DS.224
Total Shared Surface and Non-Standard Level Surface streets and spaces

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1 Introduction

1.1 Notes

a. This standard explains requirements about the creation of Total Shared Surface streets and spaces and Non-Standard Level Surface areas.

1.2 Discussion

a. The term ***Level Surface*** is used to describe streets and spaces (or parts of them) that do not include up stand kerb steps to separate carriageways for vehicles from footways for pedestrians. This means that the entire street is at a single level.

b. The term ***Shared Surface*** is used to describe streets and spaces (or parts of them) where people and vehicles mix with equal priority and without any segregation from one another. There are numerous ways this could work. A Shared Surface could be:
   i. A conventional street that keeps protected footways that are for pedestrians only, but where pedestrians are also able to share carriageway space with vehicles.
   ii. A ***Level Surface*** without up stand kerb steps to physically contain vehicles to certain areas. Though pedestrians might be able to use all part of the streets, vehicles may or may not be restricted to certain areas (though given the absence of vertical kerbs other means would need to be found to manage this). This is the most extreme example of a ***Shared Surface*** wherein the entire street becomes a single surface that can be used by all.

c. The Highway Authority is supportive of both ***Level Surface*** and ***Shared Surface*** design approaches subject to certain provisos. These are as follows:
   i. Notwithstanding the dedication of certain parts of the street as ***Shared Surfaces*** used by both vehicles and pedestrians, continuous pedestrian only routes need to be retained to either limit of the highway for the benefit of the minority of people who will not be comfortable or confident mixing with vehicles. See standard DS.201 for further information.
   ii. In the case of ***Level Surfaces***, suitable delineation still needs to be retained between pedestrian only areas and areas that vehicles are able to access. The only standard acceptable approach to achieving this (and one which designers are strongly encouraged to adopt because of its many other advantages) is to use raised edge linear tree pits or planting beds. In certain limited circumstances in new build situations some use of up right street furniture may also be acceptable. Use of corduroy tactical surfacing is not supported at this stage.
   iii. Traffic conditions must be right and engineering risk considered. As such, ***Shared Surfaces*** designed as per the above will generally only be acceptable in quiet low trafficked street environments where pedestrians will dominate. Additional reinforcement of pavements may also be required.

   Where all the above can be satisfied then no special authorisation is needed to implement these designs.

d. What is <u>not</u> supported at this stage without special authorisation is:
   i. Total Shared Surfaces - The creation of areas that omit pedestrian only routes from the edges of the street or space such that vulnerable pedestrians have no choice but to use spaces shared with vehicles.
   ii. Non-Standard Level Surfaces - The introduction of level surfaces that use methods other than those which the Highway Authority is currently comfortable with (generally anything other than raised edge linear tree pits or planting beds or – in certain limited circumstances – closely spaced up right street furniture).

e. The Highway Authority has implemented some schemes that could be considered to contain Total Shared Surface or Non-Standard Level Surface elements in the past. It remains extremely interested in the

potential benefits that evidence is beginning to suggest these techniques might bring. However, given the current lack of clarity about important connected design issues and uncertainty about their appropriateness for vulnerable user groups (see discussion in Appendix A) these are considered to remain experimental techniques for the time being. They are not yet considered suitable for widespread general use.

f. The Highway Authority does want to play its part in contributing to the growing research base on ***Shared Surfaces*** and ***Level Surfaces*** to help determine whether and how Total Shared Surface and Non-Standard Level Surface approaches might be made appropriate for all users. It will therefore consider proposals for Design Pilots to gather further evidence about effectiveness. As evidence becomes clearer, successful design approaches are better understood and the support of vulnerable users is gained, it may reduce these restrictions to permit the more widespread of use of these techniques.

2 Requirements

2.1 Use requirements

a. A Design Pilot dispensation will need to be agreed in order to permit exploration of any of the following approaches within a project (see note):
   i. Total Shared Surfaces - Proposals to introduce shared surfaces that do not meet the requirements of standard DS.201 to provide routes for pedestrians only along the limits of the Highway. And/or
   ii. Non-Standard Level Surfaces - Proposals to introduce level surfaces that do not include a standard method to delineate pedestrian only areas from areas that vehicles can access.

   In addition, such approaches are considered to be Equalities Sensitive. Therefore, notwithstanding agreement to a Design Pilot, EqS Departures to these approaches will need to be obtained.

NOTE: Designers should note that such dispensations may only be agreed early on in the development process during the Outline Design Workstage. Where not so agreed at this stage then no departures from this standard will be considered later in the development process.

Appendix A – Background

1.1 Discussion

a. Both ***Shared Surface*** and ***Level Surface*** design techniques are closely related to the concept of ***Shared Space***. This is a design philosophy about creating more people friendly streets that strike a better balance between people, place and vehicles. ***Shared Surface*** and ***Level Surface*** techniques can be thought of as amongst a tool box of measures that might be used to achieve this goal. However, it is important to appreciate that they are not a perquisite. Conventional street arrangements may also work in many instances. Where ***Shared Surface*** and/or ***Level Surface*** techniques are used, they could be employed to small areas only or to the entire extent of a street. That street could be anything from a quiet cul-de-sac or alley to a major busy road or high street carrying lots of vehicle traffic.

b. The idea of creating streets with ***Level Surface*** and/or ***Shared Surface*** areas is relatively new to the UK and has provoked much debate. Whilst many designers and users agree with the philosophy of ***Shared Space*** (e.g. creating more people friendly streets and spaces) there is disagreement about whether ***Shared Surfaces*** and ***Level Surfaces*** are the best way to achieve its aims and who might benefit or lose out as a result.

c. Advocates of ***Shared Surfaces*** and ***Level Surfaces*** reason that these approaches may have a range of benefits. They argue that removing up stand kerbs steps and clear segregation of the carriageway will cause vehicle users to behave more cautiously, resulting in slower speeds and more courteous treatment of pedestrians. They suggest these approaches will create environments more conducive to social activities as well as reducing casualties. They also note that removing up stand kerb steps could make streets more accessible for people with some types of mobility difficulties who may struggle with negotiating level changes.

d. However, national groups and organisations representing a wide range of vulnerable people have expressed strong opposition. They reason that ***Shared Surfaces*** and ***Level Surfaces*** may affect the safety and independence of vulnerable people by limiting their ability to navigate streets and spaces without fear of conflict with vehicles. They point out that Highway Authorities are subject to a statutory duty to promote equality and that these approaches needlessly discriminate as conventionally kerbed and segregated streets are easily achievable. Groups have argued that, irrespective of the eventual outcome over current design disagreements, vulnerable people must be closely involved in the design process for ***Shared Surface*** and ***Level Surface*** schemes. There has been concern that this has not always been the case to date and this has been supported in part by research[1]. However, there is some subtlety and detail to this position. Most groups are opposed to the idea of creating total shared surfaces that leave people with no option but to mix with vehicles due to absence of safe space. However, many see potential benefits for vulnerable people from the introduction of ***Level Surface*** – it is just the means of delineating these they object to as the needs of different vulnerable user groups vary considerably and most of the proposals so far made by designers have been problematic for one or the other.

e. Despite the odd high profile scheme, there are currently few ***Shared Surface*** and ***Level Surface*** schemes in the UK to draw any conclusions from. Because of this, a lot of research has been commissioned in recent years in order to get to the bottom of the debates (see references). This has attempted to resolve issues raised by disability advocacy groups about shared and level surfaces and to evidence the alleged benefits and disadvantages.

f. There is growing evidence from the above research to suggest that ***Shared Surface*** and ***Level Surface*** techniques *could* be appropriate in very busy pedestrian spaces (e.g. town centre shopping streets) where

[1] See in particular Imrie, R. and Kumar, M., (2011).

vehicle flows are very low[2]. Complete removal of all forms of delineation (e.g. making the entire space appear as one area) appears likely to be key to reducing vehicle speeds and achieving benefits. However, this evidence base is not yet fully developed and some of it is contested[3]. On the other hand, some of the arguments of those opposed have also been evidenced[4] whilst there is as yet no agreement on important design issues that are critical to certain groups (including new national standards for tactile warning surfaces that can be used by visually impaired people in the absence of raised kerbs)[5]. In addition, many complex legal issues remain that are yet to be fully understood by Highway Authorities. It is likely that resolving some of these will require changes to legislation which will take considerable time.

g. A final area of interest relates to general public support. Much of the research commissioned on ***Shared Surfaces*** and ***Level Surfaces*** so far has tended to look at issues related to the needs of people with disabilities – particularly those who are blind or partially sighted, wheel chair users, and (to a lesser extent) people with learning difficulties. Less research has considered desirability amongst the general public or issues for other vulnerable user groups[6]. Consultations carried out by the Highway Authority in preparation for the SSDM found that the general public were not in favour of ***Shared Surfaces*** or ***Level Surfaces***. Importantly this opposition extended to many of the design features that research to date suggests are likely to be most important to their successful operation. An associated equalities impact assessment also returned a negative response.

[2] See in particular MVA consultancy (2010a, 2010b and 2011).
[3] See in particular Moody, S. and Melia, S., (2011).
[4] See in particular TNS-BMRB, (2010), Childs, CR. et al (2009) and Newton, R. and Ormerod, M., (2007).
[5] See Department for Transport, (2002) and Department for Transport Mobility Unit, (2005) for current standards. For information about trials of potential alternative tactile warning surfaces see Guide Dogs for the Blind Association, (2007), Childs, CR. et al., (2009 and 2010), and MVA consultancy, (2011).
[6] However, see Newton, R. and Ormerod, M., (2007) for some attitudinal information about older peoples views on shared surfaces, level surfaces and tactile paving. See also Kaparias, I. et al., for some discussion about the willingness of different user groups to share space.

1.2 References and further reading

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