

# The Expanded Walkability Toolkit Pilot Project: Operationalising Walkability in the Victorian Planning Context

Chloe Duncan, Policy and Research Analyst, Department of Transport (Victoria)  
Dr. Evelyn Légaré, Senior Policy Manager, Department of Transport (Victoria)  
Carmel Boyce, Social Planner, City of Greater Geelong  
Jenny Donovan, Director, David Lock Associates

## Abstract

The Victorian Planning Provisions require local government planners to create walkable residential developments, but do not define walkability in sufficient detail for the concept to be easily operationalised. With the help of a Steering Group, the Victorian Department of Transport (DOT) developed a Walkability Toolkit for local government officers as an aid to interpreting the Victorian Planning Provisions. DOT concomitantly undertook an evaluation of this Toolkit. Preliminary evaluation results indicate that while the Toolkit is a valuable instrument for encouraging local government planners and engineers to engage with walkability, using it presents council officers with several challenges. These challenges in using the Toolkit largely derive from the complicated task of translating the concept of walkability, which originates in disciplines other than statutory planning and engineering, into terms that are useful to strategic and statutory planners and engineers. The paper concludes by suggesting several avenues for modifying the toolkit to address these issues.

**Key Words:** walkability, walking, planning, community design, urban design

## Introduction

It is increasingly recognized that there are significant benefits to walking, both at a social and at an individual level. After stationary energy, transport is the second largest source of greenhouse emissions in the State of Victoria. It is the main source of other major air pollutants, leading to an estimated 300 deaths a year in Melbourne (State of Victoria 2008; Denison *et al.* 2001).

Supporting and promoting active transport, including walking, is part of the Victorian Government's policy plan to build a "more sustainable transport system" through "using less polluting forms of transport more often" in a context of climate change (State of Victoria 2008: 108).

Influencing people's choice of transport mode to make walking more attractive directly reduces congestion on our roads (DOT 2008a) and, in the case of Melbourne, on our public transport system.

Other benefits to increased walking levels include:

- improved individual health and public health cost savings associated with a range of health conditions (Cavill *et al.* 2009;

VicHealth 2007; Genter *et al.* 2008),

- household savings on fuel costs (Gotschi & Mills 2008),
- more robust local economies (NZ Ministry of Transport 2008),
- better community cohesion and social capital (Queensland Department of Transport 2008), and
- improved safety for pedestrians and cyclists (Jacobsen 2003; Robinson 2005).

Given all these benefits, why is it so difficult to build walkability into our communities? This paper seeks to explore this question through the lens of a pilot project called the Expanded Walkability Toolkit Pilot Project.

The paper describes the methods DOT used to develop, pilot, and evaluate its walkability toolkit. It includes a brief history of earlier toolkits that informed the development of this toolkit. Preliminary findings are discussed. The paper then takes a step back from the findings of the evaluation to address the question, "what are the underlying issues that gave rise to these evaluation results?" Using this question to frame the discussion, the

paper analyses continuing difficulties and tensions with:

- 1) translating 'walkability' from a health planning and urban design perspective to the fields of engineering, statutory and strategic planning,
- 2) embedding walkability within the structure of planning processes,
- 3) making provision for good walking connectivity and access, and
- 4) the tension created by the objective to promote best practice.

In 2008 the Victorian Department of Transport (DOT), with a Steering Group from several government departments, local governments, and the Planning Institute of Australia (PIA) – Victorian Division, set out to develop a 'Walkability Toolkit' that local government statutory planners and engineers could use to embed walkability in development planning. The long-term objective of the project was to develop Victorian communities in a form that will encourage walking over other modes of transport. For the purposes of the project, 'walkability' was defined as "a quality of the built environment that invites people to get around on foot, not because they have to but because they will feel like they are missing out if they don't" (CoGG 2008b: 4).

To accomplish the Steering Group's objectives, the Walkability Toolkit needed to define and provide a way of assessing 'walkability' in tools that could be relatively easily used by local government planners and engineers when assessing development schemes. 'Walkability' is not defined in Victoria's Planning Provisions. This omission has led to several attempts to create tools that operationalise the concept of walkability. The paper will discuss definitional issues in the context of this toolkit, as well as the difficulties identified by council officers testing the earlier toolkits from which DOT's toolkit was developed.

### **Walkability and clause 56 of the Victorian Planning Provisions**

Principles and requirements for planning Victorian communities are set out in the *Victorian Planning Provisions* (VPP). Clause 56 of the VPP applies to residential

subdivisions, and describes standards that will allow planners and developers to meet the objectives of residential planning. Subclause 56.03.1 sets out the "compact and walkable neighbourhoods objectives" for residential subdivisions, and the relevant standards. These include requirements that planning applications show the distance in metres from public transport stops, the estimated number of dwellings within those distances, and the layout of the subdivision in relation to the surrounding area. The subdivision must also be designed to be accessible to people with disabilities<sup>1</sup>.

While the standards provide some broad guidance on embedding walkability, planners have encountered difficulties when applying them to proposed subdivisions (Légaré Forthcoming). In particular, what is 'walkable' is not defined and several of the standards are set out in broad terms<sup>2</sup>. This lack of detail makes it difficult for planners to identify when

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<sup>1</sup> Additionally, subclause 56.03.1 requires that subdivision applications meet the standards set out in other subclauses of clause 56, including those relating to activity centres, planning for community facilities, lot diversity and distribution, walking and cycling networks, the public transport network, and the neighbourhood street network (Department of Planning and Community Development (DPCD) 2006:: subclauses 56.03.2-3, 56.04.1, 56.06.2-4). In combination, these subclauses require that key destinations are accessible by direct walking routes; that subdivisions should have a mix of lot sizes; that subdivision applications should implement any relevant local or regional walking strategy; that links should be provided to existing regional walking networks; that subdivisions should provide an interconnected, continuous and safe network of walking paths and safe crossing points; that subdivisions should provide priority for cyclists; and that streets in new subdivisions should be provided with natural surveillance. There is some overlap between the requirements of the various standards.

Although it is not referred to by subclause 56.03.1, subclause 56.6.5 provides some broad requirements for standards to which walking infrastructure should be built.

<sup>2</sup> As indicated in an unpublished report by the Heart Foundation Australia.

they are achieved. In the absence of a definition of when each element of a standard constitutes a 'walkable standard', local government planners have noted inconsistent applications of walkability standards in new developments (CoGG 2008a).

In addition to the issue of defining walkability, there is the issue of what is variously defined as "best practice," "stretch targets," or "aspirational" standards. Victorian local government social planners have a strong interest in improving the walkability of communities for health. They express concern that without including a clear and aspirational definition of 'walkability' in the VPP, developers will only be required to incorporate the minimum possible walking infrastructure into subdivision applications (CoGG 2008c).

Developers cannot easily build walkability into subdivision applications without clear guidance on what will be acceptable in each local government arena. As a consequence, local government planners are burdened with the task of renegotiating items on each application, at every stage in the application process from concept through to statutory approval (CoGG 2008a).

Engineers, for their part, are focused on the achievement of performance standards. Without clearly defined standards, engineers have significant difficulty going beyond the measures in the VPP. These relate footpath width to road classification, rather than the quality of walking environments, and so are particularly unhelpful in providing guidance on pedestrian comfort or safety.

Development of the Walkability Toolkit

### **The DHS/Deakin Toolkit**

In 2006, the Victorian Department of Human Services (DHS) commissioned Deakin University to enhance local government's ability to embed walkability into policy and planning practice (Edwards *et al.* 2006; DOT 2008b). The development of the Project commenced in the inner northern DHS region. Officers from the Cities of Yarra, Banyule, Darebin, Hume, Whittlesea, Nillumbik, and Moreland were involved

A second phase was initiated by DHS in the South Barwon Region, and in particular, Geelong<sup>3</sup>. This project sought to develop a walkability toolkit that would be aspirational and would enable planners to incorporate best practice in walkability planning. It was envisaged that the toolkit would have three main functions: to assess and score subdivisions as more or less walkable; to facilitate informed, engaged and integrated planning; and to help ensure that assessment decisions were based on a consistent evidence base (DOT 2008b). The focus of the toolkit was planning for healthy environments, in line with DHS business activities.

During the course of the project, council officers identified issues with the toolkit that could make it difficult to operationalise. These included:

- A need for more visual guidance;
- A lack of a specified target audience;
- A need to clearly distinguish between best practice and required standards;
- Difficulties with using the toolkit in existing areas;
- Difficulties in using the toolkit in activity centres; and
- The document was too long.

Some difficulties, particularly the need for more visual guidance and confusion around terminology on standards and requirements, arose from the difficulty in translating a health planning perspective into terms and tools more familiar to statutory and strategic planners. The difficulties with the length of the document and the difficulty in using the toolkit in already established areas and activity centres were a result of the realities of the work context – the large workload of statutory and strategic planners, the extent of their work activities, and the timelines they must meet.

Ultimately, local council officers did not support implementation of the DHS/Deakin toolkit in the planning context.

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<sup>3</sup> The City of Yarra and the Shire of Whittlesea assisted in the development of the second phase of the project.

### **The City of Greater Geelong Toolkit**

At the conclusion of the DHS project, three of the councils— Greater Geelong, Yarra and Whittlesea – decided to develop a new toolkit for use in interpreting walkability requirements of clause 56 of the VPP. The City of Greater Geelong (CoGG) engaged Urban Designers, David Lock Associates, to develop a toolkit specifically for use by local government statutory and strategic planners. A primary objective was to assist planners apply best practice principles to the walkability in new sub-divisions. CoGG also wanted to ensure that all subdivision proposals were identifiably consistent with Clause 56.

CoGG facilitated the development of a toolkit in consultation with a number of stakeholders including DOT (then the Department of Infrastructure), the Victorian Department of Planning and Community Development (DPCD), DHS and the City of Whittlesea. CoGG conducted a trial of the toolkit at a workshop for subdivision planners, engineers, and health promotion staff in mid 2008.

The CoGG toolkit addresses or avoids four of the difficulties council officers had identified with using the DHS/Deakin toolkit. The CoGG toolkit clearly indicates that it is to be used by council officers and developers when interpreting clause 56 of the VPP (CoGG 2008b). During testing of the CoGG toolkit local government officers noted that its illustrations were a helpful aid to interpretation. It was also a specific requirement of the CoGG toolkit that it be applicable in green field developments, to take account of high levels of development in Geelong's outer urban growth areas (CoGG 2008a). Local council comments regarding use of the toolkit in established areas and activities centres were not relevant to the CoGG toolkit.

### **The Department of Transport Expanded Walkability Toolkit**

In 2007, DOT became involved in the development of the Deakin Toolkit with the Cities of Geelong, Yarra and Whittlesea. DOT was interested in developing a Toolkit for use at a state-wide level. In addition, the

Councils and DOT were interested in extending the CoGG toolkit so that it was capable of application in developments in established areas and activity centres (DOT 2008b).

In June 2008, DOT convened a Joint Steering Committee<sup>4</sup>. The tasks of the Steering Committee included: ensuring a toolkit could be used state-wide; consulting broadly; and rigorously trialling the toolkit in other Council areas to indicate whether it met other Councils' needs. It was decided to make the CoGG Toolkit the basis for an expanded toolkit. As the project evolved, the Steering Committee suggested that an audit and rating mechanisms be added to the toolkit.

As with the DHS/Deakin and CoGG toolkits, an important aim of the DOT toolkit was to allow developers or planners to embed best practice in walkability in new developments. The walkability provisions of the VPP focus largely on walking paths and networks of footpaths, and it was recognized that walkability should go beyond minimums to also address other influences on people's choice to walk or not, including elements such as shelter, stops, attractive and accessible destinations, and an attractive environment. The walkability toolkit would become a means of introducing planners, engineers, and the community to the idea of walkability, and raise awareness in those who may not have considered creating walkable developments to incorporate walkability into their applications (Steering Committee, personal communication).

DOT commissioned David Lock Associates to expand the CoGG toolkit and pilot it with a range of local government authorities. As a first step, David Lock Associates held a workshop with participating council officers to gather their feedback on the CoGG toolkit. This feedback was used to develop a draft expanded walkability toolkit. Councils involved included CoGG, Brimbank City

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<sup>4</sup> Members of the Steering Committee include DOT, DPCD, DHS, Growth Area Authority (GAA), CoGG, the City of Whittlesea, and the Planning Institute of Australia (PIA) – Victorian Division.

Council, the City of Casey, and Colac Otway Shire<sup>5</sup>. Of these, only CoGG piloted the toolkit across all development sites currently being processed by council. The remaining councils applied the toolkit during assessment of proposals for select sites. Sites were chosen to encompass a range of development types including green field, retrofitting, infill, and activity centre developments. The councils participating in the trial represented inner metro, metro-rural interface, regional centre, and rural areas.

The Expanded Walkability Toolkit comprises two toolkit documents, one for residential developments, and one for activity centres. In addition to the walkability audit and rating mechanisms, the documents include introductory comments explaining the concept of walkability and how to create walkable areas, a description of the limitations of clause 56 in comparison to best practice in walkability, and a guide to using toolkit. The audit tool is in three parts: an assessment of the walkable catchment, an assessment of the contents of the walkable catchment surrounding a site or development, and an assessment of the quality of the walking experience.

Urbis consulting was commissioned to undertake an independent evaluation of the toolkit to run concurrently with the pilot. The evaluation reviewed the expanded toolkit against the existing literature on walkability, and tested the toolkit with local government planners and engineers in a series of workshops using a hypothetical development. It is anticipated that feedback from both the evaluation and from participating council officers participating in the pilot will be incorporated into the final form of the Expanded Walkability Toolkit.

As of the writing of this paper (June 2009), both the pilot and the evaluation of the expanded walkability toolkit are still underway. However, preliminary findings from the evaluation are available following the workshops conducted with councils.

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<sup>5</sup> Colac Otway Shire participated in only some elements of the project, including the initial stages of the pilot and the hypothetical workshops with Urbis.

#### Preliminary results from the expanded walkability toolkit evaluation

The purpose of this section is to shed light on the tensions and issues in trying to operationalise the concept of walkability within the context of planning processes in Victoria. The focus is not the preliminary results of the evaluation *per se*, but rather, what these results tell us about the underlying issues.

Urbis conducted workshops in May 2009. The purpose of the workshops was to provide a control for the application of the toolkits at councils' own sites. Council statutory and strategic planners and engineers took one-and-a-half hours to apply the expanded walkability toolkit to hypothetical developments. Planners from Urbis also participated in the workshop to obtain a clear idea of exactly which elements of the toolkit worked well, and which were more difficult to use. The residential and activity centres toolkits were tested at different workshops.

Positive comments on the expanded walkability toolkit included:

- 1) *Making walkability visible.* Many participating council officers noted that they were already 'thinking about' walkability when they conducted assessments of development applications. Using the expanded walkability toolkit reinforced their intuitions that improving walkability in new developments was both desirable and possible. Council officers considered the range of examples of how to embed walkability in new developments in the Expanded Walkability Toolkit to be helpful. The toolkit encouraged planners and engineers to think more carefully about the urban design elements of new developments.
- 2) *The value of illustrations.* In particular, officers found that the diagrams and planning examples in the toolkit contained useful suggestions for embedding walkability into development applications. There is a suggestion that the Toolkit is,

therefore, a useful reference for Strategic Planners and Developers.

Participating council officers also identified a number of difficulties with using the toolkit, however, including:

- 1) *Use of unfamiliar language.* Participating council officers noted that the documents often used social planning and urban design language that they were not familiar with. This unfamiliar language hampered their use of the documents.
- 2) *Precision in language.* Some council officers reported that a number of the questions in the toolkit were ambiguous or “subjective,” which made assessing developments difficult for them. For example, some questions asked whether or not a design feature was “characteristic of the development.” The feedback notes that the toolkit provides no guidance on how to determine this.
- 3) *Need to reflect the type and level of information available at each stage of the planning process.* The planning application process occurs over several stages. At the initial stage of the precinct structure plan, the development plan is presented at a high level, focusing elements of the development such as street layout and the location of activity zones, and the development’s relationship to surrounding areas. At later stages, such as the actual subdivision application, plans include much more detail about the design of streetscapes. Different officers are involved in these different stages of the planning process; strategic planners are involved at the precinct structure plan stage and statutory planners and engineers are involved at later stages. Each of these professionals requires and will have different information available to them, relevant to the work they are undertaking. Some workshop participants reported that the documents comprising the expanded

toolkit did not account for the different stages involved in the planning process, thereby requiring users to have access to information that no other officers involved in the planning process would have. All planners and engineers using the toolkit therefore would be unable to answer some questions without undertaking lengthy data collection exercises.

- 4) *The scope of planning applications.* Participating council officers noted that the definition of the “walkable catchment” in the toolkit could include areas outside the development, which is outside the scope of the application they were assessing. This problem was particularly pronounced in the case of the activity centres toolkit.
- 5) *The documents are too long.* At 54 and 56 pages long respectively, both the Residential and Activity Centres toolkits were considered too long. None of the council officers completed assessing the document using the toolkit during the set time. While acknowledging that using the toolkit would become quicker with practice, council officers considered that using the toolkits would be onerous, given their existing workloads.
- 6) *Need for definition of best practice vs. required standards.* As with the earlier toolkits described above, the Expanded Walkability Toolkit does not differentiate between the features which allow developers to meet the requirements of Clause 56, and which contribute to meeting best practice. Participating officers noted that use of the term “standard” in the toolkit was confusing as the term should be used only to refer to the standards set out in the VPP.

Overall, council officers were not convinced that using the toolkit would lead to better outcomes. Participating officers reported that the concept of walkability comprises several key components. The Expanded Walkability Toolkit included these key components; however, they suggested, it needs to focus on these key components, while de-emphasising elements which are less crucial to the concept of walkability.

## Discussion

The concept of “walkability” has evolved from three streams of research. Theoretical research into the relationship between physical activity and the built environment came originally from, research on travel behaviour and from research on physical activity (Handy 2003). More recently, walkability has been promoted through the urban design literature that calls for ‘neo-traditional’ design to replace suburban sprawl (Southworth 1997).

At a public policy level in Victoria, the emissions and congestion reduction benefits associated with walking for transport purposes is a key driver for promoting walkability in the transport planning field (State of Victoria, 2008).

The policy and advocacy pressures to promote walkability have therefore come from areas other than the areas of statutory and strategic planning and engineering. While individual planners and some councils are very interested in improving the walkability of new developments, improving walkability is not always identified as core business for local authorities.

Given its origins, walkability is described using terminology from the urban design, social planning and health disciplines, and is associated with concepts specific to these disciplines. It should be noted that local council planners who helped in the development of the Expanded Walkability Toolkit were also involved in the development of the two earlier toolkits on which the DOT toolkit is based. It is clear that a number of the difficulties that have been identified with the Expanded Walkability Toolkit are actually associated with the complex task of translating any toolkit into the terminology and concepts typically used by engineers and statutory and strategic planners without losing the essence of a concept that is a critical addition to the planning process for what may be perceived as non-planning or non-engineering reasons. This point is highlighted by the contrast between the feedback from the workshop and the fact that the Geelong Toolkit (the basis for the current Toolkit) has been awarded the Planning

Award for Excellence in the area of Health and Wellbeing from the Planning Institute of Australia – Victoria Division (2008) and was a key component in City of Greater Geelong’s award from the Heart Foundation, the State Category Winner and State Overall Winner in the category, “Implementation of Plans and Policies to Support Heart Health” (2008).

As noted, the toolkit uses language common to the disciplines from which the concept of walkability developed. For example, at the hypothetical workshops, council officers identified “sheltered open space” as a term that requires a supporting glossary. Thus, while the concept of sheltered open space is an important aspect of walkability, this term required clarification to allow technical application by engineers and strategic and statutory planners. Translation requires more emphasis on the use of familiar language and technical definitions in order to eliminate confusion and ensure ease and speed of use.

A related issue involves what is perceived as the subjectivity and ambiguity of some of the questions in the toolkit. Council engineers in particular, were likely to report being accustomed to working with detailed, specific, often quantifiable measures. To translate walkability effectively for council officers, where possible the toolkit should provide measures that council officers will find easy to use, given their disciplinary background.

The toolkit was also considered confusing to use because it did not adequately account for concepts typically used by engineers and statutory and strategic planners or used concepts that have a different meaning for them. An example of the latter is the term “standards.” The term is used by local council officers assessing planning applications, but the terms were used in the toolkit in a way that differed from the way council officers typically use the term in their work. Another example of this is the term, “activity centre.” Its use in the toolkit differed from the term’s use in planning regulations. Clearly, it is imperative that the toolkit uses the terms in a manner consistent with their use in the wider planning process.

The processes governing the development of planning documents and planning

applications is also an issue. Workshop participants noted that the Expanded Walkability Toolkit did not distinguish between the specific roles and functions different types of council officers play in the planning process. In particular, the toolkit did not recognize the very different functions of strategic planners versus statutory planners and engineers. They noted that, in its present form, using the toolkit requires strategic planners to obtain information that is properly the domain of statutory planners, and vice versa. From this perspective, the toolkit requires both types of planners to address items in applications that are irrelevant to their stage of the application process. This tension is inherent in the concept of walkability, which is conceived in a holistic manner. It may be necessary to reformat the walkability toolkit by breaking down the concept to allow it to be applied in a staged manner, consistent with the different stages in the planning process.

Feedback from the hypothetical workshops also indicated that the toolkit did not adequately take account of the realities of statutory planners' activities. The most obvious example of this was that using the toolkit simply took too long. If implemented at the Statutory Planning context only, application the walkability toolkit would significantly increase staff workloads. It should be noted that this feedback has been given for all the earlier versions of the toolkit. It is also noteworthy that a range of tools attempting to provide guidelines on walkability consistently meet with the feedback that they are too long and/or too complicated (personal communications with Steering Group members and external agencies). The tension here is between an application process that is limited to the scope of the development, while the concept of walkability encompasses the notion of a network that incorporates links between the development and the surrounding area. By definition, this goes beyond the notion of individual routes to focus on access, connectivity, permeability and encouraging walking. The dilemma is that where a non-compulsory requirement causes officers so much extra work, it is likely that it simply will not be used.

This point is related to the last issue we will discuss in this paper. Difficulties with the toolkit arise from the very fact that policymakers and practitioners outside the field are trying to incorporate aspirational elements, which broadens the approach used by council staff in assessing development applications. The Steering Group agreed that the toolkit should aim, not only at helping council officers to interpret clause 56 according to the minimum standards, but also at promoting best practice in designing for walkability. The point of the exercise is to challenge toolkit users to think beyond the usual scope of their work – applying regulations – to improve outcomes for walkability. However, from the feedback, it is apparent that this dual focus has caused confusion among council officers involved in the toolkit pilot. The complexity of the situation is amplified because planners will, in practice, often need to compromise on one or more aspects of walkability because of pre-existing features of the area being developed – for example, topography or layout of existing arterial roads. Where all items are being assessed on a best practice basis, it is not possible for planners to perform this sort of pragmatic weighing of different aspects of the development.

### **Conclusions**

It is important that the focus on promoting best practice be retained in any refined version of the expanded walkability toolkit. However, it may be useful for planners applying the toolkit to subdivision applications to have some leeway in assessing all items to a best practice standard. Any move in this direction needs to be done carefully so that core components of walkability are not compromised.

Planners and engineers have been closely involved in the development of both the expanded walkability toolkit and its antecedents. Despite this, preliminary results from the evaluation indicate that the expanded walkability toolkit does not allow council planners and engineers to operationalise clause 56 of the VPP. The challenge of finding a common interdisciplinary language is real and difficult.

Promoting walkability is an important policy objective for DOT and the Steering Group, and council planners and engineers have indicated that they want to embed walkability into developments. Despite difficulties with the Expanded Walkability Toolkit, council officers have indicated that it contains some useful suggestions for doing this. DOT and the Steering Group will need to work collaboratively with council officers to navigate a way forward with the toolkit.

The structure of the Toolkit must find a way to take greater account of the functions of different personnel, the scope of different elements of planning applications, the language and concepts used, and the typical workload of council staff. Investigations could explore ways that planners, engineers and developers could work together in early mutual assessment of a subdivision, and with delegation of parts of the assessment to staff with the appropriate skills. It may be appropriate to refine the toolkit so that it includes shorter tools more focused on specific tasks undertaken by council staff, and that it clarifies which items are best practice and which are statutory standards. Additionally, alternative means of operationalising the concept of walkability for council planners and engineers should be fully investigated.

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