

Victor Harbor Footpath and Pedestrian Strategy

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Executive Summary

Footpaths play a vital role within communities. They provide a means of access within urban areas to facilities and services and promote greater health and wellbeing. The need for this Strategy continues to be reinforced by community concerns in relation to paving types and roll out priority.

The Pedestrian and Footpath Strategy applies to all urban areas of Victor Harbor as defined by the Urban Growth Management Strategy and focuses on the provision of permanent paths for pedestrian use. This Strategy should to be considered as a complementary strategy to other key strategies developed by Council.

The need for footpaths is very dependent upon the traffic and physical conditions on any street, road or other location and the nature of the pedestrian demand at that location. These conditions and the pedestrian demand can vary over time and consequently, a flexible methodology for assessing footpath requests was considered necessary in preference to adopting an ideal network to be implemented over time. The Pedestrian and Footpath Strategy includes a strategic tool for assessing and prioritising requests for footpaths (the Evaluation Matrix) which takes into account all these issues. The needs of vulnerable road users such as children, elderly or pedestrians with a disability are also given priority.

The adoption of this Strategy and the Evaluation Matrix has enabled Council officers to evaluate and prioritise requests for the construction of footpaths as well as determine appropriate pavement types for precincts within the city. The most highly ranked footpath requests are then considered for inclusion in the draft Ten Year Capital Works Program.

The Strategy allows requests for footpaths to be considered at any time and prompt advice to be provided to those requesting paths. The priority of any path can also be easily re-evaluated if circumstances change. The listing of footpaths for construction is consequently tentative and are reviewed annually and updated on an on-going basis as more projects are assessed for inclusion. This approach has not lead to a significant increase in the number of high priority projects but some additional medium priority projects can be expected.

The total cost to Council of constructing (asphalt) footpaths with a condition rating three to five is estimated to be \$800,000. Footpaths with low priority, condition ratings one and two the total additional cost to Council would be \$5 million.

PART A – STRATEGY

INTRODUCTION

Footpaths play a vital role within communities. They provide a means of access within urban areas to schools, commercial centres, and other facilities and services. They also provide a means to greater health and wellbeing through exercise and reduced car usage. Currently, the Council's footpath network incorporates approximately 93,000m² of constructed footpath (wearing course – asphalt, concrete, exposed aggregate, gravel, pavers) valued at replacement of approximately \$8.3 million.

The Pedestrian and Footpath Strategy has been updated by the Environment and Infrastructure Department to enable Council to evaluate and prioritise requests for the construction of footpaths across Victor Harbor's urban area as defined within the Urban Growth Management Strategy boundary. Council receives regular requests for footpaths from the community, this Strategy includes a tool (the Evaluation Matrix) which enables Council officers to rank each request. The most highly ranked footpath requests are then considered for inclusion in the draft Ten Year Capital Works Program.

Need for a Strategy

The need for new footpaths across the Council has been identified through the numerous community representations outlining concern at the condition and inadequacy of the current network. The completion of a Pedestrian and Footpath Strategy to guide the future provision of footpaths has been adopted by Council since 2011.



Related Strategies, Policy and Legislation

Community Plan 2036 and Strategic Directions 2016 – 2020

- Australian Standard 1428 (Set) 2010
- Austroads Guide Part 13
- Disability and Inclusion Act 2018
- **Disability Discrimination Act 1995**
- Footpaths Policy 2000
- Local Government Act 1999
- Regional Public Health Plan
- The Regional Trails Strategy
- Victor Harbor Asset Management Plans
- Victor Harbor Bicycle Strategy 2016
- Victor Harbor Recreation and Open Space Strategy 2017
- Victor Harbor Town Centre Masterplan 2006
- Victor Harbor Town Centre Traffic Management and Car Parking Strategy 2017
- Victor Harbor Urban Growth Management Strategy 2013 2030

BACKGROUND

The existing footpath network has a number of areas that fail to meet compliance with standards or acceptability from the community. Broad community feedback highlighted the following areas.

- a) Inconsistent footpath networks
- b) Pedestrians being forced to cross roads as footpaths were only on one side of the road
- c) Total lack of footpaths in some areas

A number of prioritised locations for construction of footpaths have been identified previously through a subjective selection process, however these priorities did not necessarily meet the needs of the whole community and a lack of transparent process for prioritisation. Many of the locations highlighted were isolated and failed to consider forming networks for pedestrians.

The Pedestrian and Footpath Strategy builds on existing footpath development programs by allowing annual reviews of criteria based on changing needs and situations and more rigorously identifying the needs of the community.

SCOPE

This document is called the Victor Harbor Pedestrian & Footpath Strategy.

Council adopted the Victor Harbor Footpath & Pedestrian Strategy on 27 June 2011:

Resolution: That Council resolves that the Victor Harbor Footpath & Pedestrian Strategy as per Attachment 1 be adopted and utilised as a guide for Council and Administrative purposes.

This Strategy applies to all road reserve in the City of Victor Harbor.

OBJECTIVES

This strategy aims to:

- a) Generate a Rolling Works Program for the construction of new footpaths;
- b) Increase directness and connectivity of footpaths;
- c) Improve equity of access and convenience for pedestrians;
- d) Provide links to public transport, recreational and health facilities, commercial areas, and educational institutions;
- e) Strengthen existing pedestrian links creating a connected network;
- f) Assist in responding to residents' requests for construction of new footpaths and high expectations for their delivery; and
- g) Resolve suitable paving materials for application throughout the CBD and residential areas of Victor Harbor.

EVALUATION PROCESS

The following list of general principles and the Evaluation Matrix (described in Part B) have been followed in developing this Strategy.

- Most roads should desirably have some type of walking facility (e.g. shoulder or grassed verge) out of the normal vehicle path;
- On low volume and low speed roads, it may be acceptable for pedestrians to share the road space with vehicles;
- The need for segregation of pedestrian and vehicular traffic increases with increasing vehicular volumes and speeds;
- The need for footpaths should be related to the safety issues at a particular site, the function of the path in the overall path network and the anticipated usage; and
- The needs of vulnerable road users such as children, elderly or pedestrians with a disability should be given priority.

Warrants

Warrants have been developed categorising threshold levels at which the road section score will either:

- Recommend no action
- Acknowledge but recommend no action
- Acknowledged need but not sufficient for funding; or
- Acknowledge need and recommend for rolling works program.

Some road sections have physical constraints preventing the construction of a footpath regardless of how desirable it is to construct one. Due to these constraints, priorities and funding some road sections are unlikely to ever have footpaths constructed in them.

Some streets also have strong resident opposition to the construction of any footpaths for a variety of reasons. Usually such opposition is based on issues such as loss of amenity, loss of privacy, and/or objection to the type of footpath paving material. These reasons do not outweigh the need to ensure a footpath is accessible to a person with a disability. Some footpaths may be constructed despite opposition from residents.

Road network audits

Audits of road sections must be undertaken using an audit toolkit developed in accordance with this strategy to record information about each road section. Initial audits will be undertaken following the adoption of this strategy review audits can be rolled out across the City as land use changes or as required.

Upon receipt of each footpath request the audit scores will be re-evaluated to ensure accurate records are used. It is also appropriate to annually review points allocated to criteria and warrants to ensure that the needs of the community are continually being met.

Capital Works Program

The key objective of this Pedestrian and Footpath Strategy is to prepare a prioritised rolling works program for the construction of new footpaths. This will provide a qualified and dynamic



assessment system that is prioritised rather than weighting isolated customer requests at the detriment of the rest of the community.

From trial assessments of various road sections, it is expected that a score of 85 warrants a footpath on both sides of the road and 70 or over warrants a footpath on one side of the road. These figures are estimates only and may be subject to change.

Technical Development

In addition to keeping a permanent record of all data recorded on Council's Asset System, which can be reviewed as required, the information will also be recorded in the GIS system. This will allow a graphical representation of footpaths that have been programmed to be constructed and the likely completion date, to be available to relevant stakeholders.

METHODOLOGY

The need for footpaths is very dependent upon the traffic and physical conditions on any street, road or other location and the nature of the pedestrian demand at that location. These conditions and the pedestrian demand can vary over time and consequently, a flexible methodology for assessing footpath requests was considered necessary in preference to adopting an ideal network to be implemented over time. Even if an ideal network could be identified, the problem of needing to priorities works would still exist. Also, the need for footpaths is not always about networks but rather local links to services and facilities.

This approach allows requests for footpaths to be considered at any time and prompt advice to be provided to those requesting paths. A new request does not need to be added to the end of the queue but can be given its appropriate priority immediately. Further, as conditions change (e.g. a new development in a street or increased traffic volumes) the priority of any path can easily be re-evaluated. This approach also avoids the need to assess every possible footpath before adopting a strategy.

The Pedestrian and Footpath Strategy applies to all urban areas of Victor Harbor as defined by the Urban Growth Management Strategy and focuses on the provision of permanent paths for pedestrian use. Rural and rural living areas are generally excluded and requests for paths in these areas should be considered under the walking trails strategy. In unusual circumstances footpaths can be considered outside areas zoned for urban development and would (as far as practicable) be subject to evaluation using the Evaluation Matrix.

Generally only those footpaths previously identified have been included as it is impractical to evaluate every possible footpath project. However a number of additional projects have been identified during the process and inspections have been undertaken of all significant developed areas of the council. All projects included in the Evaluation Matrix have been inspected.

It is proposed that any projects from anywhere within the Council can be added at any time for assessment under the established criteria. Therefore the recommended listing of footpaths for construction is tentative and will be reviewed annually and updated on an on-going basis as more projects are assessed for inclusion. It is proposed to continue adding projects from all over the municipality either from officer assessments or by referral from residents. It is not expected that this would lead to a significant increase in the number of high or very high priority projects but some additional medium priority projects could be expected.

A number of key policies, strategies and other relevant guidelines influence the construction requirements for new footpaths and have been considered in preparing this strategy.

Strategic Directions Plan

The City of Victor Harbors vision is to;

Provide a thriving and sustainable regional coastal centre offering a wide range of attractive, high amenity lifestyle choices to our local community, the wider Fleurieu region, our visitors and future generations.

This *Pedestrian and Footpath Strategy* is fully consistent with the goals of Council's Community Plan 2036 and Strategic Directions Plan 2016 to 2020, which include:

- Objective 4 Services and infrastructure supporting the community
- Approach 4.3 Create and maintain safe road and footpath networks
- Strategy 4.3.3 Maintain and implement Council's 10 Year Capital Works Program for each asset class for both new projects and renewal
- Strategy 4.3.4 Implement the Victor Harbor Pedestrian Strategy

Access All

AS 1428.2 2001 - Design for Access and Mobility Part 1: General Requirements for Access-

New Building Work provides guidelines for the provision of appropriate accessibility for disabled persons within buildings. While this Standard doesn't provide specific guidelines for footpaths it does make recommendations regarding walkways; gradients, kerbs, ramps, circulation spaces and handrails. These recommendations are incorporated in The Guide to Traffic Engineering Practice: Part 13 – Pedestrians. These guidelines have been considered under the section Design and Management Issues on page 32.

Town Centre Masterplan

The Town Centre Master Plan takes the guidance provided by the Urban Design Principles to create specific urban design concepts and investment opportunities focused on achieving a set of strategic Goals for the Town Centre. These take the form of concept designs for the redevelopment of the foreshore, the creation of new attractions and destinations, improvements to the pedestrian network and street environment, an access and parking strategy and proposals for an investment in and commercial redevelopment of key properties.

Principle 2 within the Masterplan calls for the reinterpretation of the foreshore environment, building on its strengths to create an iconic and memorable experience for visitors and locals. A continuous dual use pedestrian/cycle promenade is proposed for the full length of the foreshore connecting the town centre to adjacent coastal areas.





Figure 1: Principle 2 – Develop an active, sustainable and iconic foreshore area

Principle 5 calls for an integrated network of high amenity pedestrian and cyclist paths. These will be established by creating a foreshore promenade and a railway promenade, improving the existing street network, introducing new pedestrian crossings and establishing new secondary pedestrian connections between destinations and activity nodes.



Figure 2: Principle 5 - Create a walkable and attractive town

Regional Public Health Plan for the Southern and Hills Local Government Association The Pedestrian and Footpath Strategy has been developed to take account of the overriding themes in "Wellbeing in Our Community", the Regional Public Health Plan for the Southern and Hills LGA, of Healthy Environments and Healthy Lifestyle.

Identified strategies include planning for built environments that support communities to be active and socially connected and contribute to health and wellbeing, which will require a focus on creating liveable and "walkable" towns and places with appealing and good quality public realm, open spaces and community facilities.

Disability, Access and Inclusion Legislation

The Commonwealth Disability Discrimination Act (DDA) 1992 is based on the premise that people with disabilities have the same rights as any other members of the community, including the right to engage in all aspects of community life, and equitable access to goods, services and facilities.

Access to premises is covered principally by Section 23 of the DDA. Discrimination is unlawful under Section 23 except where it can be shown that removing a barrier to access would impose unjustifiable hardship. A footpath would come under the definition of 'premises' and would therefore be covered by Section 23. Complaints could be lodged directly against a local government authority if it is responsible for the footpath. A complaint could also be lodged against the person or organisation directly creating the access barrier. In addition, a complaint may be possible against the local government authority responsible for the footpath under Section 122 of the DDA if it could be argued that the authority was 'permitting' barriers to access.

- To ensure a footpath is accessible to persons with a disability and does not unlawfully discriminate in breach of the DDA, industry standards (even though they may not be binding) are relevant considerations. Australian Standard 1428 Parts 1 and 2 contain relevant provisions with regard to the DDA standards applicable to footpaths, but the most specific industry standard is (Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling.). This sets a general minimum standard footpath width of 1.2m as adequate for most road and street situations except in commercial and shopping environments, where the pedestrian demands and accident risk may require wider paths. The Guide states that to enable wheelchairs to pass, an absolute minimum width of 1.5m is required.
- The Human Rights and Equal Opportunity Commission is the body responsible for administering the DDA. It has issued an Advisory Note on Access to Premises which adopts the content of Australian Standards 1428 Parts 1 and 2. It states that where it is not possible for a continuous accessible path of travel to be 1.8m wide, then the frequency of passing spaces should be considered in the context of a location and purpose of the path. Advisory notes also indicate that in a retail shopping strip, the guidance line for visually impaired persons must be the building line as opposed to another line such as the footpath line.
- The location and purpose of the footpath are fundamental DDA considerations. The
 purpose of the paths is to enable access to shopping and other public facilities and
 venues, as well as private housing. If proper access paths are not provided it would
 impede the ability of disabled persons to perform basic functions of shopping, attending
 public facilities, going home or visiting friends. These are basic human rights to which the
 DDA is directed.
- Encroachments on an accessible footpath created by commercial trading activities are undesirable in terms of DDA provisions. Such encroachments could potentially expose Council to a high risk of being successfully litigated. Footpath widths should be 1.8m (commercial areas) wherever possible, and not less than 1.5m with passing spaces at intervals of not more than 6m, as recommended by Australian Standards.
- An integral component of a continuous accessible footpath environment is guidance line on which a visually impaired person can rely to guide them along the path of travel.
- Guidance lines should be provided as required to ensure a visually impaired person is not forced to lose their straight line, become disoriented or lose direction, and risk injury.

Tactile indicators are not an entirely satisfactory alternative as they may be of little use to the elderly.

It is Council's view that the building line is generally the most appropriate guidance line on Council footpaths. To use the footpath line is unsatisfactory in that it has encroachments by signs, posts, fire hydrant and the like. This is likely to cause the disorientation and potential for serious injury. However, maintaining a 1.8 metres wide clear pedestrian space located 0.6 metres from the building line, while providing for a 0.6 wide trading display area against the buildings, is considered appropriate and practical within the town's central business district (CBD) due to the extended footpath widths and the CBD's lack of straight building lines.

The South Australian Disability Inclusion Act commenced on 1 July 2018. The new Act has a focus on improving access and inclusion for South Australians with disability.

Under the new legislation (Section 16) all state authorities are required to prepare a disability access and inclusion plan. A local council constituted under the Local Government Act 1999 is considered a state authority. A disability access and inclusion plan:

- Must set out the measures that the state authority intends to put in place to ensure that people with disability can access the mainstream supports and services provided by or on behalf of the State authority.
- Must explain how the state authority proposes to give effect to the objects and principles set out in Part 2.
- Must explain how the state authority proposes to give effect to the State Disability Inclusion Plan.
- Must include strategies to support people with disability in the following areas:
 - o access to built environs, events and facilities,
 - o access to information and communications
 - o addressing the specific needs of people with disability in its programs and services
 - o employment; and

Under Section 17, state authorities are required to:

- Report to the Chief Executive Officer of the relevant state government department on the operation of their plan during the previous financial year;
- Undertake a review of its plan at least once in each 4 year period.

Pedestrian Access

The primary focus for the Victor Harbor Town Centre Master Plan regarding pedestrian access is the provision of an accessible pedestrian network throughout the CBD. The pedestrian data from that plan shows that there is a focus of pedestrian movement in the town centre east of Torrens Street with the highest concentration being at the Ocean Street/ Victoria Street/ Albert Place intersection.

There is a considerable change to the pedestrian movement recorded in the "tourist" section of the town centre, specifically Albert Place, The Esplanade and Flinders Street where the pedestrian volumes increase during the peak weekend by as much as six times.

Based on the pedestrian data recorded and on site observations pedestrian facilities should be monitored:

- Ocean Street/Victoria Street/Albert Place intersection
- Flinders Parade/Causeway; and
- Flinders Parade near the toilets amenities

Mobility around the City Centre and the city in general is an ongoing concern for all people including people with disabilities. Infrastructure is a key element to easy, dignified and independent access whilst moving in and around a city, the footpaths, kerb ramps, and pedestrian crossings, the need for people with vision impairment/blindness to have audio, tactile and other way finding cues.

Managing street furniture, A-frame signs and display stands outside retail premises along the building line can address hazards to people with disabilities by improving the space available for clear, unobstructed passage.

Priority Pedestrian Corridors

A workshop held on 14 February 2019 with members of the Disability Access and Inclusion Advisory Committee identified priority roads for consideration of priority pedestrian corridors with a view to ensuring that these corridors are accessible for people with a disability. These priority corridors were endorsed by Council at Ordinary Council meeting on 25 March 2019 as follow:

Victor Harbor Primary Priority Corridors:

• The Parkway

- Seaview Road
- Crozier Road
- Acraman /Carlyle/High/Riverview
- Torrens Street/Hindmarsh Road
- Victoria Street
- Ocean Street
- Coral Street
- Flinders Parade
- The Esplanade
- Island Street
- Oval Road
- George Main Road
- Bay Road.

Victor Harbor Secondary Priority Corridors:

- Pine Avenue
- Renown Avenue
- Hill Street
- McKinlay Street
- Links between Seaview and Crozier such as William, Ozone or Canterbury;
- Links between Crozier and Oval such as Churchill, Leworthy, Lindsay or Sturt
- Harbourview Terrace.

Victor Harbor Additional Priority Corridors:

- Canterbury Road between Crozier and Seaview
- Ozone Street between Crozier and Seaview
- Churchill Road
- Lindsay Street
- Sturt Street
- Stuart Street
- Newland Street



Figure 3: Victor Harbor Priority Corridors



Hayborough Priority Corridors:

- Adelaide Road
- McCracken Drive
- Hindmarsh Road (missing links)
- Mentone Road (in stages)
- Ocean Road
- First Avenue
- Port Elliot Road



Figure 4: Hayborough Priority Corridors

Encounter Bay Priority Corridors:

- Franklin Parade
- Bartel Boulevard
- Tabernacle Road
- Matthew Flinders Drive
- Nicolas Baudin Drive
- Whalers Road
- Battye Road



Figure 5: Encounter Bay Priority Corridors

Walk Trails Strategy

A walking trail is an off road trail, track or path that caters for a variety of uses. The focus of this strategy is for the provision of footpaths in residential areas, not on the significant array of trails throughout the Council area that provide access for a range of activities such as walking, bike riding and pedestrian usage or provide critical linkages in rural townships.

The Regional Trails Strategy and Victor Harbor Recreation and Open Space Strategy 2017 both provide insight regarding the purpose, provision, development priorities, management and use of the shared trail network within the Victor Harbor Council area.

PART B – PROCEDURE

Overview

To facilitate preparation of a prioritised listing of footpath construction works a methodology for assessing road sections is developed based on best practice, testing and refining of criteria suitable for Victor Harbor. This Strategy is based on points being allocated to criterion that can be assessed, footpath priorities are then ranked and action is determined by warrants.

Data is collected by physical footpath section audits where reports can be generated for footpath sections where there is an acknowledged need and a recommendation for addition to the rolling works program, score will prioritise these lists.

This strategy is a dynamic assessment program that allows footpaths sections to be reassessed due to changed conditions. It also allows the flexibility of criteria to be reassessed and amended if necessary. It is also appropriate to annually review points allocated to criteria and warrants to ensure that the needs of the community are continually being met. Where a variation is sought due to special circumstances, the request must document the reasons and extent of the variation for Council's consideration.

The strategy lists footpath sections in a prioritised order based on defined criteria that attempts to meet the needs of the whole community. By assessing only the requests for footpaths this method fails to prioritise construction of footpaths that meets the need of the whole community. The Pedestrian and Footpath Strategy will assess each footpath section in the network. Each section will be assessed on criteria that assume that there is no footpath constructed within that location.

EVALUATION MATRIX

Annually the Environment and Infrastructure Services Department receives a number of requests from the community and council officers for new footpaths across the Council area.

A consistent and efficient method of prioritising these requests is required, correct identification of higher priority footpaths will ensure that Council funds are spent to achieve the greatest community benefit, whilst, maintaining our assets.

An Evaluation Matrix has been developed for this purpose which scores each request and then ranks it against all other requests. The Evaluation Matrix contains a list of criteria (refer to Tables below) in the form of questions designed to prompt the officer when considering each request. The range of scores available for each criterion varies to reflect the weighting given to each particular criterion.



Criteria

Each section is assessed on seven criteria. These criteria are:

- Pedestrian Generators PG
- Pedestrian Volume PV
- Traffic Volume **TV**
- Network Linkage NL
- Mid-Block refuge or crossing MC
- Topography T
- Infrastructure I

Pedestrian Generators – PG

Points are allocated to different types of pedestrian generators. Points are cumulatively added for each generator if a pedestrian generator contributes points to a road section if it is:

- In the road section
- Within 200m of that road section
- Is within 500m of that road section on a direct route
- Is more than 500m on a direct route linking two major generators, i.e. a school and bus stop.

Pedestrian Volume – PV

Points are allocated based on the actual or apparent level of use of the path by pedestrians. Worn tracks are one indicator that the path is used by pedestrian traffic (it could also mean poor grass maintenance or lack of rainfall, so careful assessment is required). Pedestrian volume counts can also be undertaken.

The following figure provide an indication of visual cues:





Low Usage

Medium Usage



High Usage

Figure 6: Visual cues of footpath usage



Usage Not Demonstrated

As a guide pedestrian volumes could also be categorised by pedestrians counted in a 60 minute cycle.

Traffic Volume – TV

This criterion considers the safety of pedestrians based on traffic volumes in the road. Safety for pedestrians is especially relevant where there is no constructed footpath and consequently pedestrians are likely to walk on the roadway. Higher traffic volumes increase the safety risks for pedestrians by increasing the chance of conflict between pedestrians and vehicles. Where traffic volumes are not available estimations have been made based on similar roads in the surrounding area.

Network Linkage – NL

This criterion assesses the network of paths and considers if the road section forms part of a wider network, extends to a wider network, links major paths or if it is an isolated path.

This criterion is difficult to quantify in many instances. The following diagrammatic representations offer some guidance only. The basis of these sketches is that some areas serve local residents only, such as cul-de-sacs and isolated residential areas, others infill missing links in existing infrastructure and other road sections form part of a link between significant Pedestrian Generators.

A road section that links unjoined paths is shown in the following figure. The road section is not part of a big network but services more than the pedestrians in that road.



Figure 7: Road section linking unjoined paths

An extension of the major network indicates road sections that extend to a major network by connecting to residential areas or a minor pedestrian traffic generator as shown in the figure below.





Figure 8: Extensions of major networks to minor pedestrian traffic generator

An example of a major network includes road sections between major pedestrian generators such as public transport to schools as shown in the figure below.



Mid-Block Refuge or Crossing – MC

Mid-block pedestrian refuges, pedestrian crossings and children's crossings contribute to pedestrian desire lines and consideration should accordingly be made appropriate provision of footpaths at these locations. It should also be noted that such devices to assist pedestrians cross the road typically emu, wombat or koala crossing areas where high volumes of pedestrians and vehicles meet.

Topography – T

Consideration is also given to the topography of the road section. Topography includes road and footway grades and curvilinear nature of the road section. The points have been allocated to reflect the importance of each of the criteria used to assess the road sections. The points have been developed through trials to produce scores that were reflective of the footpath need within the community.

Infrastructure - I

Consideration of existing footpaths within the road section must be made. If a road section currently has a concrete footpath in it (on either or both sides) the road section will have points deducted.

This criteria is aimed at ensuring roads with no existing footpaths or footpaths of poor asset condition that require renewal can be fairly evaluated with roads that already have a footpath on one side of the road. The reduction of points means that if a road with an existing footpath on one side meets warrants, a footpath is warranted on the other side of the road also.

PART C – ASSESSMENT PROCEDURE

Criteria Points

Table 1 sets out the parameters that will be measured and Table 2 has been developed to distinguish between absence of a footpath being recommended for "no action", being acknowledged as a "problem" and being recommended for "action".

| Criteria | Туре | Points |
|------------------------------|---------------------------|--------|
| | Industrial | 2 |
| | Passive Reserve | 2 |
| | Bus Stop | 4 |
| | Residential | 4 |
| | Active Playground | 8 |
| Pedestrian Generators | College | 8 |
| | Secondary School | 8 |
| | Small Retail | 8 |
| | Transport Interchange | 10 |
| | Large Retail | 12 |
| | Primary School | 12 |
| | Very Low (0-2) | 0 |
| Pedestrian Volume | Low (3-5) | 3 |
| (10min guide) | Medium (6-14) | 6 |
| | High (15+) | 8 |
| | <500 | 0 |
| Traffic Volume | 500-2,500 | 2 |
| (Vehicles/day | 2,500-5,000 | 8 |
| | 5,000-10,000 | 10 |
| | 10,000+ | 12 |
| | Residents only | 0 |
| | Link other paths | 2 |
| Network Linkage | Extend to a major network | 5 |
| | Extend the major network | 7 |
| | Major network | 10 |
| | Nil | 0 |
| Mid-Block refuge or crossing | Pedestrian refuge | 3 |
| | Pedestrian crossing | 6 |
| Topography | Long Straight | 0 |
| | Restricted Sight | 3 |
| | Grade >3% | 3 |
| | Tight bend | 3 |
| Infrastructure | No existing footpath | 0 |
| | Existing footpath | -15 |

Table 1 Criteria Points



Table 2 establishes problem and action warrant cut off thresholds based on the points for each road section.

| Priority | Raw Points | Arterial Road# | Collector | Local Streets# |
|-----------|--------------|----------------|-------------|----------------|
| | Range | | Roads# | |
| Very High | 35 and above | 100% | 100% | 100% |
| High | 25 to 34 inc | 100% | 75% | 75% |
| Medium | 15 to 24 inc | 100% | 75% | 50% |
| Low | 5 to 14 inc | 75% | 50% | 34% |
| Very Low | Less than 5 | Admin costs | Admin costs | Admin costs |

Table 2 Maximum Council Contribution* #the landowner contribution required is the percentage of the total cost that must be paid by landowners. It does not represent the contribution of any individual landowner which may vary.

FUNDING IMPLICATIONS

The current list of requests for new footpaths will be evaluated and ranked using the Evaluation Matrix. Table 3 below provides an example of summarised costs of footpaths by general priority (i.e. very high, high, medium, low and very Low) and road hierarchy.

| Priority | Raw Points Range | Roads Hierarchy | No of Projects | Total Cost | Maximum Council Cont.* | Maximum Council Cost |
|-----------|---------------------|----------------------------------|---------------------|--|-----------------------------|--|
| Very High | >35 | All | 1 | \$283,500.00 | 100% | \$283,500.00 |
| High | 25 to 34 inc | Arterials Collectors Local | 11 2 1 (part) | \$87,6600.00 \$155,070.00 \$54,000.00 | 100% 75% 75% | \$876,600.00 \$116,303.00 \$40,500.00 |
| Medium | 15 to 24 inc | Arterials Collectors Local | 12 6 8 | \$2,321,175.00 \$482,310.00 \$448,875.00 | 100% 75% 50% | \$2,321,175.00 \$361,733.00 \$224,438.00 |
| Low | 5 to 14 inc | Arterials Collectors Local | 22 17 27 | \$3,309,900.00 \$1,726,425.00 \$1,812,375.00 | 75% 50% 34% | \$2,482,425.00 \$863,231.00 \$616,208.00 |
| Very Low | < 5 | All | 67 | \$6,458,850.00 | Administrative Cost Only | \$0 |
| | | | 173 | \$17,929,080.00 | | \$8,186,093.00 |

Table 3 Footpath Construction Costs (Example Only) *Voluntary external contributions beyond the minimum indicated will not improve the ranking of any project.

The total cost to Council of constructing (asphalt) all projects with a condition rating three to five is estimated to be \$800,000. If \$350,000 per annum was available this would represent a three year program as a number of projects have already been constructed or hold a low condition rating. If all possible schemes for low priority projects progress (condition rating one and two) which is extremely unlikely, the total additional cost to Council would be \$5 million.

DESIGN, CONSTRUCTION AND MANAGEMENT ISSUES

Footpaths shall be designed and constructed in accordance with the following references:

- AS/NZS 1158.3.1
- AS 1428.1
- Chapter 2 Walkways and Footpaths, part 13, Pedestrians, Guide to Traffic Engineering Practice, AUSTROADS.

Footpaths shall be constructed on both sides of a carriageway for:

- Arterial roads and roads with bi-directional traffic volumes in excess of 1500 vehicles per day;
- Roads with central medians and/or with a carriageway width in excess of 12.0m;

Footpaths shall be constructed on one side of the carriageway for:

- Roads with bi-directional traffic volumes greater than 300 vehicles per day but less than 1500 vehicles per day.
- Streets within the direct vicinity of schools that act as a connector to those roads described in section (1).
- Primary bus routes;
- Commercial Precincts
- Priority corridors
- New developments and road upgrades

Footpaths shall not be constructed adjacent existing roads that have bi-directional traffic volumes less than 300 vehicles per day, unless they meet other priority criteria.

Footpath Widths

A general minimum footpath width of 1.2m has in the past been considered adequate for most low use road and streets. However, increasing importance is now being placed on the need for disability access. Where possible sufficient footpath width should be provided to allow two wheelchairs to pass, i.e. 1.5m minimum. Any surface scoring, guidance strips or other treatments that may impede passage should be added outside the minimum widths recommended.

In high activity areas such as commercial and shopping areas wider than minimum widths are likely to be necessary, as well as at locations where pedestrian's gather such as entrances to schools, and associated crossings, recreational facilities and important bus stops.

It is recommended that a general minimum width of 1.5m be adopted for footpaths in high activity areas with a wider width of 2.0m (minimum 1.8 at restricted locations) adopted where disability access is identified as a significant issue.

A minimum width of 2.5m should also be adopted if the footpath forms part of the Shared Trails Network or could potentially become a shared path.

The normal height clearances for the appropriate users should be provided. For example an absolute minimum head height clearance of 2.4m is required for pedestrians.

Kerb Ramps (Pram Crossings)

Kerb ramps (pram ramps) should always be provided in association with footpath construction and should comply with appropriate standards including the provision of tactile strips 300mm from the kerb.

Ramps

Ramps should be provided where possible as an alternative or in addition to stairs. For people in wheelchairs or with prams it is important that minimum standards be met in order that ramps can safely and conveniently be used. The Standards suggest that rest areas be provided every 9m for grades of 1:14 or every 14m for grades of 1:19. The need for handrails should also be considered. Ramp cross fall shouldn't exceed 1:40.

Gradients

AS 1428 lists requirements for design of sloping footpaths. Where the gradient is between 1:33 and 1:20, level rest areas 1.2m long should be provided at no greater than 18m intervals. Paths with a steeper gradient are to be considered as ramps for design purposes.

Adjacent ground for all footpaths should be within 25mm of the level of the footpath. If adjacent ground has a steep slope or drop off, a kerb or handrails may be required.

Cross fall

Footpaths should be as flat as possible but should achieve an adequate drained surface. AS1428 specifies any cross fall should not exceed 1:100. Steeper cross falls may be provided if drainage problems are expected, but should not exceed 1:40.

Materials and Surface Treatments

Surface treatment materials preferred and recommended by Council in areas other than the Regional Town Centre Policy Zone is block paving and asphalt. Block paving is predominantly used within the CBD area however these may be varied consistent with the paving themes outlined in the Town Centre Masterplan.

Councils Masterplan indicates that a careful and considered strategy needs to be applied to new materials, structures and surfaces. This includes a consistent approach to colour, materials and form throughout the CBD. This could include a mix of tailor made and standard furniture elements. Potential themes for these elements should be derived from the landscape, culture, and heritage and built form of the area.

Given the seaside location and intensity of use within the study area, any new materials and furniture will need to be robust enough to withstand harsh weather, exposure to sea salt and potential vandalism with a minimum of maintenance and remediation work.

Elements will need to be of a timeless and contemporary design that will complement both the elegance and grandeur of the town's heritage, whilst, reinforcing the bold, playful and innovative new interventions of the Master Plan.

For areas beyond the CBD block paving and/or asphalt is the preferred footpath surface treatment, concrete may be used in new developments.

Loose surface materials (gravel, soil, sand etc.) should be avoided on pedestrian routes. Crushed rock is only suitable as a temporary path or for a specific purpose such as trails or recreational routes. Crushed rock paths should not be provided under this strategy.

Refer Appendix A - Advantages and disadvantages of different pavement types for a summary.

Laying of Footpath Pavements

Cost of laying footpath pavements depends on a variety of factors and it is best determined by obtaining quotes for a specific job. The materials used, the pavement size, the bedding requirements and the complexity of the pattern all affects the cost of laying pavements.

CONCLUSION

The Pedestrian and Footpath Strategy aims to improve the access and mobility for pedestrians and provide a pedestrian network that is more connected. A rolling works program will be developed that prioritises the construction of footpaths on the criteria that have been developed to meet the changing needs of the community.

The Strategy is a dynamic assessment system that can be refined and reviewed based on experience. Criteria can be changed, added to or removed as required and the formula refined. Road sections can be reassessed in changed conditions allowing the flexibility to meet changing community needs.

As an example Figure 10 provides a snap shot of the overall condition of Victor Harbor's footpaths.

The lower the rating the better the condition of the footpath.

Footpath Condition Ratings are based on segmental cracking, stepping includes trip points, distortion and depression.

| Condition Grading | Description of Condition | | | |
|----------------------|--|--|--|--|
| 0 | Brand New: Asset is brand new. | | | |
| 1 | Very Good: Near as new condition with no defects. | | | |
| 2 | Good: Superficial deterioration. No issue with reliability. No maintenance is required. | | | |
| 3 | Fair: Minor deterioration present. Routine maintenance may be required. | | | |
| 4 | Poor : Significant deterioration present. Requires maintenance to keep the asset serviceable and programming for renewal/rehabilitation on forward 5 year works program. | | | |
| 5 | Very Poor : Extensive deterioration present. Requires significant maintenance to keep the asset serviceable and programming for renewal/rehabilitation within the following year. | | | |
| 6 | End of Life: Asset is unserviceable and provides no service. Asset cannot be used. | | | |

Table 4: Footpath Condition Rating



Rating Value D Not Rated \$6,000 \$5,000 \$4,000 Value (\$'000) \$3,000 \$2,000 \$1,000 \$0 0 1 2 3 5 Rating Condition CRC (\$'000) Weight (%) 0 \$0 0% \$1,301 1 12% 2 \$4,812 43% 3 \$4,783 43% 4 \$233 2%

Victor Harbor CC - Condition Profile (Footpaths _S1_V1)

Figure 10:Footpath Condition Rating snapshot

5

The Pedestrian and Footpath Strategy and Evaluation Matrix enables Council to evaluate and prioritise requests for the construction of footpaths across the city within the urban boundary. The most highly ranked footpath requests can then be considered for inclusion in Councils Draft Ten Year Capital Works Program. In some circumstances, developer contributions may be appropriate.

\$25

The Strategy allows requests for footpaths to be considered at any time and prompt advice to be provided to those requesting paths. The priority of any path can also be easily re-evaluated if circumstances change. The listing of footpaths for construction is consequently tentative and is reviewed annually and updated on an on-going basis as more projects are assessed for inclusion.

0%

*all 2019 dollar values in (\$'000)'s

PART D – EXAMPLES

| John | ston Rd, Bass Hill | | Ro | odd St, Sefton | |
|--------------------------|------------------------|--------|-------------------------|------------------------|--------|
| Criteria | Туре | Points | Criteria | Туре | Points |
| | Industrial | 2 | | Industrial | 2 |
| | Passive Reserve | 2 | | Passive Reserve | 2 |
| | Bus Stop | 4 | | Bus Stop | 4 |
| | Residential | 4 | | Residential | 4 |
| | Active Playground | 8 | | Active Playground | 8 |
| Padastrian Conservations | College | 8 | Badastrian Conservation | College | 8 |
| Pedestrian Generators | Secondary School | 8 | Pedestrian Generators | Secondary School | 8 |
| | Small Retail | 8 | | Small Retail | 8 |
| | Transport Interchanges | 10 | | Transport Interchanges | 10 |
| | Large Retail | 12 | | Large Retail | 12 |
| | Primary School | 12 | | Primary School | 12 |
| | | 0 | | | |
| | Very Low (0 – 2) | 2 | | Very Low (0 – 2) | 2 |
| Pedestrian Volume (10 | Low (3 – 5) | 8 | Pedestrian Volume (10 | Low (3 – 5) | 8 |
| min Guide) | Medium (6 – 14) | 10 | min Guide) | Medium (6 – 14) | 10 |
| | High (15+) | 12 | | High (15+) | 12 |
| | | 0 | | | |
| | <500 | 2 | | <500 | 2 |
| Traffic Volume | 500 - 2,500 | 5 | Traffic Volume | 500 - 2,500 | 5 |
| (Vehicles/day) | 2,500 - 5,000 | 7 | (Vehicles/day) | 2,500 - 5,000 | 7 |
| | 5,000 - 10,000 | 10 | | 5,000 - 10,000 | 10 |
| | Nil | 0 | | Nil | 0 |
| Mid Block Refuge or | Pedestrian Refuge | 3 | Mid Block Refuge or | Pedestrian Refuge | 3 |
| Crossing | Pedestrian Crossing | 6 | Crossing | Pedestrian Crossing | 6 |
| | Long Straight | 0 | | Long Straight | 0 |
| | Restricted Sight | 3 | | Restricted Sight | 3 |
| Topography | Grade >3% | 3 | Topography | Grade >3% | 3 |
| | Tight Bend | 3 | | Tight Bend | 3 |
| | No Existing Footpaths | 0 | | No Existing Footpaths | 0 |
| Infrastructure | Footpaths | -15 | Infrastructure | Footpaths | -15 |
| | Total | 16 | | Total | 36 |

Figure 11: Examples of Scoring System

APENDICES

Appendix A – Advantages & Disadvantages Different Pavement Types

| Concrete – Exposed Aggregate | | | | | | |
|---|--|---|--|--|--|--|
| Advantages | Disadvantages | Comment | | | | |
| Lifespan approx. 25 yrs. Hardest most durable surface Easy to construct/form and adapt to site conditions e.g. around service holes and pits Smaller equipment required during construction and less clean-up and disruption to verge Greater resistance to periodic inundation and scour by floodwater No edge restraint required Can modify surface cover to suit local environment | Construction and expansion joints can influence ride quality Very highest construction costs Depress and crack as settlement occurs Whole panels require replacement when there is a failure/broken slabs Tree roots can cause vertical separation Unnatural looking surface Weed growth in expansion/construction joints Occasional heavy vehicle use can cause failure | Performance can be variable in the medium term where have ground expansive soils but tends to have the longest design life and least maintenance overall. Performance is superior where have weak or wet sub-grade, potential for periodic inundation and intermittent heavy truck traffic Fibre reinforced concrete is claimed to improve performance, but were unable to trace documented practical experience. Approx. Cost: \$140/m ² with 100mm Base Preparation | | | | |
| Asphalt | | | | | | |
| Advantages | Disadvantages | Comment | | | | |
| Lifespan approx. 20 years Hard smooth surface No joints in riding surface Suitable where there is anticipated ground movement as can withstand gradual settlement of the sub-grade | More intensive maintenance to maintain a smooth surface - especially where there are weak sub-grades (i.e. expansive clays) Prone to upheaval by tree roots | Where there will be regular monitoring and timely maintenance intervention, granular or flexible pavements perform well. Where built on expansive clays, may expect problems in the short term | | | | |

| Less costly to reconstruct because repairs can be localized to damaged area (compared with whole of slab replacement) Can blend well with local environment, surface is able to conform to the contours of the terrain | Requires more space during construction/larger plant vehicles Suitable edge restraint required that will be flush with path surface Regular spraying to control weed ingress through path More susceptible to failure following periodic inundation | increasing the pavement thickness or the addition of a geotextile layer can be effective in increasing the life of the pavement. Approx. Cost: \$70/m² with 100mm Base Preparation |
|--|--|--|
| Granular Surfaced Pavement | | |
| Advantages | Disadvantages | Comment |
| Moderate to low cost Natural looking surface Firm smooth surface if well maintained | Surface spongy when wet Regular maintenance to keep consistent surface (sweeping, grading and weed control) Prone to washouts, rutting and erosion following heavy rainfall Requires periodic re- sheeting to replenish material Inappropriate for steep grades Rolling stones may cause slipping Life span unknown, to many variables | Only secondary trails tend to be left 'unsurfaced' post construction. Idea for rural areas and walking trails Costs will be variable due to terrain and material sources. |
| Block Paving | | |
| Advantages | Disadvantages | Comment |
| Lite span 20 - 25 years Flexible surface unique interlocking properties sand in the spaces between closely fitting block paving Uniform appearance Edge restraint not required Individual blocks/flags can be lifted, cleaned and re-laid for maintenance work Aesthetic appeal in most environments Durable | Debris can become caught in spaces between pavers Lower skid resistance when get sand over path | Urban areas within Adelaide widely use block paving, has proven success. Approx. Cost: \$65/m ² with 100mm Base Preparation |

| Choice of styles and colors Aesthetically pleasing | | |
|---|---|---|
| Chip Seal | | |
| May provide lower construction and maintenance costs compared to asphalt | size is used for paths to achieve a smoother riding surface which means a low binder application rate must be used that will result in a shorter life of the seal | geotextile will enhance its performance and provide a better ride quality but at a higher cost. Approx. Cost: \$55/m ² |
| | thereby more frequent disruptions to use etc. Slippery surface unless all the aggregate is removed Bitumen may bleed in the warmer months Residents may pick up bitumen on their shoes. Require suitable weather to undertake bitumen spraving | with 100mm Base Preparation |



Appendix B – High and Very High Priority Projects Condition Ratings 4 & 5



Figure 12: Footpath Condition Rating 4 (C4) and Condition 5 (C5) by pavement type.



Appendix C – Medium and Low Priority Projects Condition Ratings 1 to 3



Figure 13: Condition Rating 1 - 3 (C1 - C3) by pavement type.



Access All – A facility, amenity or service is designed, available and promoted for use by anyone, regardless of ability.

Collector Road – A road whose prime function is the distribution of traffic between arterial roads and local streets.

Arterial Road– These roads are for the primary road network for the movement of goods and people by motor vehicle. The primary road network is managed by Department of Planning Transport and Infrastructure (DPTI) and supplemented by the local road network (Council managed).

Evaluation Matrix – Assessment tool designed to rank requests for footpath construction.

Footpath – That portion of a road or street or other public place set aside for use by pedestrians only.

Distributor – Provides primarily for the main connection from, urban centres and local areas to the wider State main arterial road network (Victor Harbor City Council managed).

Local Footpath – Provides only pedestrian access to abutting properties or properties in nearby streets. A path with no strategic function.

Pedestrian – A person walking, and including people in wheelchairs, on roller skates/blades or riding on 'toy vehicles' such as skate boards or other vehicles, and a person in or on a wheeled recreational device or wheeled toy.

Residential Street – A road, the main function of which is to provide access to residential properties.

Shared Trail – A footpath on which pedestrians, bicyclists and equestrian riders mix, but on which bicyclists and equestrian riders must give way to pedestrians.

Strategic Local Path – A Local Footpath that has been identified as having a strategic function in providing pedestrian access to a broader local area.

Strategic Regional Path – A footpath that is not located on an arterial road but has been identified as being of regional importance for longer distance pedestrian movements.

Urban Growth Boundary – A notation on a planning scheme map that delineates the extent of the ultimate urban area(s) within a particular planning scheme, to enable the application of specific planning controls for land outside that urban area.