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# MID CHERWELL VILLAGES OXFORDSHIRE

Tackling traffic and safety concerns through place-making and lower speeds



For the Mid-Cherwell Neighbourhood Plan Forum

June 2017



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**For Mid Cherwell Neighbourhood Plan Forum**



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## Introduction

The quality of public space is critical to the economic and social vitality of towns and villages. The streets and spaces between buildings provide the essential connections between the houses, shops, schools, pubs and meeting places, connections that define communities and underpin their identity. For villages to prosper, a coherent public realm is essential to provide the framework for the day-to-day human activity and exchanges that form the basis for village life.

For most villages, especially those close to major traffic arteries, it is the impact of vehicles and traffic that determines the quality of its public space. Every community relies on the connections and movement provided by the network of streets, lanes and roads. Buses, cars and lorries and the transport they provide will continue to be an essential component of towns and villages for many years. But traffic can also isolate and erode village life, and the vitality and economic resilience of a community depends to a great extent on balancing the pressure from traffic and maintaining a coherent and attractive public realm.

For villages close to busy traffic routes and facing major growth and development, such a balance is especially challenging. For the area of Mid-Cherwell, increasing traffic volumes on the M40 and the strategic north-south routes between Banbury and Oxford, along with significant new developments at Heyford Park add to the challenge. Retaining and enhancing the quality of villages in the face of growing traffic has become critical to the community cohesion and quality of life for residents.

The communities of Mid-Cherwell have taken the initiative by forming the Mid-Cherwell Neighbourhood Plan Forum (MCNPF) to bring together a dozen parish councils together with a major developer to prepare a neighbourhood plan. A major theme for the plan is transport, and especially the search for measures capable of restoring and maintaining a balance between traffic and village life. The initiative will contribute to Cherwell District Council's Local Plan, and reflects the strong emphasis placed on the need

to retain strong, distinctive and coherent village communities.

These brief notes do not represent a specific set of proposals for the area. Such an exercise will require a great deal more detailed study and partnership work with public and private bodies, especially Oxfordshire County Council as highway authority, Cherwell District Council as the planning authority, and the Dorchester Group as the main developer for Heyford Park. Instead they are intended to record a number of observations and suggestions arising from an initial one-day visit to Mid-Cherwell. In addition these notes touch on a number of principles for the design, management and maintenance of rural roads, lanes, streets and spaces that have been successful elsewhere in ameliorating and minimising the impact of traffic on the public spaces that define village communities.





## Background

These notes follow on from an initial one-day visit to Mid Cherwell on 6th June 2017. The exercise stemmed from an invitation by the Neighbourhood Forum in response to the growing levels of concern amongst residents about the traffic impact of new development, and increasing volumes, size, and speed of vehicles. The visit by Ben Hamilton-Baillie included an introduction to the work of the Forum and a tour of the its locations and villages. The visit concluded with an evening presentation and discussion at the Heyford Campus. This allowed an introduction to some of the core principles underpinning emerging best practice for traffic in towns and villages, as well as some initial observations and recommendations concerning Mid-Cherwell villages.

The work of MCNPF has highlighted the importance placed by residents on addressing traffic-related issues. The intention of the visit and initial discussions was to work towards a broad consensus concerning the direction of

policies for Mid-Cherwell to reduce the impact of traffic, and to ensure that resources and effort are steered towards small-scale measures that are likely to be most effective.

The villages are not alone in seeking fresh ways to address traffic issues. Across the South of England and the rest of the UK concerns about traffic speeds, safety, pedestrian confidence and the quality of public space in towns and villages increasingly dominate local concerns. The publication of *Manual for Streets (2)*, alongside guidance such as *Traffic in Villages*, has provided renewed impetus to reconciling the realities of traffic with the qualities of streets and spaces that provide the economic and social basis for communities. The increasing limitations and shrinking resources of County and District Councils place more emphasis on finding new means to lower speeds and re-balance the various uses of public space that can engage the energies and enthusiasm parish councils and local residents, and their representative bodies.

The Mid-Cherwell Neighbourhood lies to the north of Oxford along the Cherwell Valley to the west of the M40. A major new development, Heyford Park, is underway at the former military airfield. The older historic settlements include:

- Duns Mew
- North Aston
- Somerton
- Fritwell
- Fewcott
- Ardley
- Middle Aston
- Steeple Aston
- Upper Heyford
- Lower Heyford
- Caulcott
- Middleton Stoney
- Kirtlington





## Mid Cherwell

The group of villages between North Aston and Fritwell in the north, and Kirtlington to the south are home to around 7,000 people, forming 17% of the population of Cherwell District Council. The historic house and garden of Rousham lies on its western edge, where the River Cherwell flows north through the area. The exceptional beauty and tranquility of the Cherwell Valley contrasts with the very busy M40 to the east. Canals and a railway add to the north-south routes through the area. East-west links are more limited by river crossings.



The significance of the former RAF / USAF airbase near Upper Heyford is very apparent from an aerial image of the area. Now the site of a major development of well over 2,500 homes with related employment and facilities, the new community of Heyford Park introduces a significant



change in the relationship of the existing villages, and brings substantial increases in traffic flows. The challenge to minimise the negative impact of such traffic is therefore critical.



Speed, and the expectations of drivers (particularly of HGV's) is the most damaging aspect of such traffic on the quality and value of the streets and spaces that make up the public realm of rural communities. The gradual retreat of human presence from streets is already evident. Children play in back gardens or in designated playgrounds. There are notably few walkers and cyclists using the roads and lanes. Such a retreat is more evident in the eastern part of the area, especially close to Junction 10.





## The villages - Initial observations

The quiet, understated beauty of this part of Oxfordshire manifests itself from a long-standing relationship between geography and human activity. Houses are scattered along ancient routes between settlements, many of which lack the defined boundaries of more defended towns. Attractive houses sit alongside ancient churches in a landscape shaped by agriculture and local transport. Villages tend to be linear, straddling their spine roads, such as Kirtlington, Fritwell and Somerton. Others, such as Middleton Stoney have developed around crossroads, or as hamlets around farms, such as Caulcott.

Few of the villages have obvious centres, where a public square might be framed by the church, pub and shop. Similarly the edges of the villages are rarely distinct or definitive, except where waterways or railways require bridges, such as at Lower Heyford and Somerton. The absence of clear centres and edges blurs the distinction between village environment and the higher speed roads that link them. This leaves the settlements more vulnerable to higher traffic speeds, and to the highway measures that gradually accrue as a result. The erosion of village life is especially evident in villages such as Upper and Lower Heyford, Middleton Stoney and, most of all, in Ardley, close to Junction 10. Traffic signals, large highway signs designed for speed, wide sweeping junctions and road markings all contribute to a slow, steady extension of the highway into the low speed context of village environments.

This loss of public space represents a threat to the viability and purpose of villages. With their reduced role as centres for markets and economic exchange, villages rely on investment from residents and visitors who value their intrinsic quality. Without such attractions, villages become mere dormitories for urban centres, and lose the shops and pubs that help define their identity. But such erosion remains reversible. An awareness of the fragility and sensitivity of the rural environment to standard highway engineering can ameliorate the impact of growing traffic levels. Traffic volumes are especially significant for Ardley, the Heyfords, Middleton Stoney and Kirtlington, but generally speeds represent a greater threat than traffic volumes.



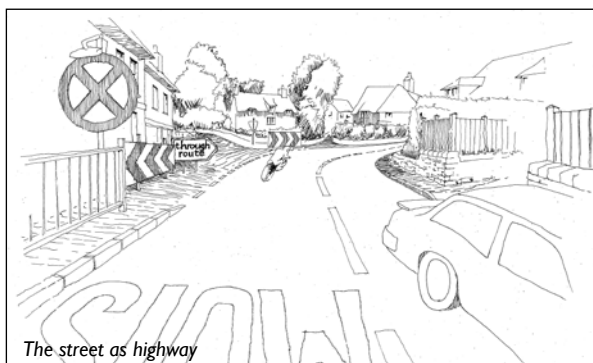
## Design principles

Retaining and enhancing the quality of Mid-Cherwell's villages requires a set of combined measures to modify the response of drivers to their surroundings. In particular this means reductions in speeds, whilst maintaining steady vehicle flows to cope with traffic movement. Conventional traffic calming measures such as speed humps and chicanes are unlikely to achieve these objectives. Amendments to the current speed limits are also unlikely to be effective on their own. The appropriate change in speeds and driver expectations can be achieved by introducing more subtle modifications to the streetscape known to slow traffic and improve safety.

The first such change relies on creating a clear point of transition between the faster approaching highways and the context of the village centre. A distinctive change in scale and street characteristics on the boundaries of the village helps alert drivers to the change in circumstances. This is particularly relevant for Caulcott, the Heyfords, Middleton Stoney, and in the transition into Ardley from Junction 10 of the M40.



Narrow visual widths and edge friction. Poynton, Cheshire



The street as highway

Secondly, lower speeds can be fostered by reducing the apparent widths of carriageways. This can be achieved through modifying verge and kerb details. The use of planted central median strips to divide carriageways, where widths permit, can also help.

Thirdly, reducing the linearity of streets, and emphasising their relationship to adjacent buildings, can reduce speeds. Removing or minimising road markings such as centre lines can also be helpful. Lower speeds result where streets are punctuated by a series of perceived spaces or "events", which reduce the linear characteristics. Animation and activity alongside the carriageway in drivers' peripheral vision, sometimes referred to as "edge friction", is an additional factor in modifying the speed environment.

Above all, the extent to which a village is perceived as a place in its own right, rather than a mere stretch of highway, influences drivers' speed and expectations. Such place-making is key to achieving more balanced, low-speed streetscapes. Lower speeds in turn enhance the potential for establishing places, creating more forgiving road environments better suited to the complex unpredictable context of a village.



Creating a village centre. Selbourne, Hampshire



The street as place



## Village entry points

The conventional traffic calming measures of road humps and chicanes have limited effectiveness in villages. Neither do formal speed limits, despite cameras and other enforcement techniques. The southern entry into Somerton does not noticeably slow traffic. These elements merely bring highway elements into the village, masking the special human environment to which drivers naturally respond.

By contrast, drivers appear to modify speed and respond to their surroundings where there is a clear gateway or point of transition from the higher-speed highway into the low-speed world of the village. To achieve this it is essential that any signing is consistent with the built environment, so that drivers are aware of the village edge. Placing signs and placenames too far outside a village is a common error. Centre line road markings are not needed for low speeds, and it is important to end these at the village entrance. A change in apparent width and the apparent scale of the road is also helpful in emphasising the transition. Speed limit signs where the form and context of the road remains unchanged are of little value. Lower Heyford has a clear example.



Conventional traffic calming has minimal effect in Somerton



Little to indicate the entry into Lower Heyford from the west



Centre lines and unchanged carriageway widths encourage speeds

Finally, the change to the low-speed context of a village becomes more effective the more evidence of human activity is visible to the driver. Such signs need be no more than a bench, some well-tended planting or visible children's toys. These elements often disappear as traffic increases, and it is essential that communities find creative ways to maintain the presence of village life to counteract the damaging effect of highway infrastructure.



No village visible and the unchanged road form approaching Fewcott



The white lines and chevron on the bend contradict the entry gateway



## Village entry points



The medieval Rousham Bridge serves as entry point to Lower Heyford...



.... and the canal bridge serves the same purpose for Somerton



Entry to Somerton marred by road markings



The entry to Fretwell is clearer, with markings gone and widths reduced



Kirtlington southern entry too far outside village. Note chevron and lines



Middleton Stoney entry breaks all the advice, and has little effect



The wide sweeping fast approach to Ardley from Junction 10



Excessive junction geometry extends the highway into Ardley's centre



## Place-making

Linked with clear entry points, the concept of place-making is a critical component of the toolkit for improving traffic in villages. Empirical research indicates that driver speeds and behaviour can be modified and improved through awareness of a distinctive set of places or memorable spaces through which routes pass. Such routes punctuate the linear continuity of the driver's perspective, and contribute strongly to emphasizing the unpredictable and multi-purpose context of a village.

Such places need not be formal spaces or village squares, greens or market spaces. Very simple measures to help frame spaces and provide a clear connection between buildings and adjoining space are often sufficient. A line of setts, or a slight change in paving can be enough.

The villages of Mid-Cherwell present many such opportunities. At present there is little to interrupt the linear progression of the driver's experience through some villages, and few cues to draw his or her attention to distinct places. The more such places extend their presence and activities to front the street, the more drivers moderate speed and engage with the realities of the village.

For long, linear villages such as Kirtlington, a sequence of distinctive places will help maintain lower speeds. The space fronting the shops, and two triangular village greens offer such opportunities. Fretwell offers a similar space where the road is too dominant. Elsewhere simple junctions could serve as identifiable places, rather than anonymous points on a road network. Lower Heyford has a fine example, where the simple removal of road markings would be sufficient. A pub at a junction in Upper Heyford could be the focus of a simple square to punctuate an otherwise long straight road, and a farmstead could serve the same purpose on the Somerton to Fewcott road. North Aston has a strong sense of place around its historic drinking trough, and Steeple Aston has such an opportunity at the junction by its shop. Most importantly, the junction at the centre of Middleton Stoney could become a recognizable place through the removal of traffic signals. At low speeds this would also improve flows and reduce congestion.



*The street through North Green could become part of Kirtlington*



*A similar opportunity at the bend on the southern green in Kirtlington*



*A potential village centre square on Lower Heyford*



*The village green in Fretwell could extend to include the road*



## Place-making



*An ancient farmstead could serve to punctuate a long, straight road*



*Steeple Aston's centre could become more of a place and less highway*



*The junction by the pub in Upper Heyford could become a distinct place*



*The Upper Heyford road could become part of the village*



*One of many place-making opportunities outside Somerton*



*The arrangement of trees and drinking trough in North Aston*



*The centre of Middleton Stoney would benefit from place-making*



*At low speeds, this junction could work as an informal space*



## Self-reading roads

If increasing speeds and volumes of traffic are not to erode the identity and coherence of the villages of Mid-Cherwell, it is important that the network of roads and lanes provide clear clues to drivers about the context through which roads pass. The more that highway design ignores buildings, and the activities they generate, the more drivers are isolated from the low-speed civic world of towns and villages.

Mid-Cherwell presents plenty of opportunities for emphasizing the presence of key places and buildings. In Lower Heyford, for example, the entrance to the important canal quayside is all but invisible from the wide, fast B4030. In Somerton, the village hall is an important centre of activity, but its presence is largely ignored by its adjoining street. In Upper Heyford, a well-used children's playground extends no visible presence onto the Somerton road as it enters the village. Similarly a key landmark such as the school in Kirtlington is celebrated only with standard yellow zig-zag markings.

Re-establishing a clearer connection between streets and key buildings does not require major changes. A modest change in the tone or aggregate content of the asphalt, or the insertion of a few lines of cobbles or setts can make a major improvement. Where buildings such as schools or village halls generate on-street parking, differentiating such spaces through contrasting paving can help to raise driver awareness of likely pedestrian activity. Animating the carriageway by simple place-making to reflect a village's morphology helps to punctuate the long, linear stretches of road that otherwise encourage speeds. The B3040 passing Caulcott is an example of a location where the presence of the hamlet could be made apparent through minor changes to the road markings and road surface.



The white lines and road widths provide no clues to the adjoining hamlet



The entrance to Lower Heyford quayside - invisible from the B3040



The well-used village hall in Somerton offers scope for a simple forecourt



A presence of the Upper Heyford playground is ignored by the road



The frontage of Kirtlington School forms no break in the A4095



## Mid-Cherwell - The next steps

This initial visit and brief notes represent merely the first stage in a long journey. A community response to the traffic issues in Mid-Cherwell calls for a thorough programme for local public engagement and participation. The presentation and discussion are intended to assist with a long-term vision for the area as a thriving and attractive set of villages. Much refinement and modifications will be required, especially in partnership with Oxfordshire as highway authority. The interests of local residents and businesses are key to such a scheme to maximise the economic and social benefits that a cohesive village centres can bring.

Although the circumstances for Mid-Cherwell are unique, there are benefits to be gained from learning from precedents. These can range from relatively simple rural schemes that combine speed reduction with place-making. One example is West Meon, where speeds on the A32 were reduced and a village centre re-established. At a more ambitious level, schemes such as the regeneration of Poynton in Cheshire demonstrates the potential for urban regeneration and place-making despite very heavy through traffic. Visits and further analysis to such examples can build up understanding and knowledge, and afford valuable lessons for the area.

Changes to the public realm are not easy. Streetscape alterations are disruptive, expensive and almost always controversial. A community has to undergo many months of debate and persuasion in order to establish sufficient consensus to take a project forward, to raise the necessary funds and support, and to withstand the discomfort and inconvenience of any construction works. Such consensus building requires patient engagement at both a local and county level to establish agreements on the key principles behind the approach. It is hoped that this brief visit may form a basis for exploring the vision further, and modifying the details in light of local responses, opportunities, and ever-changing circumstances. We would recommend a programme of events in connection with the emerging Neighbourhood Plan to initiate this critical engagement process, and a more detailed follow-up feasibility study to explore how the necessary funds can be raised.



*Extensive local engagement will be required to develop the scheme*



*Low cost speed reduction and place-making - West Meon*



*Low speed village centre with heavy traffic - Poynton*

## Conclusions and recommendations

An initiative by the Forum to address the long-term future of traffic and the public realm in Mid-Cherwell is well timed. The gradual erosion of the essential qualities and attractiveness of the village as a result of traffic and speeds is very evident. At the same time, new principles and techniques are emerging that can address some of these issues while allowing streets to retain their transport functions. Relying on the Highway Authority alone, with a limited palette of standard traffic calming measures, is unlikely to resolve or ameliorate the issues.

Funding in a time of public sector austerity is clearly a challenge. It is likely that the Parish Councils and their communities will need to be much more directly engaged in fund assembly and packaging together the various potential contributions, particularly those that are increasingly available from development, such as the Community Infrastructure Levy. Over coming years, much maintenance and street replacement will take place, and it essential that such works are informed and guided by a long-term vision.

With limited resources and voluntary leadership, it is essential that the Parish Councils do not waste time and energy on measures that are unlikely to be realistic or beneficial. Heavy engineering or conventional traffic calming are not likely to be successful. Neither would the road closures, one-way systems or speed limits. Such highway steps bring a range of additional highway paraphernalia, and tend to increase the impact of traffic. A focus on a set of small scale, modest enhancements to adapt the streetscape will be the most effective means to address the major concerns.

Traffic will remain a reality for rural communities for many years, especially for those like Mid-Cherwell adapting to major growth and development. Traffic and movement will always be a characteristic of thriving towns and villages. However an approach based on the principles outlined and discussed are likely to be most effective in ameliorating traffic concerns, and helping to retain and enhance the long-term qualities of the villages of Mid-Cherwell.

