatial and Economic Strategies (RSES), which must demonstrate consistency with the policies of the NTA in relation to the effective integration of transport and land use planning. This includes provision for local transport plans (LTPs).

LTPs will be prepared by local authorities for the key towns as designated in the RSES and other towns as identified by local authorities, based on the Area Based Transport Assessment (ABTA) guidance produced by NTA and TII. They will include priorities for each settlement in terms of public transport infrastructure and services, cycle investment, improvements to the pedestrian environment and road enhancements.

Rural Cycleways

Rural cycleways can comprise a mixture of new and retrofitted infrastructure and include greenways, cycleways, towpaths, and forest trails. Guidance on the design of rural cycleways has been developed by Transport Infrastructure Ireland (TII) with funding also available under programmes such as the Rural Regeneration and Development Fund. The identification of suitable rural cycleways can be part of the process in developing local transport plans.

The Programme for Government commits to developing an integrated national network of greenways to be used by commuters, leisure cyclists and tourists. The current Greenways strategy was published in 2018 and *"aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity"*.

The NTA has also recently established a Cycle Design Office (CDO), though at present this is only focused on providing design services to assist in the delivery of cycling projects predominantly in the Greater Dublin Area and the Regional Cities. The primary role of the CDO is to develop various cycling schemes through the design and planning stages of each project, together with the development of tender documents for construction plus the management of the tender process for construction.

Mobility as a Service

Mobility as a Service (MaaS) is a concept that has received high levels of interest in the transport sector both from the public and private sector. With MaaS, customers fulfil and manage all their mobility needs on demand, based on their general preferences and journey-specific needs. The focus in this approach is not on personal ownership of transport modes, but on mobility per se, which is seen as a service.

It generally comprises three principal characteristics:

1. DRT - aims to define the most suitable transport means for the journey required. This could be public transport, taxi or rental car, or even ride-, car-, or bike-sharing;
2. A subscription service – users can use during an agreed period of time a pay-as-you-go subscription solution, this allows users not to buy travel tickets or sign up for separate accounts;
3. Potential to create new markets – MaaS can be used to create richer data about travel demand patterns, this allows the creation of new sales channels, access to unexploited customer demand and to simplify the user payment methods.

An increasing number of cities have witnessed a steady shift towards shared and collaborative mobility services enabled by the emergence of intermediary platforms. Those platforms enable the sale of mobility services, acting as intermediary between customers and mobility service providers, and in some cases, creating new mobility services themselves e.g. e-scooters, bike-sharing, car-sharing and ride-hailing.

An EU funded project called Mamba is currently examining and promoting sustainable mobility solutions in rural areas. This includes piloting MaaS solutions in a number of different countries such as in Denmark and Finland.

Box 3: Example of Mobility as a Service

MinRejseplan – Denmark

The mobile application *'MinRejseplan'* or *My travel plan*, is a Mobility as a Service (MaaS), or rather a combined mobility solution currently being developed by the Transport Authority of Northern Denmark

The aim is to improve mobility and access to services for residents in rural areas where public transport is limited to rush hours – while reducing dependence on private cars. The new mobile app will guide users to the most convenient and cheapest mobility services available on a selected route from A to B – public as well as private options (e.g. carpools, shared cars, ferries, taxis, and transport-on-demand buses).

In a future version of the app, users will be able to pay the whole trip in one go, regardless of how many service providers are involved. As part of the project, the Transport Authority also started a collaboration with carpooling provider *GoMore* to ensure that carpooling is a viable option for travellers in the region. The long-term goal is to enable the use of MinRejseplan in all Danish regions.

More information is available here.