

### 3.4.4 Relief Roads

The focus of this Manual is the creation of place-based/sustainable street networks, which balance pedestrian and vehicle movement. However, it is recognised that there are some roads which are required to cater for the efficient movement of larger volumes of motorised traffic at faster speeds over longer distances. These are generally referred to as *Inner Relief Roads* and *Urban Relief Roads*.<sup>13</sup>

*Inner Relief Roads* are generally used to divert traffic within an urban area, away from a *Centre* or *Node*. The design of these routes needs careful consideration. Chapter 2 highlights the issues associated with the provision of higher speed/highly segregated routes through cities, towns and villages. Authorities in many urban areas have attempted to overcome issues of severance by vertically separating these routes into a series of tunnels, cuttings or elevated carriageways. Such solutions, however, tend to be reserved for major national projects and can have significant negative impacts on place (see Figure 3.30).

It is more likely that *Inner Relief Roads* through urban areas will need to occur at moderate speeds (50 km/h). The route should be integrated within the urban fabric so that a sense of place is maintained and to prevent severance between adjoining areas. There are many examples in Ireland of streets that carry significant volumes of through traffic at moderate speeds and retain a high place value/levels of connectivity (see Figure 3.31). Successful solutions tend to be designed as boulevards with well planted medians and verges that provide a buffer between the heavily-trafficked carriageway and the surrounding pedestrian environment. Boulevards may also be designed as a 'multiway' boulevard with a central carriageway for through traffic and access carriageways at the side (see Section 3.4.5 Noise and Air Pollution).



Dublin Port Tunnel



Gran Via Les Corts Catalanes, Barcelona



M4 London

Figure 3.30: Examples of major urban roads that move large volumes of traffic via vertical segregation. These require significant investment in infrastructure. As illustrated in the middle and bottom examples they can have negative impacts in terms of place and/or connectivity (image sources: Google Street View).



Figure 3.31: Dorset Street, Dublin, an example of a street that carries large volumes of traffic and where recent improvements have ensured it maintains an important place function.

<sup>13</sup> See DN-GEO-03031 Rural Road Link Design (2017).

*Urban Relief Roads* are generally routed around urban areas and are commonly referred to as *By-Passes* or *Outer Ring Roads*. Designers may use these routes to direct longer distance traffic, and in particular Heavy Goods Vehicles (HGVs), away from cities, towns and villages provided they are clearly separated from the urban fabric (see Figure 3.32). Urban development should not extend to the edge of these routes without full integration into the surrounding street network. This is a strategic issue that should be resolved via a County Development Plan/ Local Area Plan (see Figure 3.33) and may also require close consultation with TII, where the road is part of the national road network.<sup>14</sup> In the case of a motorway or national grade separated dual carriageway the future integration of the road would not be an option.

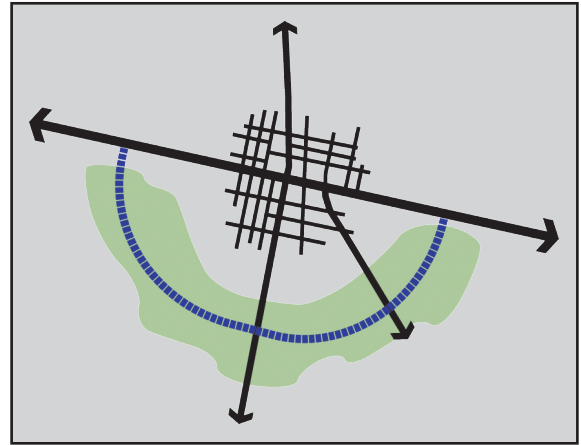


Figure 3.32 Outer Relief Roads can be used to direct long distance traffic away from cities, towns and villages

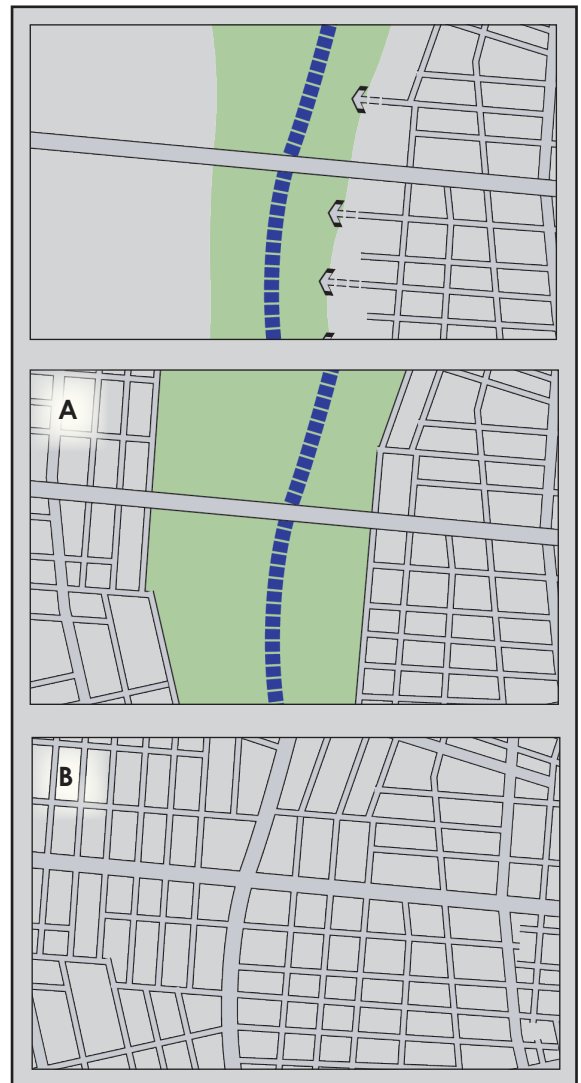


Figure 3.33: As urban expands toward an Urban Relief Road (top) a strategic decision will need to be made as to either maintain segregation and 'leapfrog' leaving a green belt (middle), or moderate speed, retrofit and integrate route (bottom).

<sup>14</sup> Refer to *Spatial Planning and National Roads: Guidelines for Planning Authorities* (2012).