

**STUDY ON THE EFFECT OF THE INTRODUCTION
OF HOME ZONES
FOR THE DEVELOPMENT CONTROL WORKING GROUP
CELTIC BENCHMARKING CLUB**



TIME TO THINK?

**Report prepared by
Mic Ralph
Land & Environmental Services
Glasgow City Council**

February 2008

Preface

The Celtic benchmarking club consists of a number of “Road Services” from several Local Authorities established in 2000 to allow each authority to benchmark themselves against the others to ensure that “best practise” was being implemented. The groups aim is “*to improve our service delivery through comparison and the sharing of best practice*”

The Key Objectives of the group are

1. To exchange information with partner authorities through discussions and networking to assist in the improvement of service delivery.
2. To establish and exchange details of working methods and processes across a range of activities within the highways and transportation function and other areas of mutual interest.
3. To seek to develop a common range of performance measurements and indicators in relation to the highways and transportation function.
4. To instigate, as far as possible within each authority, common methods of performance data collection and analysis in order to provide credible benchmarking.
5. To promote best practice and improve the quality of services through the definition, measurement, comparison and refinement of our processes.

The Council’s that participated in the working group and who subsequently agreed with the content of the report were, Argyle & Bute Council, Glasgow City Council, Perth & Kinross Council, South Ayrshire Council, Stirling Council, and Roads Service Northern Ireland.

REPORT ON THE USE OF HOME ZONES
LAND & ENVIRONMENTAL SERVICES - GLASGOW CITY COUNCIL

The aspirations of a home zone are well documented and in most instances are laudable, in that they intend to use the available road space in a way that prioritises pedestrians and cyclists and attempt to make the car driver feel that they are “the visitor” in a pedestrian friendly environment.

However, although the objective has significant support from the statutory bodies involved in the process, there are a growing number of professionals involved in road engineering and road safety who have genuine concern over the safety of vulnerable road users if home zone layouts are introduced based on current guidelines.

This report will firstly highlight these concerns and explain the reasons, including the statutory responsibility for any “roads authority” and finally offer suggestions that may mitigate some of the more serious points of concern.

This report is not necessarily the formal position of Glasgow City Council, but a personal view of senior officers who each have over twenty five years experience in road and planning related issues.

The following points are not necessarily prioritised in order; therefore all points referred to should be treated with equal concern unless otherwise stated.

THE NEEDS OF THE VISUALLY IMPAIRED AND OTHER DISABLED GROUPS



Everyone involved in the planning process is well aware of the needs of disabled persons, and in particularly the current legislation specified in the Disabled Discrimination Act (DDA).

Numerous reports have been prepared by disabled groups, particularly the visually impaired who have serious concerns over the use of shared surface roads.

The principle of a shared surface road is that the driver of the vehicle realises that they are in a different environment where pedestrians and cyclists have priority. This means that when a driver comes across a pedestrian, the vehicle is going so slowly, 10mph or less, that through eye contact the pedestrian and driver pass each other in a safe manner.

It is therefore very understandable why visually impaired persons are insisting that they have a clearly delineated route where they know that they will not encounter motor vehicles or cyclists. If a safe route is not provided visually impaired persons will not be able to use such roads and the developer and the local authority will be failing in the provisions stipulated in the DDA.

It is not only visually impaired persons that have concerns over the principle of shared surfaces. A significant number of other disabled groups have also voiced their concern. A joint statement calls upon government to

“Demonstrate its commitment to social inclusion, and to meet its disability equality duty in regulations, guidance, planning policy and decisions which impact on the pedestrian environment.

Ensure that professionals involved in the design, development and monitoring of streetscape and public space schemes take into account the requirements of disabled people.

Ensure that all parties consult with disability organisation at all stages in the process of developing streets and public spaces.

This statement was co-signed by Arthritis Care, Canine Partners, Deaf Blind UK, Disability Wales, Dog Aid, Dogs for the Disabled, Guide Dogs, Inclusive Mobility and Transport Advisory Committee Northern Ireland (IMTAC), Joint Committee for the Mobility of Disabled People, MENCAP, National Association of Local Societies for Visually Impaired People, National Federation of the Blind UK, National League of the Blind and Disabled, RNIB, RADAR, RNID, Tendering Community Transport, The UK Disabled People's Council.

A further key aspect of shared surfaces is the intention to make the street “so safe” by reducing vehicle speeds that children should be able to play freely in the road. Two points are worth considering here:

1) Although home zones are being advocated by the Children's Play Council (CPC), Road Safety education, which is generally a remit carried out by the local authority, currently educates our children not to play on the road. If home zones are promoted further, a re-think of road safety education will be required at a national level and it is recommended that in all areas where home zones have been, and will be introduced, schools should be targeted locally to provide specific road safety advice on the contradicting ethos for road safety training purposes.



2) Home zones will frequently advocate that children's play equipment be incorporated within the overall layout, this is intended as a further “traffic calming” measure in an attempt to “force” drivers to drive at walking pace. In addition to this, on street parking is often incorporated within a layout, which again is intended to act as a natural traffic calming feature.

It is envisaged that measures such as these “will enhance the overall safety” within a home zone. Reducing forward visibility is again considered to be a “safety feature” of a home zone. The suitability and effectiveness of these “measures” are now being challenged by Road Safety experts and Road Engineers throughout the country, and genuine concern on the overall safety of home zones, particularly if introduced in urban areas is being expressed.



Within Glasgow, 28% of child pedestrian injury accidents have a causation of either the child being “masked by stationary vehicles” or the child “crossing between parked vehicles”. Even with low vehicle speeds, there is obvious concern that vulnerable road users could be at risk when the above “measures” are put together.

On street parking and children playing brings about another obvious danger, when a vehicle needs to reverse into or out of a parking space, since the driver of the vehicle has very limited visibility. Even if a vehicle collides with a child at a low speed the force of the vehicle will be considerable and the severity is likely to be of a serious nature.

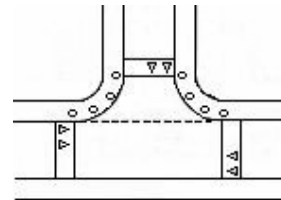
Every guide on the implementation of home zones stipulates the need to have the “road” traffic calmed to a maximum speed of 10 mph, which is considered ideal for residential roads. Putting theory into practise is more difficult than most people envisage.



Residential roads that are adopted or are potentially adoptable must allow for all standard vehicles to negotiate safely. The obvious larger categories include refuse vehicles, fire appliances, delivery vehicles and pantechnicons (furniture removal vehicles). Vehicles with long wheel bases have limited manoeuvrability and any traffic calming which incorporates a lateral (horizontal) shift must be laid out in a manner that allows larger vehicles to navigate safely in a forward gear. When the layout of any traffic calming is limited by the above criteria it is obvious that smaller vehicles, such as private motor vehicles and works vans etc can usually negotiate such traffic calming at speeds much higher than 10mph.

Achieving such speed reductions is particularly difficult if the road is linear in nature, which is the case in the vast number of “retro fit” scenarios and the majority of new build situations.

Existing standards for traffic calming on residential roads are designed to achieve a 20 mph maximum speed. In order to achieve this, varying measures can be used and are categorised as types A, B & C. Type A is the most severe (usually vertical measures with an 80mm up stand), the minimum spacing for a type A measure is every 60m. If a type C is used, (central islands, pinch points etc) then the spacing is a measure every 25m.



For home zones to work effectively, (according to their promoters), the maximum design speed a vehicle should be able to travel at is 10mph. When considering the engineering requirement to traffic calm a road to 20mph, it is clear that to successfully traffic calm a standard road to 10mph will be extremely difficult. Therefore this report recommends that all existing home zones are tested on site to see if they comply with the stringent requirements. It is also recommended that any home zones which are at the design stage are re-checked to determine if in fact the maximum speed possible is 10mph. This speed limit must be self enforcing as the Police would not be in a position to enforce.

When analysing the numerous Home Zone Guides a significant part of the ethos is to use limited forward visibility, parked cars, children’s play equipment, children playing and general pedestrian movement, to create an area where it is unsafe to drive at more than 10mph, however it is important to recognise that these circumstances will only work as “traffic calming” if all drivers, both recognise the danger **and** react appropriately.

Prevailing Driver Behaviour

Glasgow City Council, as one of the largest Local Authorities in Britain processes more than twenty requests for traffic calming per week, from members of the public who believe that drivers within their residential area are travelling at excessive speeds for the prevailing road conditions.

It is widely recognised, that although not all drivers chose to drive at inappropriate speeds, a proportion of the driving public does. This behaviour is not “accidental”, it is a choice that the driver makes. In the vast majority of cases the driver is well aware that they should not be travelling at speeds higher than 20 mph, but for varying reasons chooses to do so.

The type of person who drives in this manner is not restricted to “boy racers”. Numerous other driver categories also do so, parents running late on the school run, commuters travelling to work, drivers who feel that they are better drivers and can therefore drive faster than the average driver, people with works vehicles, van drivers who have a set number of deliveries to make, people who do not live in the road they are driving on, etc. The list of driving groups who will drive at inappropriate speed, at some point of time, is virtually endless.



This form of human behaviour can be observed throughout the country and is well documented via the number of complaints that each local authority receives each year.

When considering the above, it is likely that any home zone or traffic calming proposal, where the safety of vulnerable pedestrians depends entirely on, (or in part), drivers recognising and acting on the dangers in the road ahead, will be flawed. It is therefore recommended that any such scheme must have physical measures which will control vehicle speeds to 10mph. However, as indicated earlier this will be very difficult to implement and is likely to have a significant reduction in vehicle comfort with the proximity of various measures.

Aspirations versus Accountability

It is worth covering the above sub topic briefly, as it will help everyone involved in the process to understand the issues and will hopefully help to identify how best to build roads which play an enhanced role in delivering a better community for people to live in.

As highlighted at the start of this report the aspirations for Home zones are laudable and everyone involved in the delivery of new or improved residential area must accept the responsibility of working together to ensure that what is actually provided is the best and safest possible layout for our communities.

Creating better communities is an integral part of the policies of all local authorities and the responsibility of delivering this will mainly come from the Roads and the Planning Authorities. In several cases it is possible that developers of private and social rented accommodation will wish to promote such schemes, however in both cases this can only happen if the cost of such work can be justified in financial terms.

Accountability for reducing road traffic accidents falls mainly on the Roads Authority and targets in accident reduction are set nationally. It therefore follows that Roads Authorities may be reluctant to support schemes where they feel there may be an increased risk to pedestrians.

This reasoning helps to explain what may, to promoters of home zones schemes, be a reluctance to support layouts which depart from a conventional road strategy.

Accident statistics are an engineer's guide in helping decide good practice; however Home Zones are such a new commodity that there is insufficient data to collate to help form a useful opinion.

Shared surface style roads have however been around for some time and most authorities will have a number of larger residential developments where shared surface roads have been incorporated. It should be noted that in “conventional” terms shared surfaces will only be installed at the lower end of road hierarchy generally where there will be no through traffic. This excludes such scheme from any accident statistical analysis when evaluating the risk of developing Home Zones as the dominant type of residential road.

This report would encourage all parties, planners, road engineers, road safety personnel, disabled groups, architects, developers and the local community involved in these processes to investigate possibilities for road layouts, which help deliver a better safe community for people to live in.

Numerous studies have been undertaken to evaluate home zones that have already being implemented. Retro fit home zones that have been promoted and driven by a local community appear to provide the greatest benefit.

New build home zone have not been widely appreciated by new residents who appear to be more concerned over the reduction of on street parking and the expectation of a conventional layout with footways clearly identifying “safe pedestrian” areas.

Materials

When money is made available to create a new layout, whether it is a new build or retrofit, the likelihood is that when a scheme is implemented funds would not be available to make any subsequent significant alterations.

It therefore follows that all parties concerned share the responsibility for “getting it right first time”. With this in mind, materials for any new road layout must be carefully considered.

The chosen materials need to be

- of a contrasting finish to conventional roads, to highlight that the “road” is a different, more “pedestrian friendly environment”.
- of a high quality.
- of an appropriate finish to deliver the required planning aspirations.
- readily available and at a reasonable cost for maintenance purposes. Whole of life maintenance costs must be considered.
- capable of being easily and successfully reinstated when worked on e.g. by utility companies.



The incorporation of services into a home zone needs to be carefully planned, as utility companies have a right of access to their apparatus. In current shared surface arrangements equipment is usually installed in a service strip immediately adjacent to the carriageway.

As service strips are between the carriageway and the private gardens of the dwellings, there are numerous problems with residents “extending” their garden by either erecting fencing or planting shrubs etc.

Service areas within home zones has yet to be fully developed as the conflict not only with the needs for good reinstatements but more importantly is the safety issues of creating safe working areas where children may well consider that they are in a safe “play area”.

The possible requirement for a total road closure to carry out works safely may be necessary, which would restrict access for residents and create an increased administrative burden (the need for a temporary traffic regulation order) for the local authority and could restrict the times / day's utility companies could carry out work.

These criteria again make it very difficult to find suitable materials, as the material which is generally used to date is coloured mono-block. Within Glasgow there are earlier streetscaped roads which have been constructed mainly in mono-block. The maintenance issues have been so significant with these roads, particularly if they have vertical traffic calming features or have been subject to work by utility companies, that there is a significant reluctance to use mono-block in any areas that are or will potentially be publicly adoptable*.

In small areas, moulded, coloured thermoplastic with a “mono-block” finish may be worth considering, but this is not suitable for very large areas or where utilities are likely to excavate, (patching / repairing is difficult to do and is not a standard kit).

Coloured asphalt is another option which works reasonably well from a maintenance perspective, but there are safety concerns that this finish may not communicate to drivers that they are in a significantly different environment. There are also concerns that this type of treatment may not “deliver” the planning aspirations required.

**See addendum on the use of block work*

Way Forward

This report has covered a number of key areas of concern that have been highlighted through discussion with Planners, Road Engineers, Focus Groups, Architects, Developers and members of the public.

It is clear that the further introduction of Home Zones on a large scale using the current home zone format will raise serious concerns from a number of key participants in the process.

It is therefore recommended that a working group be established that encompasses all those concerned in the provision of better communities to investigate the topics raised in this report and to then pass their findings to the respective authorities to see if any additional local issues should be considered.

It is further recommended that this home zone working group start with a “blank canvas” scenario, first of all to identify the facilities an area should have, then design a safe road layout which has a maximum design speed of 10mph before integrating the desired buildings which would then complement this design.

Conclusion

The CELTIC bench marking steering group have approved this report for wider circulation to encourage further discussion on how we collectively play our part in building better and safer communities.

The assistance of William Chan BSc(Hons) in the preparation of this report is gratefully recognised.

Documents Reviewed

Manual for Streets

PAN 76

Designing Places

The Home Zones (Scotland) Regulations 2002

The Home Zones (Scotland) (No. 2) Regulations 2002

Home Zones in Scotland: Evaluation Report

Home Zones – A Planning & Design Handbook

East Lothian Council Home Zone Guide

Bristol City Council New Build Home Zone Guide (November 2003)

Joint Committee on Mobility of Blind and Partially Sighted People (JCMBPS)
Shared Space in Public Realm - Policy Statement 2005

Shared Surface Street Design: Research Project – Report of Focus Group

Shared Surface Street Design: Research Project – Report of Focus Group (Holland)

Designing for Disabled People in Home Zones JMU Access Partnership

The above list is far from being exhaustive on material referred to in terms of home zones. It does however cover the relative legislative documents and the main guides currently being applied in Scotland.

ADDENDUM ON THE USE OF BLOCK WORK

Block work is commonly put forward as a road and or footway material when the promoter of a residential scheme is intending to make “their” development different than that of a conventional layout.

However, it is obvious that without a clear strategy on such materials and their use, developments throughout the country could create significant maintenance difficulties and could create confusion for drivers, which in turn would have an adverse effect on road safety.

The common problems with block work that manifest on a frequent basis include,

Dislodged blocks, causing a trip hazard.



Poor re-instatement (normally following a utility installation).



Reinstatements using alternative material i.e. asphalt, concrete rather than blocks.

Unightly finish due to spalling and / or weed growth.



Settlement of blocks surrounding ironwork, leaving the ironwork sitting proud of the carriageway.