

Longsight Road Langho

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Note in relation to the On-Site (Access) Loop Road. Text by Peter Blair for the Appellant and Chris Carter for RVBC

Peter Blair Text

I have been asked the question, “*Why has the site road been designed as a Loop?*” I was not the Highway Engineer on the case originally, so cannot attest to any conversations on the matter with the LHA, when the indicative layout was being worked up. I have spoken to the Engineer (Adam Smoud formerly of Fore Consulting) and he informed me that the indicative layout was designed following best practice principles and with an expectation for a loop, through discussions with Lancashire County Council (LHA).

To consider an alternative, past design guidance such as DB32 set a limit on the number of dwellings which could be served off a cul-de-sac and recommended more than one access for developments of this size. Modern guidance does not set such limits, but the principles of emergency access and minimising disruption to traffic, at times of road closure or roadworks on a single length of carriageway are still sound.

In the case of this site, the form of access junction and the geometric parameters such as visibility splays and developing the Ghost Island tapers which inform its design are such that only a single point of access can reasonably be located on the frontage.

Under those conditions, a recognised approach is to have a loop road on site, with as short a single carriageway connection to the main road as possible, so as to provide emergency access and minimise the length over which disruption could occur.

When I came to be appointed, I did note the Consultation response from the LHA (CD 2.7) which offered comment on the indicative layout, noting the need for an 8m wide road as far as the first junction and 5.5m thereafter. Such a requirement is standard for loop layouts to recognise where a single road link to the highway could be subject to roadworks (and disruption), it is built “over wide” to minimise such effects.

The Fire Service will also have been a consultee and have not raised an issue with the loop layout. It enables emergency access from two directions.

I would also have recommended a loop layout. Current guidance champions permeability and connectivity, which generally, cul-de-sacs do not serve well. Replacing the loop with 2 cul-de-sacs may save a short section of connecting road

but would compromise emergency access and would necessitate two new turning heads and a significant and frequent practice of reversing and turning. Even if that alternative was advanced, I would expect that the area would still be impacted as pedestrians and cyclists would still wish to pass through the same area on a desire line across the south of the site.

Whilst it is not currently the intention to divert buses into the site, a loop road would also facilitate that (and refuse vehicle and other delivery vehicle rounds), so there are advantages in minimising travel and minimising reversing and turning manoeuvres too. The loop layout could attract the diversion of future bus services too.

MfS says designers should be cautious because cul-de-sacs can make the network less direct for people walking or cycling and can create avoidable vehicle trips.

MfS is much more supportive of connected streets with some dead ends as exceptions, rather than whole estates built around dead ends.

Paragraph 4.5.7 of MfS states '*Caution must, however, be exercised when planning for cul de-sacs, as they may concentrate traffic impact on a small number of dwellings, require turning heads that are wasteful in land terms and lead to additional vehicle travel and emissions, particularly by service vehicles.*' My underlined text identifies the shortfalls in including cul-de-sacs within a residential development.

Paragraph 6.8.2 of MfS states '*Well-connected street networks have significant advantages for service vehicles. A shorter route can be used to cover a given area, and reversing may be avoided altogether. They also minimise land-take by avoiding the need for wasteful turning areas at the ends of cul-de-sacs.*' The looped arrangement eliminates the need for service vehicles to reverse. This further reinforces that cul-de-sacs are disadvantageous for service vehicles negotiating the on-street layout.

Additionally, Paragraph 7.10.3 of MfS states '*Routing for waste vehicles should be determined at the concept masterplan or scheme design stage (see paragraph 6.8.4). Wherever possible, routing should be configured so that the refuse collection can be made without the need for the vehicle having to reverse, as turning heads may be obstructed by parked vehicles and reversing refuse vehicles create a risk to other street users.*' My underlining. Whilst Figure 7.24 of MfS shows the different turning spaces and usable turning heads, the looped arrangement reduces the need for a service vehicle to reverse. In doing so, this reduces the risk to other street users.

These aims are reflected in the LCC current design guidance, Civilising Streets. Para 5.10.10 of that document says cul-de-sacs should be designed out.

Peter Blair

Chris Carter Text

I offer my professional opinion as a Transport Planner, but not as the LHA. Mr Blair sets out a reasonable case for a site layout designed to incorporate a loop road from a highways perspective. I note the benefits of doing so from an emergency access, servicing and resilience perspective. I agree that the loop road is the optimal highways layout for the site. However, the question I have been asked is, "Could the site have been designed without a loop road?"

In considering this, I highlight that I am not a masterplanner, nor have I had the benefit of the time needed to look into this matter in detail and examine the technical feasibility of alternatives. From a purely transport planning perspective, should there be non-transport reasons for not promoting a loop road layout, I would recommend investigating whether the southern section of the loop is entirely necessary to be used for vehicles. This would create a west and an east cul-de-sac.

Providing a direct, but pedestrian/cycle/emergency only link between the ends of the two culs-de-sac would meet the MfS aim of providing direct routes for walking and cycling along desire lines. Thus the two culs-de-sac would act as a road with a modal filter, as is often applied in Liveable Neighbourhoods. Para 5.10.10 of LCC "Creating Civilised Streets" (2010), states, "Where possible developments should be designed to maximise permeability and connectivity and design out cul-de-sacs. However, where design layouts are constrained the roads should provide turning facilities."

Thus, whilst culs-de-sac are discouraged, they are recognised as a potential response to a constraint. It should be possible to avoid provision of turning heads through the layout of, and intersection with, side roads. Reversing of servicing vehicles would be needed, although this already occurs in many other locations in this design.

In conclusion, I agree that the loop road is, on balance, the optimal way of delivering highways access from a purely transport perspective. However, I also consider that alternative ways of providing access are likely to exist, subject to appropriate technical feasibility and masterplanning consideration.

Chris Carter