Response to Integrated Movement Systems Policy Paper

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Introduction

The following comments on Integrated Movement Systems Policy Discussion (IMSPD) paper are arranged according to a number of themes that are generally aligned with the policy priorities discussed throughout the IMSPD paper.

One key critique of the paper is the apparent confusion over the meanings attributed to 'sustainable mobility' on one hand and 'transport' on the other. Indeed, these terms are constantly conflated in the paper with the result that the transport meaning of urban travel (ie., from A to B as quickly or efficiently as possible) has become the 'default' policy position and this meaning tends to be privileged over other meanings. The significance of this is that policy promoting sustainable mobility is compromised and likely to remain on the margins of any policy intended to deliver integrated movement. Put another way, conflating 'mobility' or 'travel' with 'transport' will see the ongoing expansion of infrastructure that simply caters for and prioritises private motor vehicle use. What this means for other, more healthy, sustainable and socially convivial travel modes – ie., active travel modes – is that they will remain at the margins of planners’ thinking with the potential to craft appropriate policy enabling active travel options to be relegated to ‘after-thought’.

On this note, it is important to acknowledge that current policy directed towards cycling and walking in the SAPPL is outdated and inadequate. A recently published study by Wendy Bell and myself is attached that demonstrates many of the problems associated with the current policy regime. This paper is offered in good faith and may be useful in assisting DPTI staff to develop policy enabling (rather than simply promoting) these travel modes in the Code. Further, the paper’s findings would certainly put into question the claim, on page 28 of the IMSPD paper, that the SAPPL policies are ‘transition ready’.

Promoting active travel

The IMSPD paper begins with a future vision for integrated movement that states, up front, that a (compact) urban form that supports active travel is the key objective. This is laudable and imperative in order to support initiatives aimed at creating a more sustainable and liveable city.

It is significant that the SA Government has sought to increase the number of people participating in active travel (embracing walking, cycling and public transport use) over the past 10-15 years, but its various policy settings have ultimately failed to deliver this objective. There are many reasons for this, but one of the most important is the ongoing and uncritical acceptance of the "normal" response to congestion, which is to build more and more road infrastructure which, as noted above, maintains the privilege accorded motorised forms of urban travel. Such an approach also curtails proper investment into public transport infrastructure and supporting infrastructure for active travel modes (walking, cycling, skating etc) that makes it more desirable and convenient to engage in these modes.

The following suggestions would go some way to redressing the fundamental imbalance of current policy settings to enable greater participation in active travel:
• Build on existing policy seeking higher density development close to centres, public transport hubs and along transit corridors by introducing design-based provisions that enhance accessibility to these areas by transport modes other than motor vehicles. The idea here being to increase the catchment area for walkers/cyclists while ensuring that walking/cycling routes to these destinations are convenient, accessible and attractive.

• Introduce policy that ensures the provision of well-located, secure bike parking at all major destinations (railway stations, transport hubs, shopping centres, event spaces, major precincts, main streets) is needed. Such policy could be presented in a way to balance requirements for car and bicycle parking. The current practice of siting bike parking (and potentially scooter parking) in un-useable areas of car parks is highly problematic and often unsafe. I have witnessed dozens of development applications where bike parking facilities are located adjacent waste bin storage areas which are dark and dank and provide no opportunities for casual surveillance. Providing such unsafe and inconvenient facilities for cyclists is hardly likely to encourage people to participate in cycling!

• Safe and secure bicycle parking facilities and end-of-trip facilities (showers, lockers, etc) should be a standard requirement for commercial, industrial, mixed use and large-scale residential developments, and such requirements should be built into the Planning & Design Code. Furthermore, these facilities should be sited in ways that make it easy for people to use them.

• Supplement existing policy in the SAPPL with policy from the Victorian Planning Provisions (VPP) which has delivered better infrastructure for cyclists across Victoria.

**Link and place**

Link and place principles should be carefully thought through before applying in a policy context. There is a danger of dichotomising these terms and attributing all streets as links for fast, efficient vehicular transport and all places as destinations. But streets are not all the same. While some roadways need to be prioritised for efficient transport reasons, other streets may be destinations in their own right and should, therefore, be conducive to active travel modes such as walking, cycling, skateboarding, riding on scooters or mobility aids. The development of the road hierarchy therefore becomes important in identifying the potential for the creation of places and this should be aligned with the development of planning policy that focuses on developing places to go to, rather than through.

To ensure a more nuanced application of link and place principles, planning policy should be crafted alongside local area transport plans. For local councils, many more streets would be categorised as 'places' rather than 'links' although it is important that the categories 'link' and 'place' are not seen as mutually exclusive as streets often perform both roles.

The role of public transport - through bus and tram modes - is crucial in successfully pursuing link and place principles and enabling the development and activation of places. Planning policy is currently geared towards regulating private transport. It does very little to promote or regulate public transport in a way that would make it more accessible and attractive to the population. Similarly, the construction of public transport infrastructure is rarely moderated by the application of planning policy. The attached paper demonstrates how railway stations along the southern rail line cater primarily for use by motorists with very little consideration of safe access to them for walkers and cyclists. As our population ages, the difficulties experienced accessing these stations will become especially acute.
It is imperative that the Code responds to the needs of an ageing population. Travel by mobility scooters is becoming increasingly popular amongst our older citizens and planning policy needs to cater for these different travel requirements. It increases the importance of making streets safer and more appealing for active travel purposes. Footpaths are quite dangerous for scooter riders, younger cyclists and skate boarders. Accordingly, more (public) road space should be allocated for use by active travellers and that road space needs to be safe and convenient to use.

**Climate impacts**

It is well recognised that street spaces across metropolitan areas like Adelaide generate significant heat loading and stormwater run-off impacts. To make streets more attractive places for active travellers, it is also important that the protection, shading and cooling provided by street trees is enhanced and, at the very least, maintained. Adelaide currently has the lowest tree canopy coverage of any Australian capital city and this not only constitutes a major impediment to effective climate change mitigation, it also negatively impacts on mental health and the overall attractiveness of our urban/suburban areas.

Current development patterns across suburban Adelaide and along key transit corridors is stripping the city of effective tree canopy and making our streets unappealing heat generators. Planning policy could be an effective mechanism by which to prevent the erosion of tree canopy through provisions that require developers to provide meaningful landscaping on site that includes semi-mature and mature trees together with the incorporation of effective WSUD principles. Policies aimed at offsetting the loss of tree canopy and green infrastructure more generally should also be more prescriptive than current policy settings that continue to allow replacement trees to be located away from development sites to the detriment of living environments across the city.

**Increasing density**

Planning policy geared towards facilitating higher density forms of development should include provisions that enhance the amenity of public places. Policy in the Code could be calibrated in a way that requires developers to provide public realm benefits in cases where they propose exceedances in site areas, frontages, site coverage etc. A rationale based on the idea that when development seeks to 'take' a little more than the Code prescribes, it should 'give' a little more to the community via public realm benefits should be built into the Code as a means of enabling better design solutions both on and off development sites.

It is imperative that the Code incorporates policy that enhances the amenity of streets, not just as places for people to live, work, shop and recreate, but also as places where active travel is an attractive and convenient option. While all streets should be accessible, not all streets should be "fast, efficient and minimise travel time" as stated on page 11 of the IMSPD paper. Streets promoting active travel should be attractive and provide convenient and safe access to a range of destinations.

In relation to car parking, current policy settings require excessive amounts of space to be devoted to housing cars, especially in areas earmarked for higher density living. The current approach is not working and is unlikely to support more sustainable mobility outcomes unless there is a significant shift away from current policy settings. The Code has an important role to play in promoting such a shift by allowing for differing car parking rates attached to development of particular forms and in particular locations. It should be allowable for some forms of development in certain locations to not have to provide car parking, especially in locations close to high frequency public transport routes.
Freight

While the discussion paper discusses the need to enable efficient movement of freight, there is no discussion of the potential role of heavy rail in achieving this. Research across the world has shown the benefits of using heavy rail as a long term solution to freight movement, freeing up valuable road space to be used to transport people using a variety of different travel modes.

The lack of discussion in the IMSPD paper of the approach to address freight movement is disappointing and should be an important consideration in the establishment of integrated movement systems.

New technologies

While planning policy clearly needs to be responsive to the opportunities provided by new technologies, it is important nonetheless that the outcomes of new technologies are well understood. For instance, the assertion in the discussion paper that autonomous vehicle use "...could play a valuable role in reducing private vehicle dependence" is highly problematic. The more likely outcome of autonomous vehicle use is higher levels of car dependency and, if unoccupied cars are travelling along streets, higher levels of congestion. Both of these outcomes directly conflict with the goals of creating great places and reducing private motorised vehicle use.

The technologies used to ensure the safety of autonomous vehicles must also be scrutinised in terms of who owns the technologies and what are the privacy implications for citizens using these vehicles. It is imperative that we do not get ‘dazzled’ by the potentialities of autonomous vehicular use. Research and ongoing monitoring of the effects of autonomous vehicles on our urban spaces will be an important pre-requisite for the development of effective policy around their use.
What should planners know about cycling?

Wendy Bell and Donna Ferretti

Introduction

Planners have traditionally played an important co-ordination role in planning for urban development by bringing together a range of disciplinary knowledges, including transport knowledges, in determining the suitability of particular forms of development in particular locations. While this has increased planners’ understanding of the links between land use, transport and a host of related fields, it has not been conducive to planners seeking out and developing specialised knowledge of particular modes of transport such as cycling. Land use planners in particular have relied on the advice and direction of those with specialised knowledge of transport — namely, transport planners and traffic engineers — in making decisions about cycling without seeking out and actively engaging with knowledges of cycling as a specific mode of urban transport with specific requirements within urban environments.

While the importance of the engineering knowledges that transport planners and traffic engineers use to underpin their practice should not be denied (see Rose, Chapter Fourteen, this volume), there is increasing evidence to suggest that there is a lot more that planners need to know in order to properly plan for cycling as a mode of urban transport. The recent spate of integrated land use and transport initiatives developed across Australia and New Zealand (Auckland
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Regional Transport Authority, 2009; Government of South Australia, 2013; Government of Victoria, 2010; New South Wales Government, 2012) attests to the growing recognition of how the nexus between land use and transport planning provides an important mechanism to reshape urban development towards more compact and sustainable urban forms. These initiatives seek to densify the existing urban footprint while boosting the provision of public transport and encouraging active travel modes such as walking and cycling.

In embracing the notion of active travel and its role in creating more sustainable and healthy cities (see Department of Infrastructure and Transport, 2013; Government of South Australia, 2011b; National Heart Foundation of Australia (Victorian Division), 2004; Planning Institute of Australia, Heart Foundation, & Australian Local Government Association, 2009), planners will not only need to broaden their knowledge of specific modes of transport, but also recognise the diverse and sometimes conflicting needs of urban travellers in order to enable greater participation in cycling.

This chapter is fundamentally concerned with the knowledge and skills required by land use planners to enable greater participation in cycling, either for transport or recreation (Figures 15.1 and 15.2). It examines the key strands of land use planning and how the strategies, policies and assessment decisions made by planners can shape the cycling context and the ability of people to cycle in urban areas. The chapter reviews strategic plans created for Adelaide, Melbourne and Sydney in order to determine how cycling is addressed in these plans. It then examines state-level planning policy in South Australia and Victoria to determine how these policies acknowledge and provide for the specific requirements of cyclists. In the final section, a detailed analysis of the ‘cycle-friendliness’ of two recently constructed public transport sites in metropolitan Adelaide is presented, which identifies the design elements planners should be cognisant of when assessing developments for convenient and safe access by cyclists.

Planning and cycling

The past decade has seen a growing conversation about walking and cycling as key components of active travel. Urban planners have participated in this discussion through examining the environmental, social and economic factors that shape people’s decisions to walk and cycle (Department of Infrastructure and Transport, 2013;
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Figure 15.1: Example of good recreational cycling route. (Source: Authors' own work.)

Ewing & Cervero, 2010; National Heart Foundation, 2004; Planning Institute of Australia et al., 2009).
Some of this discussion is concerned with developing criteria to measure walkability (Clifton, Livi Smith, & Rodriguez, 2007; Ewing & Handy, 2009) and cycle-ability (Wahlgren & Schantz, 2012; Winters, Brauer, Selton, & Teschke, 2013).

Much of the recent discussion examines the relationship between particular urban characteristics and levels of active travel, particularly walking and/or cycling (Adkins, Dill, Luhr, & Neal, 2012; Forsyth & Krizek, 2011; Sick Nielsen, Skov-Petersen, & Agervig Carstensen, 2013). Some researchers (Pucher &
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Buehler, 2006; Pucher, Garrard, & Greaves, 2011) have compared cycling rates in cities with different policies; and other researchers offer speculative pieces on the role of cycling under changing conditions, such as resource scarcity (Burke & Bonham, 2010). While there is widespread agreement in the planning-related literature on the role that cycling can play to address both traditional planning concerns of health and wellbeing as well as more recent concerns of environmental (particularly climate) change, there have been no studies to date that examine how land use planners include cycling in the strategies, policies and assessment decisions they make.

Strategy, policy, assessment

In posing the question of what planners should know about cycling, we have first examined what planners currently ‘do’ and ‘say’ about cycling. We have analysed a range of planning and transport texts from predominantly Australian jurisdictions (principally South Australia, Victoria and New South Wales) to examine how these interrelate with broader discussions of urban transport, infrastructure provision, and planning for urban development. State government planning strategies and policy documents have been interrogated with a particular focus on where cycling sits in efforts to regulate urban development.

The questions we have asked of these texts include:

- How has cycling been positioned in the context of broader transport planning objectives (in particular the relationship to motorised forms of urban travel)?
- How has cycling been positioned in the context of planning for urban development?
- How has cycling been positioned in the context of urban design (particularly the design of the public realm)?
- To what extent is cycling seen to contribute to population health outcomes?
- To what extent is cycling seen to contribute to urban sustainability outcomes?

We have supplemented our analysis of planning and transport texts with a case study of two public transport hubs (train stations) in the southern Adelaide metropolitan area.
Strategic planning

Strategic planning encompasses broad objectives to guide the use and development of land. Since the early 1990s, state and territory governments across Australia have developed and adopted strategic land use plans as key instruments to address emergent tensions between environmental, economic and social planning objectives in order to secure the sustainable, productive and equitable city. These plans effectively establish the key directions for future land use change, with the development of more detailed planning policy intended to align with these directions. It is through this strategy-policy linkage that the assessment of individual development proposals is envisaged to bring into effect the desired future development of an urban area.

In contrast to strategies produced in the 1980s-1990s, current metropolitan strategies seek a fundamental change in the trajectory of urban growth: to reshape urban form away from low-density greenfield development towards higher-density, mixed-use development within the existing urban footprint. This shift in strategic direction is a response to the environmental, economic and social problems associated with fringe growth, including the ongoing consumption of productive food-growing land; limited access to key services and facilities; social isolation; and high costs of supplying infrastructure and services at the urban fringe (Berry, 1992; Dodson, 2012; Gleeson, Dodson, & Spiller, 2012). It has also been informed by concerns about the declining health and ongoing car dependency of the urban population, especially those living on the fringes of urban areas, where access to employment and services is difficult (Department of Infrastructure and Transport, 2013).

The transport system occupies a fairly prominent place in metropolitan strategies given its essential role in supporting land use change. In the tranche of strategies developed for Australian metropolitan areas in the 1980s and 1990s, there is little, if any, specific reference to cycling as a mode of transport. Instead, cycling is subsumed within a discussion of private forms of motorised transport (Department of Planning, 1988; Department of Planning and Housing, 1992; Planning Review, 1992). More recent metropolitan strategies give greater weight to active transport modes such as cycling, walking and public transport in order to address the increasing spread of, congestion and pollution within, cities, as well as
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people’s health in cities (Government of South Australia, 2010; Government of Victoria, 2014a; New South Wales Government, 2010).

This change in direction of metropolitan strategies marks a significant shift in the way transport and, in particular, cycling are thought about by land use planners. It also reflects the growing significance of environmental and health discourses in the development of urban planning strategies and policies. However, this shift has yet to be reflected in the ongoing development of urban environments, and there is still much work to do if cycling is to be repositioned and elevated in metropolitan strategies. The development of land use strategies could be informed, for instance, by national, state/territory and local cycling and integrated transport strategies. We would also argue that cycling and transport strategies need to pay greater attention to the role that planning plays in shaping urban mobility options.

At the national level, both the *Urban transport strategy* and *National cycling strategy* note the importance of ‘integrated planning’, urging state, territory and local governments to address the needs of cyclists when preparing land use and infrastructure plans. However, these two strategies offer little guidance on how these plans might enable more people to take up cycling (Australian Bicycle Council, 2010; Infrastructure Australia, 2013). At the state/territory level, cycling strategies and plans have focused on the provision of cycling infrastructure (Figures 15.3-15.5), cycling networks and increasingly on behavioural change programs to encourage people to cycle. And while these strategies and plans often point to the importance of land use planning in providing safe and convenient spaces for cyclists, there is little consideration of how land use policies or planning practice may need to change in order for this to occur (Government of Victoria, 2012; Government of South Australia, 2006). Planners clearly need to play a stronger role in identifying the land use implications of cycle strategies in collaboration with cycle policy makers, urban designers, asset managers and landscape architects.

At the local level, councils have sought to promote cycling through transport and movement plans, local area traffic management plans, urban design strategies, streetscape guidelines, and recreation and open space plans. Some councils have developed integrated transport strategies that promote an increase in cycling and a reduction in car use. For example, the City of Yarra’s Bicycle Strategy has established a goal to double the rate of residents cycling to 15% by
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Figure 15.3: Shared cycling and pedestrian footpath. (Source: Authors’ own work.)

Figure 15.4: Shared cycling and pedestrian path segregated from vehicular traffic to encourage cycling. (Source: Authors’ own work.)
2015, with the city already recording the highest proportion of people who cycle to work in Australia (City of Yarra, 2010). This strategy is a prime example of a shift in emphasis towards cycling by including policies to make cycling, rather than car use, the first choice of transport for residents.

Similarly, *Smart move*, the Adelaide City Council’s 10-year transport and movement strategy, has ‘safe cycling’ as a key objective, and aims for more trips to be made on bicycle, foot and public transport (Adelaide City Council, 2012). This plan acknowledges that there needs to be a shift in emphasis away from motor vehicle use in favour of cycling (Figures 15.6 and 15.7), although — in contrast to the City of Yarra — this shift in emphasis has yet to be adequately incorporated into policy. Neither of these strategies refers to the full range of cycling treatments which could be deployed to enable greater participation in cycling (see Hamnett, Chapter Sixteen, this volume).

Many other councils have prepared cycling plans and strategies to promote cycling.1 These plans and strategies emphasise the provision of safe and convenient

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1 Currently, over 60% of local councils across Australia have a bicycle strategy or plan (Australian Bicycle Council, 2010).
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Figure 15.6: A shift in emphasis favouring cyclists in the streetscape. (Source: Authors’ own work.)

Figure 15.7: Providing more space for cyclists and pedestrians. (Source: Authors’ own work.)
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routes for cyclists, end-of-trip facilities, and, in some cases, bike hire opportunities (City of Melbourne, 2012; City of Sydney, 2007; GTA Consultants, 2007). Planners usually participate in these initiatives, but have not generally considered the implications of this work in strategic and policy planning, development assessment, land division design and public realm development.

Planners also need to incorporate initiatives such as *Healthy spaces and places* into their work. The *Healthy spaces and places* guide and website, produced as a collaborative venture by the Planning Institute of Australia, the National Heart Foundation and the Australian Local Government Association (2009), sets out a number of design principles for creating spaces amenable to cycling, and it offers case studies to demonstrate how the creation of such places can enhance participation in active travel modes. However, as clearly stated in this guide, the application of design principles and creation of healthy spaces requires a strong commitment at all stages of the planning process.

In short, information on cycling and the infrastructure that cyclists require is readily available for planners to use in preparing strategic land use plans, so long as planners are willing to apply this knowledge in the ongoing development of the built environment. Planners also have an important role to play in advocating for a greater emphasis on cycling and other active travel modes and ensuring that these modes are at the centre of discussions about the role of transport in shaping urban development. In overseeing land division and structure planning, for instance, planners should play a greater role in co-ordinating the range of disciplines involved in urban design, growth area and renewal area planning, and, more locally, in streetscape planning and design.

In taking a more prominent role, strategic planners are well placed to draw on and extend the transport, environmental and health discourses which promote cycling. This is evidenced by the recent development of integrated transport and land use plans and strategies across Australia and New Zealand, which seek to bring together the work of land use and transport planners as a means of producing more efficient, sustainable and liveable cities and regions (Auckland Regional Transport Authority, 2009; Government of South Australia, 2013; Government of Victoria, 2010; Hume City Council, 2011; New South Wales Government, 2012). The emphasis in these plans is to ensure that the transport system supports a more compact urban form and, in particular, helps stimulate higher-density, mixed-use
development in inner and middle suburbs. The renewal of these inner- and middle-
suburban areas is seen as a way of boosting investment in, and reinvigorating, the
economy of a city, but it also requires a significant commitment on the part of state
and territory governments to pursue a fundamentally different transport future — one which prioritises cycling and other active transport modes rather than the
private motor vehicle.

While the integrated transport and land use plans examined discuss the
need to promote cycling and active transport, they fail to acknowledge the degree
of shift required to facilitate greater participation in cycling, and how this might
be enabled through the land use planning system, or how it might be applied to
development through the assessment process. In short, the proliferation of cycling
strategies/plans and integrated transport and land use strategies/plans has failed
to sufficiently challenge prevailing transport discourses that privilege the private
motor vehicle (SQW Consulting, 2008). The question remains: what tools and
resources do planners need to effect such a change?

Planning policy

Policy planning involves the formulation of specific policies regulating the use
and development of land. These policies are incorporated into planning schemes/
development plans, which are applied at the local level and used by land use planners to assess the merit or otherwise of development proposals. It is significant
that planning policies are, for the most part, intended to align with, and bring
into effect, the land use objectives put forward in strategic plans. For this reason,
there are a raft of general policies within planning schemes/development plans
concerning transport and related activities such as parking, access and movement,
as well as specific transport policies for particular land use zones (such as residential,
industrial and commercial).

Most states and territories have developed a suite of standardised planning
policies for insertion into local council planning schemes/development plans. The
trend is for uniform policies with consistent terminology that can be applied at the
local level (although provision is usually made for local variation). Two examples
of these state-wide planning policies are the South Australian Planning Policy
Library [SAPPL] and the Victorian Planning Provisions [VPP].
In the SAPPL, the ‘transportation and access’ section (Government of South Australia, 2011a, pp. 107-113) recognises cycling within references to the transport system, but for the most part the policy is aimed at regulating development to accommodate private motor vehicle travel. One objective (of five) acknowledges the importance of active transport in seeking the ‘[p]rovision of safe, pleasant, accessible, integrated and permeable pedestrian and cycling networks that are connected to the public transport network’ (Government of South Australia, 2011a, p. 107). This objective is given further weight through policies on ‘movement systems’ that ask the following:

- Land uses attracting large numbers of visitors (such as shopping centres, schools, hospitals and medium-high-density residential development) should be located close to public transport while encouraging cycling and walking.
- Development at intersections and crossings should maximise sightlines for motorists, cyclists and pedestrians, in order to ensure safety for all road users.
- Development generating high-traffic volumes should be designed to minimise interference to existing traffic and give priority to pedestrians, cyclists and public transport users. (Government of South Australia, 2011a, p. 108)

The last of these provisions is indicative of the enduring focus on maintaining the efficiency of motor vehicle traffic. While new development should accord priority to active travellers, it should only do so if existing motorists are not impeded in any way. Despite the various references encouraging active travel, land use policy in this section of the SAPPL does not go so far as to question or disrupt the privileging of motorised modes of travel.

Nonetheless, the SAPPL does include a dedicated section of policies for ‘cycling and walking’ (Government of South Australia, 2011a, p. 108). The first policy in this section seeks the provision of safe, convenient and attractive routes for cyclists and walkers, which are connected to local street networks, public transport and activity centres. Here, the emphasis is on encouraging and enabling cycling for short, local trips. The second policy calls for development to provide access for cyclists and walkers to open space networks and recreational trails as well as with Adelaide’s principal cycling network, Bikedirect. While these policies would
appear to cover all bases — by accommodating cycling for transport and cycling for recreation — there remains the strong possibility that when these policies are applied to assess development proposals, the ‘on-balance test’\(^2\) would see planners support developments that provide access only to recreational cycling routes. The development of safe, convenient and attractive routes for cyclists on local street networks is widely considered to be the responsibility of local councils (specifically local traffic engineers), rather than individual developers. Furthermore, it is worth noting again that neither of these policies anticipates any change to the primary objective of maintaining an efficient transport system for motorists.

The remainder of the ‘transportation and access’ policies in the SAPPL are focused on access and vehicular parking. For access, the primary objective is to ensure that developments can be safely accessed from the road network without disrupting the flow of traffic (especially on arterial roads). There are no policies at all on bicycle access. In relation to parking, there are some 18 separate policies (and a host of sub-policies) for vehicular parking, as well as a series of tables prescribing the number of car parks that are required for particular forms of development. By way of contrast, there is a single, rather abstract, policy on bicycle parking which calls for the provision of secure bicycle parking facilities that are in prominent, well-lit, signed, undercover and accessible locations. When examining the zone sections of the SAPPL (which are the primary policy provisions used by planners when assessing development proposals), there are scant provisions for cycling and no reference whatsoever in other general sections such as ‘infrastructure’.

Turning to the VPP, the overarching planning policy document for Victoria, cycling is similarly recognised in the ‘transport’ section, particularly in the ‘integrated transport’ sub-section, which seeks to ‘… create a safe and sustainable transport system by integrating land use and transport’ (Government of Victoria, 2014b, p. 121). Here, the policy provisions promote cycling in relation to coordinating urban development with improvements to active transport networks and through the provision of safe, convenient and direct cycling access to activity centres, public transport interchanges and other strategic development sites.

\(^2\) In development assessment, planners will apply the on-balance test to those proposals that invoke several different policy objectives, requiring the planner to make a judgement on which objective(s) is/are most relevant or important in assessing the merit of the development.
These provisions are given further emphasis through more detailed policies on ‘sustainable personal transport’ and ‘cycling’, which focus on:

- encouraging cycling by creating safe and attractive environments
- ensuring that development provides opportunities to create more sustainable transport options, including cycling
- ensuring that cycling routes and infrastructure are constructed early in new developments
- providing direct and connected cycling infrastructure to, and between, key destinations, such as activity centres and public transport nodes
- separating cyclists from motor vehicles
- requiring the provision of adequate bike parking and related facilities when issuing planning approvals for education, recreation, shopping and community facilities
- providing improved facilities (particularly storage) for cyclists at public transport nodes
- ensuring the provision of bicycle end-of-trip facilities in commercial buildings
- development of local cycle networks and new facilities that are linked to, and complement, the metropolitan network of cycle routes. (Government of Victoria, 2014b, p. 3 of clause 18)

These policy provisions are noticeably more direct and purposeful in requiring development to specifically accommodate cycling and the needs of cyclists than those within the SAPPL. There is even specific reference to ‘incorporating cycling infrastructure in all new road projects’, ‘facilitating and safeguarding cyclists’ access to public transport’ and ‘considering cycling in providing access to new developments’ in the section on the ‘transport system’ — which is normally the policy area where the efficiency of the transport system for private motor vehicles is prioritised (Government of Victoria, 2014b, p. 2 of clause 18). Moreover, there is a specific policy overlay in the VPP which requires the provision of bicycle facilities — particularly ‘secure, accessible and convenient cycle parking spaces and shower and change facilities’ — before any new land use can commence or any existing use can be expanded. This overlay also includes detailed guidelines for the design of bicycle spaces, bicycle rails,
bicycle lockers and signage (Government of Victoria, 2014b, p. 1 of clause 52.34; see also Hamnett, Chapter Sixteen, this volume).

Taken together, the policies in the VPP actively seek to increase the priority accorded to cycling in the ongoing development of the urban area. Given that these policy provisions are an integral component of all planning schemes in Victoria and that they also require planners to consider other policy documents, such as the Victorian Cycling Strategy, Cycling into the future 2013-23 (Government of Victoria, 2012), in the assessment of development, it is little wonder that the City of Yarra has successfully enabled a greater number of people to take up cycling.

Moving beyond specific land use policy compendiums, there are various guideline documents available which are intended to shape planning outcomes, including the national Healthy by design guidelines (National Heart Foundation, 2004), Streets for people compendium (Government of South Australia, 2011b), the Victorian government’s Precinct structure planning guidelines (Growth Areas Authority, 2013) and Public transport guidelines for land use and development (Department of Transport, 2008). These guidelines seek to increase participation in cycling over motor vehicle movement, and have been used to plan and design urban renewal projects and new growth areas on the urban fringe. It is unknown how many councils have adopted these guidelines in local planning schemes/development plans. Anecdotal evidence points to some inclusion of policy to encourage cycling, but there is generally insufficient emphasis placed on the extent of change necessary to enable cycling to become a means of enhancing the sustainability of urban development.

What is known, however, is that new and high-quality facilities attract additional cyclists (SQW Consulting, 2008). Planning practice has the capacity to facilitate greater participation in cycling by ensuring that such infrastructure — including bike routes integrated with wider transport networks, secure bike parking/storage, signage and well-located end-of-trip facilities — is built at an early stage of development. In urban renewal projects, cycling routes can also be integrated with open space networks and streetscapes designed to include bike parking facilities (Figures 15.8 and 15.9).

While reference to these kinds of facilities and infrastructure is apparent in land use planning policies, there is little evidence as yet of them being well integrated into urban development. Not all local councils have adopted cycling
Figure 15.8: Cycle parking on private sites next to recreational cycle routes. (Source: Author’s own work.)

Figure 15.9: Cycle parking at a railway station. (Source: Author’s own work.)
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policies within local planning schemes/ development plans, so the capacity of planners to facilitate an increase in cycling in these local areas is slim. For those councils that have adopted cycling policies within local planning schemes/ development plans, there appears to be insufficient emphasis placed on these policies during the assessment process. Instead, planners continue to place greater weight on other modes of urban transport when regulating urban development.

The following section interrogates the role of development assessment in shaping urban transport outcomes.

**Development assessment**

In undertaking development assessment, land use planners are required to apply the strategies and policies described above to development proposals. Although planning systems across Australia are mostly geared towards regulating private development (with special assessment processes usually in place for public development), planners are nonetheless obliged to consider the implications of development on the public realm. To this end, planners, in collaboration with other disciplines within local government, can facilitate upgrades of the public realm arising out of a private initiative or can require a contribution from the developer to such an initiative, which might include, for instance, provision of cycle paths within a land-division development.

From our observations of, and participation in, the development assessment process, planners tend to adopt the ‘normal’ entrenched approach to transport matters arising from a proposed development — that being deferral to traffic standards established by transport planners and traffic engineers. Typically, this involves reinscribing (through conditions of development approval) car parking standards and access requirements which, as discussed above, are primarily designed to accommodate motor vehicles and facilitate their uninterrupted movement.

Planners tend to apply a similar logic to cycling in the assessment process by focusing primarily on the number of bike parks accompanying a development, rather than considering the range of factors that would enable more people to cycle to access that development. Such factors include where bike parking should be located on the development site, where the site is situated in the transport network, what priority has been given to cycling on surrounding roads and what
infrastructure exists to facilitate safe and convenient movement of cyclists to their destination. As cities ‘densify’, the question of how bicycles are stored within higher-density housing, and whether a proportion of space normally allocated to car parks should be devoted to bicycle parking, will become increasingly relevant. What is needed are detailed guidelines to supplement the policy that planners can refer to when undertaking an assessment.

There are emerging examples, particularly in the central areas of cities, of planning schemes/development plans which include zones or policy areas where development that does not provide vehicular parking spaces and accepts lower than usual rates of parking is supported (see Government of South Australia, 2014; Government of Victoria, 2014b). Such support is usually predicated on developments with good access to public transport and/or a range of facilities and services that residents require. However, if assessment planners continue to give undue weight to established quantitative standards for parking and vehicular access, they will (perhaps unwittingly) reproduce development outcomes that reinforce the marginality of cycling in urban areas.

It would be remiss not to acknowledge the various constraints that planners often encounter in assessing development proposals, including

- the problem of retrofitting existing areas
- the limited role of planners in public realm development, including the planning and design of road reserves and greenways for on- and off-road cycle routes (which are largely the domain of asset managers and engineers)
- the lack of local transport plans that accord sufficient weight to cycling
- the lack of data to substantiate budgets for developing quality cycle infrastructure.

In relation to the development of infrastructure, planners often contribute to the work of engineers, asset managers, project managers and transport planners in designing infrastructure to support urban development and land use change. The following section examines one such case in metropolitan Adelaide.

Case study — The two Seaford Railway Stations

Two new railway stations in southern Adelaide — Seaford Station and Seaford Meadows Station — have recently been developed as an integral part of planning
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for the growth area of Seaford, incorporating an extension of the southern Adelaide rail line from Noarlunga to Seaford. Both stations are located adjacent to the Coast to Vines cycle trail and have been purposefully designed to accommodate cyclists, primarily through the provision of secure bike parking in the form of ‘bike cages’. Seaford Station is located at the end of the rail line and is around half a kilometre east of the Seaford Shopping Centre. Seaford Meadows is located approximately one kilometre north of Seaford and is nestled between an industrial area to the east and a new, developing residential area to the west. Both sites accommodate substantial car parks in order to encourage ‘park and ride’ patronage.

The location of both stations close to residential and employment lands builds on a number of key objectives of *The 30-year plan for Greater Adelaide* (Government of South Australia, 2010). Of particular relevance is the objective to encourage cycling to and from activity centres and public transport hubs as a means of promoting a shift from private vehicular travel to active travel modes. The location of Seaford Station in close proximity to a mixed-use activity centre, for instance, is envisaged to realise a number of broader planning objectives, such as attracting further investment into that centre, increasing housing densities in and around the centre, and promoting the growth of a transit-oriented development [or TOD]. Seen in this context, these stations are a good case study of how contemporary planning practice has responded to the need to increase participation in cycling, reduce private vehicular use and, in so doing, contain the spread of metropolitan Adelaide.

In assessing these station sites for their capacity to accommodate cyclists, we have adopted four key criteria — namely, access, wayfinding, infrastructure and safety.

**Access**

This criterion comprises both access to and from the railway station for cyclists from surrounding areas, as well as access to the trains for cyclists wishing to take their bikes on the train.

Access to and from Seaford Station is possible from both the cycle trail immediately to the east as well as the activity centre and surrounding residential area to the west. Poor signage across the station site, however, makes this access quite difficult (Figures 15.12-15.14). When leaving the trail, cyclists must first
Figure 15.10: Seaford Station and bikecage. 
(Source: Author’s own work.)

Figure 15.11: Seaford Meadows Station. 
(Source: Author’s own work.)
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determine which direction to proceed in order to access the station and then negotiate steep ramps down to the station entrance. Signage on the trail and at the station entrance is poor. It is written in very small font on small poles, is difficult to read, fails to clearly indicate the direction that cyclists need to travel and is quite inadequate to guide cyclists to either the station entrance or the secure bike storage located on the other side of the railway tracks (Figures 15.12 and 15.16).

In accessing Seaford Station from the north-west (either from the residential area or the activity centre), cyclists can only access the platforms via the station car park (Figures 15.13 and 15.14). There are no paths available from the road to the station for cyclists who

Figure 15.12: Unclear signage to Seaford Station from the cycle path on the east. (Source: Author’s own work.)

Figure 15.13: Cycles not encouraged to access Seaford Station. (Source: Author’s own work.)
Figure 15.14: Lack of cycle access to Seaford Station from the north-west. 
(Source: Author’s own work.)

Figure 15.15: Lift-only access to Seaford Meadows Station to city, and only for one bike at a time. 
(Source: Author’s own work.)

Figure 15.16: No signage to Seaford Station from the coast path on the east. 
(Source: Author’s own work.)
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have to negotiate the car park entrance, often in busy traffic, which is devoid of any directional signage and located some distance (approximately 150 metres) from the station entrance and bike storage area. When accessing the station from the south-west, cyclists can only reach the entrance and bike storage area via a steep ramp which functions as a one-way bus route without any separate route for cyclists other than a footpath.

At Seaford Meadows, there is no direct access to the station from the residential areas to the west. Cyclists must first travel south to access a road that traverses the railway line and then join the bike trail before heading north to access the station entrance. Signage from the bike trail to the station entrance and bike storage area is poor and offers no directional guidance. While accessing Seaford Meadows from the north-east is easier, it is only so because the bike storage area and station entrance is clearly visible and the signage less important. In contrast, when approaching the station from the south, the bike storage area and station entrance are not visible; nor are there signs to give cyclists directions to these facilities until well past the station entrance. Access to the platforms is confusing, and cyclists wishing to access the northbound train to the city can only do so via a lift which can barely accommodate two bikes (Figure 15.15).

According to CROW (2007), the ‘directness’ of cycle routes (in terms of both distance and time) to access key destinations like railway stations is a key factor enabling people to adopt cycling as a mode of transport. Sadly, the opportunities provided by having a major cycle track located adjacent the southern Adelaide railway line have not been fully realised in terms of allowing direct access to public transport for cyclists.

Wayfinding

Wayfinding is facilitated by the overall design and layout of sites; the visibility of key destinations; the use, location, content and legibility of signage; and the architectural and landscape cues that aid access to, and orientation within, an area.

Wayfinding within each station’s environs is clearly geared towards facilitating access by motor vehicle drivers using the car park rather than by cyclists. While facilities are provided for cyclists, such as secure bike cages and bike racks, there are no clear directions to assist their access to these facilities or
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to the platforms. Indeed, the lack of directional signage to platforms is poor for all users of the stations and indicates a general lack of attention to the importance of wayfinding for people wishing to use public transport. This is especially important given the complexity of both station sites, with multiple levels of platforms and accessways. Unless one is familiar with the layout and location of station facilities and entrances, it would be very easy to access the wrong platform and board a train running in the opposite direction to that intended.

Poor site planning and design for wayfinding at public transport hubs not only increases the inconvenience of using public transport, but also decreases the attractiveness of public transport, and fails to support efforts to shift people's mobility away from private motor vehicles (Russell, 2012). Good signage and wayfinding can make or break efforts to increase public transport patronage and, of particular relevance to this study, to enable cycling to be a means of accessing public transport. For cyclists, what is required is clearly signed routes with symbols and/or colour codes to guide them to the station entrance, bike storage facilities and platforms (Russell, 2012). Such clearly defined routes would also be beneficial for all public transport users.

Infrastructure

The main infrastructure for cyclists at the two stations comprises

- pathways (external to the station) and ramps (accessing the station)
- bike cages (secure storage)
- cycle racks.

At Seaford, the bike cage and racks are located in reasonable proximity to the station entrance (Figure 15.18). In contrast, the bike cage at Seaford Meadows is located some 90 metres away from the ramps leading up to the station entrance (Figure 15.19). Given this distance, it comes as no surprise that at the time we visited there were only three bikes stored in the bike cage at Seaford Meadows (there were five in the bike cage at Seaford), with a further four bikes attached to racks located closer to the station entrance. There is no apparent reason for the bike cage to be sited so far from the station entrance, as there is ample space available to accommodate this facility. There is also a large, sheltered space beneath the ramps that could easily be used to store bicycles (Figure 15.20).

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Figure 15.17: No signage from the main cycle path to Seaford Meadows Station.
(Source: Author’s own work.)

Figure 15.18: Good bicycle cage location at Seaford Station.
(Source: Author’s own work.)

Figure 15.19: Bicycle cage located far from Seaford Meadows Station.
(Source: Author’s own work.)
CROW (2007) argues that the attractiveness of cycling infrastructure and its cohesion (meaning the relationship between each component of infrastructure) is of critical importance in enabling people to take up cycling. In the case of the Seaford and Seaford Meadows Railway Stations, the cohesiveness of the cycling infrastructure provided is severely compromised by a number of factors, including inconvenient access, confusing signage, poor wayfinding and excessive distances between bike storage facilities and station entrances. Such disparate connections between pieces of cycling infrastructure all combine to significantly reduce the attractiveness and convenience for cyclists seeking to access these public transport hubs.

Safety

On this criterion, we distinguish between safety from accidents and safety from crime. With regard to the former, access to the Seaford Station from both the southern and the western car park poses serious risks of cyclists coming into conflict with motor vehicles (Figure 15.20). These risks are caused by the lack of direct and clearly marked access routes, with cyclists not knowing how to access the station or bike cage, while motorists are not alerted to the likely presence of cyclists. The steepness of the ramps is also dangerous for cyclists, especially for children riding bikes and for pedestrians who may be using the ramps at the same time. These risks would be amplified on rainy days.

In relation to safety from crime, there is a large body of literature on Crime Prevention through Environmental Design [CPTED] demonstrating that poor wayfinding, together with indirect and difficult access routes, contributes significantly to increased levels of fear (Bell Planning Associates & Gaston, 1995; European Commission, 2006). Although both stations are well lit, neither their surrounds nor main access routes are lit for safe movement by cyclists or pedestrians. Accordingly, cyclists are likely to feel unsafe accessing these public transport facilities, particularly at night, and will be less likely to use public transport as a result. At Seaford Meadows, levels of fear are likely to be compounded by a general lack of surveillance in an area devoid of social activity for significant periods of the day and night (Figures 15.21 and 15.22).

This case study of the Seaford and Seaford Meadows Railway Stations demonstrates that in spite of a raft of strategies and policies supporting the
What should planners know about cycling?

**Figure 15.20:** Unsafe bicycle route from the south to Seaford Station.
(Source: Author’s own work.)

**Figure 15.21:** The remote location of the bicycle cage at Seaford Meadows may raise fear.
(Source: Author’s own work.)
Figure 15.22: Access from the rear of the bicycle cage is unsafe. (Source: Author’s own work.)

Figure 15.23: Safer alternatives for the bicycle cage at Seaford Meadows Station. (Source: Author’s own work.)
development of appropriate infrastructure and facilities to enable more people to take up cycling, the delivery of these policies and strategies has proven to be problematic at best. Both stations were designed to enhance access to public transport for cyclists. Both sites were located adjacent to the most prominent and well-used cycle track serving the southern Adelaide suburbs. Yet for both sites, access to the stations for cyclists is difficult, inconvenient and, in some circumstances, unsafe. The provision of infrastructure to encourage and enable greater participation in cycling has not been delivered in a sufficiently integrated and cohesive fashion, raising questions about how this infrastructure is provided and about the practices deployed in designing and constructing this infrastructure (discussed below). Little wonder, then, that the stations have yet to attract large numbers of cyclists to use public transport and so contribute to the objective of increasing participation in active travel modes.

Lessons for planners

So what lessons for planners can be gleaned from this interrogation of planning policy and practice as it relates to facilitating cycling in urban environments?

In relation to enabling cycling, planners have certainly developed strategies and policies that respond to increasing knowledge of the significance of cycling in planning for sustainable urban futures and healthier urban populations. However, as attested to by the case study, these policies are not sufficiently detailed and their implementation has proven to be more difficult. Planners continue to accord greater significance to supporting motorised modes of urban travel and have not recognised the degree of shift required to get people out of their cars and onto bikes and other active travel modes, even for short, local trips. In a policy context, the privileging of motor vehicle travel is evidenced by the ongoing emphasis on promoting efficient motor vehicle transport, uninterrupted journeys and excessive car parking requirements for individual developments. Until planners understand how this emphasis on motorised forms of travel disadvantages efforts to improve conditions for cyclists and enable more people to take up cycling, we are unlikely to see much change to the current situation.

In relation to making places, planners recognise the contribution that cycling makes to the development of convivial and vibrant local places (including public transport hubs), but the design of these places rarely incorporates convenient and
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accessible cycle routes or the necessary infrastructure to encourage and enable more people to cycle. Knowing how to develop these routes and infrastructure in ways that make it easy, convenient and safe to cycle is of critical importance if planners are serious about their metropolitan planning objectives to both reduce car use and boost participation in active travel. Planners need not only to engage in, and with, the growing body of literature on how to design attractive, convenient and cohesively planned cycling infrastructure, but also to be involved in, and advocate for, the delivery of this infrastructure as planned. This conclusion is timely, given the emerging trend to accord greater statutory weight to the planning and design of the public realm across Australian cities.

In interrogating the delivery of infrastructure for the two case study sites, it was evident that the initial design for Seaford Meadows had the bike cage located close to the station entrance, rather than at its eventual location some 90 metres away. The reason that the final delivery of infrastructure did not match the station design was, according to anecdotal evidence, attributed to a 'project management decision'. Clearly, such decisions run counter to strategic policy objectives to enable cycling, but they are all too common in the final delivery of major infrastructure projects, where motorised modes of transport are continually privileged. This points to the need for planners to be involved not only in the preparation of detailed cycle infrastructure design guidelines but also in the development and delivery of such infrastructure to ensure that what gets built matches the initial design. It also reinforces the need for planners to play a stronger advocacy role in promoting cycling and ensuring that cycling infrastructure is built to meet the needs of cyclists. A collaborative process between all disciplines involved in the planning, design and delivery of such public infrastructure projects is required to ensure a high quality of development appropriate to the community that the infrastructure serves.

A holistic approach that includes cultural and behavioural change is needed. Planners can promote this change in practice, but they will require more collaboration with urban designers, asset managers and engineers in the public, private and non-government sectors, all of whom share responsibility for improvements in, and design of, the public realm.

Specific knowledge requirements for planners are summarised in Table 15.1.
What should planners know about cycling?

Table 15.1: What planners need to know to increase participation in cycling.

<table>
<thead>
<tr>
<th>Writing/Implementing Strategy</th>
<th>How to effectively collaborate with transport planners, urban designers and health professionals</th>
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<tbody>
<tr>
<td></td>
<td>How cycling contributes to urban development and sustainability objectives</td>
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<td></td>
<td>The extent of the shift required to challenge prevailing priorities afforded to private motor vehicle travel</td>
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<tr>
<th>Writing/Implementing Policy</th>
<th>How planning decisions often (unwittingly) increase access and convenience for private motor vehicle travel</th>
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<td>How to de-prioritise the emphasis on private motor vehicle travel</td>
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<td></td>
<td>The range of cycling infrastructure required to properly support development</td>
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<td></td>
<td>How to integrate cycling and cycling infrastructure in all movement systems, as well as the public realm more generally</td>
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<td></td>
<td>How to provide a better balance between cycling and car parking provision</td>
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<td></td>
<td>How to enable access and egress for cyclists between private development sites and the public realm</td>
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<th>Assessing Development</th>
<th>How to properly interpret and prioritise policy that enables cycling</th>
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<td>How to incorporate cycling in ‘on-balance’ decisions on individual development proposals</td>
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<td></td>
<td>How to challenge existing traffic and parking standards in planning schemes/development plans</td>
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<td></td>
<td>How to accommodate cycling in building and public realm design</td>
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<td></td>
<td>The requirements to better connect individual sites with the wider cycling networks</td>
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<tr>
<th>Delivering Infrastructure</th>
<th>The extent and range of cycling infrastructure available for private development and the public realm</th>
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<tr>
<td></td>
<td>How to connect cycling infrastructure on individual sites with the wider urban cycling network</td>
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<tr>
<td></td>
<td>How to ensure convenient access to, and use of, cycling infrastructure</td>
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<tr>
<td></td>
<td>How to design infrastructure (such as public transport) for all travellers, not just for motorists</td>
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<tr>
<td></td>
<td>How to ensure ease of movement within, and to and from, sites for cyclists (such as through clear signage)</td>
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<tr>
<td></td>
<td>How to apply CPTED principles in planning and designing for cyclists.</td>
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</table>

(Source: authors’ own work.)
Conclusion

This interrogation of the work of land use planners demonstrates a significant gap in the knowledge of how to effectively enable more people to cycle as a regular part of their daily activities within urban areas. While strategic plans and policy provisions articulate the reasons that cycling should be encouraged within urban environments and provide dedicated planning rules to integrate cycling in development, these plans do not challenge the dominance of motor vehicles as the primary means of travelling within urban environments. As a consequence, these plans effectively reinscribe this dominance and the concomitant devaluing of cycling as an alternative travel mode.

Further, it is in the everyday practices of land use planners that this (perhaps unwitting) privileging of motorised travel occurs. The case study demonstrates that, in spite of genuine attempts to integrate cycling into the development of key public transport hubs, planners have failed to adequately support the delivery of convenient, attractive and safe cycling routes and facilities that might enable more people to engage in cycling more often.

A large shift in emphasis and affirmative action is required to change these entrenched practices. Planning has the potential to better integrate cycling into the urban fabric, but planners will need to change not only their approach to urban transport planning, but also the knowledges they deploy in regulating transport and land use. With growing concerns about public health and the ongoing depletion of important environmental assets, it will become increasingly urgent that they do so.

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