

An analysis of the legal framework influencing walking in Australia

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Key points

- Improving environmental support for walking is essential to a whole-of-systems approach for increasing population physical activity
- There is limited understanding about the statutory components that regulate the walkability of built environments in Australia
- There is diversity in the range of statutory instruments and approaches addressing design considerations for walking at the state/territory level
- Scientific legal mapping will enable a more systematic comparison and appraisal of these instruments

Abstract

Aim: Although walking is a priority in many strategic plans in Australian cities, there is limited understanding of the statutory components for delivering this. Confusion still exists despite substantial evidence about the built environment elements that promote walking and the availability of tools to assess walkability outcomes. This paper examines the characteristics and components of the legal framework that influence the walkability of built environments in Australian states and territories.

Methods: We audited the form and nature of statutory components regulating the design of the built environment and used framework analysis to identify and compare the main statutory instrument/s that address walkability design considerations in each state and territory.

Results: Lawmaking for planning may involve the state/territory parliament, executive, ministers, government departments and/or statutory authorities. The state/territory planning Act is the primary legislation that sets out the framework for the prevailing planning systems. Its relevance to walkability arises from its planning objectives, the legal effect it confers to statutory instruments that support the Act's implementation, and any processes or mechanisms to promote high-quality design outcomes. Most states and territories have developed jurisdiction-wide statutory tools that contain relevant design considerations for walking. These instruments influence walkability through objectives set for planning zones and aspects of development, and through criteria established to achieve the goals. Many jurisdictions use a combination of outcome and rules-based standards to achieve desired design objectives.

Conclusions: The variability in jurisdictional approaches poses challenges, and raises uncertainty, about the scope and strength of legal support for creating walkable environments at the national level. Future policy surveillance and epidemiological analysis are needed to refine the specifications of laws that influence walking in Australia.

Introduction

Globally, more than one in four adults are insufficiently active for health, with little evidence of improvement since 2001.¹ In Australia, this number is almost one in two.² This lack of progress will slow down chronic disease prevention efforts, and limit potential co-benefits of physical activity (PA) that may help address issues such as climate change. Walking offers a vital policy target for governments seeking to increase population PA because it is a prevalent behaviour across the lifespan and socioeconomic groups, and can be incorporated into daily life such as recreation or transport.^{3,4} In Australia, it is also the most prevalent form of non-sport PA in adults⁵, although participation varies slightly by geographic region.⁶

Interactions between individual, social and environmental factors influence walking behaviours.⁷ Interventions targeting individuals, such as walking group programs, can increase walking but can be resource-intensive and difficult to implement at scale.⁸ Built environment interventions such as increasing residential density and access to parks offer population reach and have been estimated to contribute almost 60% of the PA required to meet health recommendations.⁹ In reality, both types of interventions are needed as part of a systems approach to promoting PA.¹⁰ Statutory components of policy making can target both individuals and the built environment to encourage walking. For example, legislated congestion pricing schemes can disincentivise individuals from driving and promote a shift towards cheaper modes of travel such as walking. Statutory components of policy making may be leveraged to influence the planning sector's activities and shape the 'walkability' of the built environment (i.e. conduciveness for walking as recreation and/or transport). Setting design standards, establishing funding mechanisms, creating a mandate or authority for decision making, and developing administrative or procedural tools to support cross-agency or government coordination can aid in accomplishing this task.¹¹ Whether legal interventions target the public or the built environment, their most significant potential for mass impact is changing default options that influence behavioural and environmental norms.¹²

According to our review of (mainly non-legislative) state/territory and national policies addressing PA in Australia, PA is addressed by planning policies in each jurisdiction.¹³ A national liveability policy review found that walkability is a priority in most metropolitan strategic plans.¹⁴ Although encouraging, it is not known whether pursuing an active living agenda is operationalised by the statutory elements of the planning system that regulate and set design standards for land use and development. Recent research in Australia has indicated that more robust statutory mechanisms and legislative support may be needed to incentivise and ensure the delivery of healthy built environments.¹⁵ Studies also highlighted

the limitations of voluntary guidelines for the widespread implementation of measures designed to promote beneficial planning outcomes.¹⁶

Limited global progress on the prevention of chronic disease has led to strong recommendations from the World Health Organization's (WHO) Independent High-level Commission on Noncommunicable Diseases. These recommendations request that governments employ their full legal powers and increase effective regulation to address physical inactivity and other risk factors.¹⁷ Yet, there has been limited research to define and disseminate the components of a legislative framework for achieving such outcomes through planning in Australia, including how planning laws and regulations support or hinder walking. This study examined the details of the legal framework, including laws and legal instruments, that influence the walkability of built environments in Australia at the state and territory level. The study findings provide a foundation for public health law research to understand and assess laws that influence walking and enable health policy makers to become more informed and effective partners for healthy planning policy in Australia.

Methods

An applied policy research approach guided this study¹⁸, starting with reviewing the grey and peer-reviewed literature to synthesise the built environment design features relevant to walking. The resulting audit determined whether design features pertinent to walking are addressed by legislation and/or any statutory instruments, the responsible bodies for their enactment (i.e. state or territory parliament, executive, minister or planning agency/authority) (Supplementary Box 1, available from: doi.org/10.6084/m9.figshare.19429724.v1), and how the instruments broadly address design considerations to promote walking. A review of the 'statutory policies' and 'legislation/regulation' listed on the National Heart Foundation's Healthy Active by Design website¹⁹ and a review of government planning websites and web searches identified potentially relevant documents. We reviewed legislative or statutory instruments (Supplementary Box 1, available from: doi.org/10.6084/m9.figshare.19429724.v1). Where it was impossible to locate such documents, we considered any non-statutory policies that could have legal enforceability.

Framework analysis informed the audit of the primary instruments that addressed built environment design principles or elements.²⁰ This involved becoming familiar with how they specified planning and design requirements and then developing and applying a coding framework to document how these instruments addressed walkability considerations. The approaches used to influence walkability broadly fell within the categories: 1) establishing objectives; 2) setting out principles or strategies; and/or 3) providing criteria that could be outcome based (meaning they specify objectives but

allow discretion for achieving them) and/or rules based (meaning they are more prescriptive and usually specify measurable requirements for planning and development, for example the minimum amount of public open space that should be provided within a particular distance from housing).

Results

Our literature review identified several 'walking needs' or environmental factors influencing walking decisions.²¹⁻²³ These are basic to higher-order needs: accessibility, safety, convenience, comfort and enjoyment. A person deciding to walk will be less likely to consider a higher-order need if a more basic need is not satisfied. Supplementary Figure 1 (available from: doi.org/10.6084/m9.figshare.19429724.v1) synthesises the everyday walking needs described in the literature and identifies examples of built environment design elements to address these needs, categorised according to the level at which data may be attainable (street, neighbourhood or city level).²⁴

We found that all states and territories currently have relevant statutory instruments that affect walking needs (Table 2 and Supplementary Table 1, available from: doi.org/10.6084/m9.figshare.19429724.v1). Table 1 presents the primary forms of legislation and statutory instruments relevant to creating walkable built environments in each state/territory. Table 2 describes the main statutory tools that address the design of the built environment. The concepts presented are explained in detail below.

The planning Act is the primary legislation for each state and territory's planning system and is supported by statutory instruments (Table 1). The Act does not set out detailed rules or design specifications but outlines objectives that decision makers must generally consider or advance when executing their functions. For example, the Queensland *Planning Act 2016* requires decision makers to advance the purpose of achieving 'ecological sustainability', a concept that encompasses 'physical wellbeing' (sections 3 and 7). It includes "creating and maintaining well-serviced, healthy...liveable and resilient communities" (section 3(c)(i)). Only a few jurisdictions (South Australia, Queensland and Tasmania) include health as an objective in their planning Acts.

The planning Act may authorise the executive or a statutory authority to develop statutory instruments to support the Act's implementation and prescribe its legal effect. For example, the Western Australian *Planning and Development Act 2005* (sections 7 and 26) established and authorised a statutory body (the Western Australian Planning Commission) to prepare 'State planning policies' (SPPs). The SPPs address "broad general planning and facilitating the coordination of planning throughout the State by local governments". One such SPP is SPP7.0 (Design of the built environment), which sets out overarching design principles, including that of 'legibility'

(the provision of clear connections and features that make places easy to navigate). Sections 77 and 77A of the *Planning and Development Act 2005* determines the legal effect of the SPPs, which: 1) requires local governments to "have due regard" to any applicable SPP when preparing or amending a local planning scheme (which governs local planning and development decisions); 2) allows SPPs to be adopted as part of a legally binding local planning scheme; and 3) empowers the minister to order local governments to amend their local planning scheme to be consistent with a particular SPP.

Table 2 shows the main statutory instrument for each state/territory that addresses design considerations for walkability and identifies each instrument's broad approaches to achieve this, according to the categories developed using framework analysis. One example used by the Victoria Planning Provisions (VPP) is through objectives and strategies it applies for each policy theme/subtheme (e.g., the 'Sustainable personal transport' subtheme aims to create "pedestrian environments that are accessible to footpath-bound vehicles such as wheelchairs, prams and scooters" (VPP18.02-1S)). Planning authorities need to consider and implement these objectives and strategies when making planning decisions (VPP71.02-2; section 14(c) *Planning and Environment Act 1987* (Vic)). The VPP also sets out more detailed criteria for specific types or aspects of land use and development. For example, walking networks in residential subdivisions need to "provide safe walkable distances to activity centres, community facilities, public transport stops and public open spaces" (VPP56.06-2). This outcomes-based measure specifies an intended objective but not any measurable requirements (e.g., the desirable distance for walkability). Most of the VPP criteria are outcomes based, but some are rules based (e.g., the criteria for 'lot design' requires 95% of dwellings to be located within 400 m from the nearest existing or proposed bus stop).

In some jurisdictions, the statutory instrument specifies outcomes-based criteria and suggests rules-based standards that, if followed, would likely assist in achieving the outcomes-based criteria. The Western Australian State Planning Policy 7.3 (Residential Design Code for Apartments) specifies outcomes-based criteria for the 'Public domain interface' design element that requires "street facing development ... [to] retain and enhance the amenity and safety of the adjoining public domain" (element objective O3.6.2). The policy suggests some objective specifications to help achieve this (e.g. "Front fencing includes visually permeable materials above 1.2 m" (acceptable outcome A3.6.6)).

Supplementary Table 1 (available from: doi.org/10.6084/m9.figshare.19429724.v1) presents further examples illustrating the range of approaches used by states and territories to address walkability considerations. Supplementary Table 2 (available from doi.org/10.6084/m9.figshare.19429724.v1) compares how two jurisdictions (Victoria and Queensland) address

a particular design element for walkability (in this case, footpath provision in residential subdivisions). A combination of objectives, outcomes-based and rules-based criteria (including footpath widths for different street types) is used in Victoria. In Queensland, objectives and rules-based standards are also specified, but the requirements only address whether footpaths are compulsory on new roads and one or both sides of roads. Supplementary Table 3 (available from: doi.org/10.6084/m9.figshare.19429724.v1) identifies various plans or

actions currently underway in several jurisdictions to develop, review, revise and/or reform the legal framework or particular statutory instruments for planning, along with their projected timeframes for becoming finalised or operational. Some common themes emerge from the rationale described by the jurisdictions for their reviews, including simplifying and improving the flexibility of the planning system to deliver liveable and sustainable communities, suggesting that walkability is a current and active consideration among policy makers.

Table 1. General legislative framework influencing built environments for walking in Australia^a

Type of instrument (power to enact)	General description
State or territory level	
Planning Act (parliament)	Enabling legislation that sets out planning system objectives, key planning processes, and defines the roles and responsibilities of significant decision makers. For example, the SA <i>Planning, Development and Infrastructure Act 2016</i> establishes liveability goals, high built environment standards, supportive financial mechanisms and incentives, and promotion of cooperation, collaboration and policy integration across agencies and local government. It does not set out detailed design specifications but may enable the creation of statutory instruments to address these. It may address funding, cross-agency, and government coordination mechanisms.
State planning policies (SPPs) (executive through the governor in council, or the minister)	May provide strategic policy direction for the preparation of other statutory instruments or may be required to be integrated into local planning instruments. In some jurisdictions, the SPPs directly apply in development assessment and prevail over regional planning instruments to the extent of any inconsistency.
Planning regulations (executive through the governor in council)	Support the primary legislation and do not usually contain any detailed built environment design considerations, except in QLD, where they set minimum walkable neighbourhood benchmarks for residential subdivisions. ^b
State or territory-wide planning rules (planning authority or commission and/or minister, as authorised by planning Act)	Many jurisdictions (ACT, NT, SA, TAS and VIC) have established standardised rules. ^c They set out planning and development objectives and standards or controls for different zones and/or specific aspects. In TAS and VIC, they are supplemented by provisions prepared by local councils.
Model codes (state government departments of planning)	QLD has a model code with voluntary best-practice design standards for walkable neighbourhoods ^d , which become enforceable if the provisions are integrated and adopted as part of a local planning scheme. Local governments may be inclined to adopt the model code provisions to meet their statutory obligation of implementing the SPP state interest of creating 'liveable communities'.
Local level	
Local planning instruments (local government)	In NSW, detailed planning and design criteria are mainly addressed by individual local councils in Development Control Plans (DCPs). However, there are plans to develop model DCP provisions and a new 'Design and Place SEPP' is being set to establish core design quality principles.

ACT = Australian Capital Territory; NSW = New South Wales; SA = South Australia; QLD = Queensland; VIC = Victoria; NT = Northern Territory; TAS = Tasmania; SEPP = State Environmental Planning Policy

^a This table provides a general overview of critical statutory (and major non-statutory) instruments that apply at a jurisdiction-wide level and is not intended to be a comprehensive capture of all relevant tools in each jurisdiction. The statutory instruments identified do not all apply to every state/territory.

^b QLD *Planning Regulations 2017* (Schedule 12A) sets out walkable neighbourhood assessment benchmarks relating to connectivity, block lengths, footpaths, parks or open space and street trees.

^c ACT (*Territory Plan*), NT (*NT Planning Scheme*), SA (*Planning and Design Code*), TAS (*State Planning Provisions*) and VIC (*Victoria Planning Provisions*).

^d QLD model code for neighbourhood design – a code for reconfiguring the lot.

Table 2. Overview of how state and territory planning instruments address walkability at a jurisdiction-wide level

Jurisdiction	Primary instrument/s addressing walkability	Type of statutory instrument	How walkability considerations are addressed			
			Objectives	Strategies/ principles	Outcomes-based criteria	Rules-based criteria
VIC	Victorian Planning Provisions	Statewide planning rules	Yes	Yes, in the 'planning policy framework' section (VPP10–VPP19).	Yes, in the 'standards' part of the 'particular provisions' (VPP50–VPP59).	Yes, in the 'standards' part of some of the 'particular provisions' (VPP50–VPP59).
SA	Planning and Design Code	Statewide planning rules	Yes, expressed as 'desired outcomes' in the assessment provisions.	No	Yes, expressed as 'performance outcomes' in the assessment provisions.	Sometimes applicable, expressed as 'deemed-to-satisfy criteria/designated performance feature'.
WA	SPP7.0 Design of the built environment	State planning policy	No, none related to walkability.	Yes, the state planning policy is primarily principles based.	Yes, some qualitative guidance is provided under each principle.	No
	SPP7.2 Precinct Design	State planning policy	Yes, set out as 'policy outcomes'.	No	No	No
	SPP7.3 (vol 1 and 2) Residential Design Code	State planning policy	No, although each design element has a statement of intent.	Yes, suggested strategies are provided as design guidance.	Yes, each design element sets out 'element objectives', which may be met by demonstrating 'acceptable outcomes' or alternate means.	Yes, each design element sets out 'acceptable outcomes', which are specific measures and outcomes to meet the element objectives.
QLD	State Planning Policy	State planning policy	Yes, see the state interest 'liveable communities'.	Yes, see the state interest 'liveable communities'.	No, the 'liveable communities' state interest has assessment benchmarks but none relevant to walkability.	No
	Planning Regulations 2017 (Schedule 12A)	Regulations	Yes, Schedule 12A explains the purpose of the assessment benchmarks.	No	Yes, qualitative assessment benchmarks are provided for the Connectivity design element.	Yes, objective benchmarks are provided for most of the design elements.
	Model Code for Neighbourhood Design	Non-legislative model code, but legislative if adopted by a local planning scheme.	Yes, they are expressed as the code's purpose.	Yes, they are expressed as overall outcomes by which the code's purpose will be achieved.	Yes, expressed as 'performance outcomes'.	Sometimes applicable, expressed as 'acceptable outcomes'.

Table 2. Overview of how state and territory planning instruments address walkability at a jurisdiction-wide level (continued)

Jurisdiction	Primary instrument/s addressing walkability	Type of statutory instrument	How walkability considerations are addressed			
			Objectives	Strategies/ principles	Outcomes-based criteria	Rules-based criteria
TAS	Tasmanian Planning Scheme (State Planning Provisions)	Statewide planning rules	Yes, each zone and code sets out an overarching purpose and specific objectives, some relevant to walkability.	No	Yes, expressed as 'performance criteria'.	Yes, expressed as 'acceptable solutions'.
NSW	Standard Instrument – Local Environmental Plan	Local planning instrument	Yes, the objectives for some zones include maximising public transport patronage and encouraging walking and cycling.	No	No	No
	SEPP 65 – Design Quality of Residential Apartment Development	State planning policy	No	Yes, Schedule 1 sets out nine design quality principles.	No	No
	Apartment Design Guide	Non-statutory but consent authorities are required by SEPP 65 to consider it in development assessment.	Yes, relevant objectives in Parts 3 and 4.	No	Yes, it is addressed in the 'design guidance'.	Sometimes provided in the 'design criteria'.
ACT	Territory Plan	Territory-wide planning rules	Yes, expressed as objectives or intent.	No	Yes, expressed as 'criteria' in the codes.	Sometimes provided as 'rules' or particular provisions in the codes.
NT	NT Planning Scheme	Territory-wide planning rules	Yes, addressed as part of the 'purpose' under 'development requirements'.	No	Yes, some qualitative criteria in the 'development requirements'.	Yes, some objective criteria in the 'development requirements'.

ACT = Australian Capital Territory; NSW = New South Wales; SA = South Australia; QLD = Queensland; VIC = Victoria; WA = Western Australia; NT = Northern Territory; TAS = Tasmania; SEPP = State Environmental Planning Policy

Discussion

This study describes the legal framework that influences the walkability of built environments in Australia. It shows that lawmaking for walking (defined to include Acts, regulations and other statutory instruments enabled by the Act) can occur at multiple levels (state/territory parliament, executive, department, statutory authority). At the same time, detailed design considerations feature mostly in state/territory-wide statutory instruments, which have legal effects determined by the enabling Act. These instruments vary in structure, content and level of detail but broadly seek to promote walkable environments by setting out objectives for different zones and aspects of development and accompanying criteria to achieve those objectives. Many jurisdictions use a combination of outcomes-based and rules-based standards to achieve desired design objectives. However, the emphasis on each jurisdiction's approach was not investigated and may differ between them. For instance, the ACT planning system has been described as 'prescriptive' with an emphasis on rules and agreed norms, in contrast to the outcomes-based approach adopted in jurisdictions such as South Australia and Victoria.²⁵

Our research set out to describe the form and nature of the statutory components that regulate the design of the built environment. We revealed considerable variability in jurisdictional approaches and raised uncertainty about the scope and strength of law for creating walkable environments at the national level. With several jurisdictions considering, reviewing or introducing significant changes to their planning system, it is worth reflecting on the type of research that would be most useful and timely for advancing understanding about legal approaches to promote walking. A practical next step may involve scientific legal mapping (specifically 'policy surveillance' or 'legal assessment'), the systematic collection and analysis of laws with public health significance across multiple jurisdictions.²⁶ This step could be undertaken longitudinally (as in policy surveillance) or cross-sectionally (as in legal assessment) to map the critical dimensions of laws related to walking. This can enable the comparison of jurisdictions and generate data for other legal epidemiological research, which covers a field of scientific study analysing the use of law as a factor in the cause, distribution, and prevention of disease and injury in a population.²⁷ Scientific legal mapping data could be used with the walkability indicators in the Australian Urban Observatory²⁸ and Institute for Transportation and Development Policy's Pedestrians First²⁴ to gain a more complete picture of the PA system.

In the US, the experience of Public Health Seattle – King County, an early adopter of policy surveillance, has demonstrated some of the benefits this form of research can offer health agencies seeking to effect change outside of their direct authority. For example, through surveillance of tobacco policies across the county, they

were able to identify previously unnoticed differences in coverage and content that offered leverage points for policy improvement in settings such as parks and schools to reduce smoking.²⁶ Scientific legal mapping could be influential in Australia by enabling jurisdictions to learn about what others are doing more readily and strengthen policy capacity and cross-agency engagement between health and planning sectors through more accessible and transparent information about the existing legal framework for planning and how it is changing over time.²⁹ It would also complement research to understand the elements of effective advocacy for healthy planning policy³⁰ and ascertain the levels of support and perceived barriers and facilitators for regulatory interventions for PA.³¹

Conclusions

WHO identifies 'active environments' and 'active systems' as integral to a whole-of-systems approach for increasing population PA and prominently features recommendations for improving the walkability of built environments. Although much is known about the built environment design elements that promote walking, and tools have been developed to assess walkability, there is limited understanding about the statutory components of the 'system' that direct and regulate changes to the built environment in Australia. Our study provides an example of applied policy research identifying diverse statutory instruments and approaches adopted by jurisdictions to address walking. The use of scientific legal mapping may enable more systematic and nuanced comparisons to understand better the specific ways in which existing laws shape environments for walking and identify potential targets for improvement. The potential benefits are significant, although the feasibility and timing of such an exercise would need to be considered.

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Competing interests

None declared.

Author contributions

TN, AB and BS conceived the study. TN led the execution of the study and writing of the manuscript. AB, WB, BGC and BS contributed to reviewing and editing. All authors reviewed and approved the final manuscript.

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