Accessible Street Audit

Te Aroha

Street Access Audit carried out by CCS Disability Action in partnership with Taylored Access Ltd.

August 2020

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Including all people

TE HUNGA HAUĀ MAURI MŌ NGĀ TĀNGATA KATOA

CCS Disability Action

Supports around 5,500 disabled people across New Zealand and has been operating for over 85 years. We have a good knowledge of the lived experience of disability. This, along with the advocacy and research that we conduct puts CCS Disability Action in an excellent position to work with Local Authorities to improve access across New Zealand.

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Taylored Access

Is a consultancy that combines civil engineering with the disability sector. A family-owned business, Taylored Access draws on the expertise of personnel that have worked for Local Authorities and live with family members that are mobility impaired. With the 'lived with' experience and Local Authority experience, Taylored Access Ltd is an ideal partner for CCS Disability Action and Councils.

Taylored access

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Executive summary

Streets connect people and communities. Road Controlling Authorities have a legacy of older and mostly inaccessible footpaths that prevent many people from accessing essential activities. The resulting disconnection has significant negative effects on wellbeing. Disabled and older people; Māori, Pasifika, children and people on low incomes are significantly disadvantaged by poor access. Numerous aspects of street infrastructure create access barriers, these include steep kerb ramps, narrow/uneven footpaths, lack of or unsafe crossing points etc. Improving accessibility increases community participation and contributes to improved wellbeing.

Identifying and systematically upgrading footpaths creates considerable logistic and financial challenges for Matamata-Piako District Council. The Street Access Audit identifies and classifies access barriers and provides costed recommendations that allow Matamata-Piako District Council to progress investments via maintenance budgets. The audit was developed by CCS Disability Action, Transport Engineers and disabled people. It combines engineering best practice, the principals of universal design and is informed by the lived experience of disabled people. Systematically improving access will allow Matamata-Piako District Council to improve liveability in Te Aroha.

Taylored Access Limited audited the Te Aroha CBD in August 2020. The overall condition of the footpaths was good, considering the installation of Ultrafast Fibre at the time of the audit. Lack of a crossing point on Whitaker Street (between Lawrence Avenue and Burgess Street), Tactile Ground Surface Indicators (TGSI) (directional indicators for visually impaired people) and poor access to Mobility Parks are all serious risks and improvements should be given the highest priority. Other risks included steep kerb ramps or missing kerb ramps, broken footpaths etc. which can be addressed via the maintenance programme. Cobblestones and some pavers create access hazards for disabled people, and while overall the condition of the cobblestones was satisfactory, it is recommended that Matamata-Piako District Council ensure that existing cobblestones are well maintained and considers accessibility by not using cobblestones in the future when upgrading areas and planning new developments.

Introduction

This report provides an overview of the findings of the Street Access Audit and information regarding access barriers, people with access needs and the benefits of improving access. This report is mainly for Matamata-Piako District Councillors and Council staff. Detailed information for the Roading Team is contained in the Engineers report.

Footpaths are the fabric of the community. We all benefit from regular footpath use to socialise, walk to the bus/work, access essential goods and services. Access barriers including steep kerbs, narrow paths, potholes, lack of or unsafe crossing opportunities, poor signage etc. prevent many people from using footpaths. This means that many people are prevented from:

- Taking trips.[1]
- Taking the most direct route and are forced to take an alternative, longer and more taxing route. This often means that trips are limited.
- Participating in the community, accessing essential goods and services, with negative effects on all aspects of wellbeing.

Taylored Access Limited audited the Te Aroha CBD in August 2020. Overall, the condition of the footpaths was good, considering the installation of Ultrafast Fibre at the time.

Accessibility is a problem for all

All people are compromised by poor access at some time in their lives, e.g., parents with pushchairs, people with short term injuries or illnesses etc. Inaccessible footpaths present daily access challenges to large sectors of our society.

Pedestrian categories

Pedestrians can be separated into several groups including:

- **Disabled people**

  Twenty-four percent (24%)[2] of the New Zealand population identifies as having a disability and the lack of accessible transport creates one of the greatest barriers to disabled people participating in society[3]. Disabled people take fewer trips or longer less convenient trips, with both immediate and long-term effects on their wellbeing[4]. Disabled people experience poorer levels of educational attainment, health, lower incomes and are less likely to be employed than the general population[5].

- **Older people**

  Disability increases with age. Fifty-nine percent (59%)[2] of the population over the age of sixty-five has a disability. Older people are at risk of the negative effects of loneliness, isolation and inactivity. Maintaining mobility and contact with people is crucial for older people to access goods, services and retain their wellbeing[6].

- **Children**

  Eleven percent (11%)[2] of New Zealand children identify as being as being disabled. The inability to access footpaths/transport disadvantages many and they are prevented from joining neighbourhood activities, using public/school transport etc. Additionally, children are vulnerable high-risk pedestrians and have limited capacity to understand the complexity of the traffic environment and some parents overestimate children's pedestrian skills[7].

- **Māori and Pasifika**

Māori and Pasifika have higher than average rates of disability than the general population. Thirty-two percent (32%)[2] of Māori and twenty-six percent (26%) of Pasifika identify as being disabled.

Footpath safety is a concern for all New Zealanders

Safety is a concern for all pedestrians. Children, older adults, disabled people, Māori, and Pasifika are more likely to be injured when pedestrians[5]**.** Disabled people frequently find travel as pedestrians difficult, stressful and tiring. The result of barriers to access or safety concerns means pedestrians take fewer trips, or longer less convenient trips, with both immediate and long-term effects on their mental and physical health[8]**.**

Additionally, around seven hundred New Zealand pedestrians are admitted to hospital annually as a result of non–motor vehicle injuries on the road or footpath. These include slips, trips and stumbles and are mostly related to people stepping up kerbs or negotiating surface cracks, potholes, tree roots etc[9].

Demand for an accessible community will increase

The number of disabled people over the age of sixty-five is predicted to double in the next twenty years[10]. The ageing population will place unprecedented demand on all services and the ability to use the footpaths/transport system to maintain independence will be crucial to the wellbeing of older people and reducing the demand on all services.

It is predicted that years in retirement will increase from around 10 – 15 years to 25 – 30 years. Many older people will face hardship in retirement[11] and will be dependent on walking or public transport. It is likely, the number of people over the age of seventy-five years holding a driver's licence will decrease[12]. Others will have good financial resources and increased expectations in retirement e.g., baby boomers and are likely to be more active and have increased expectations.

Access improvements increase community participation

CCS Disability Action and its partners have developed a tool to measure the participation of disabled people in the community. This has been used to demonstrate increased community participation by all members of society, including disabled people.

Infrastructure improvements resulted in an increase in all people crossing

Infrastructure improvements at the Five Roads Roundabout in Hamilton including the installation of two raised tables and a signalised crossing north-east of the intersection and tactile ground surface indicators resulted in increased community participation. This included an:

- Increase in all people crossing – 41% – 51%.[13]
- Increase in disabled people crossing 88%

Mobility parking permit holders noticed access improvements

Participants in a small survey of permit holders[14], surveyed two years following a Street Access Audit and resulting improvements noticed access improvements. See table one:

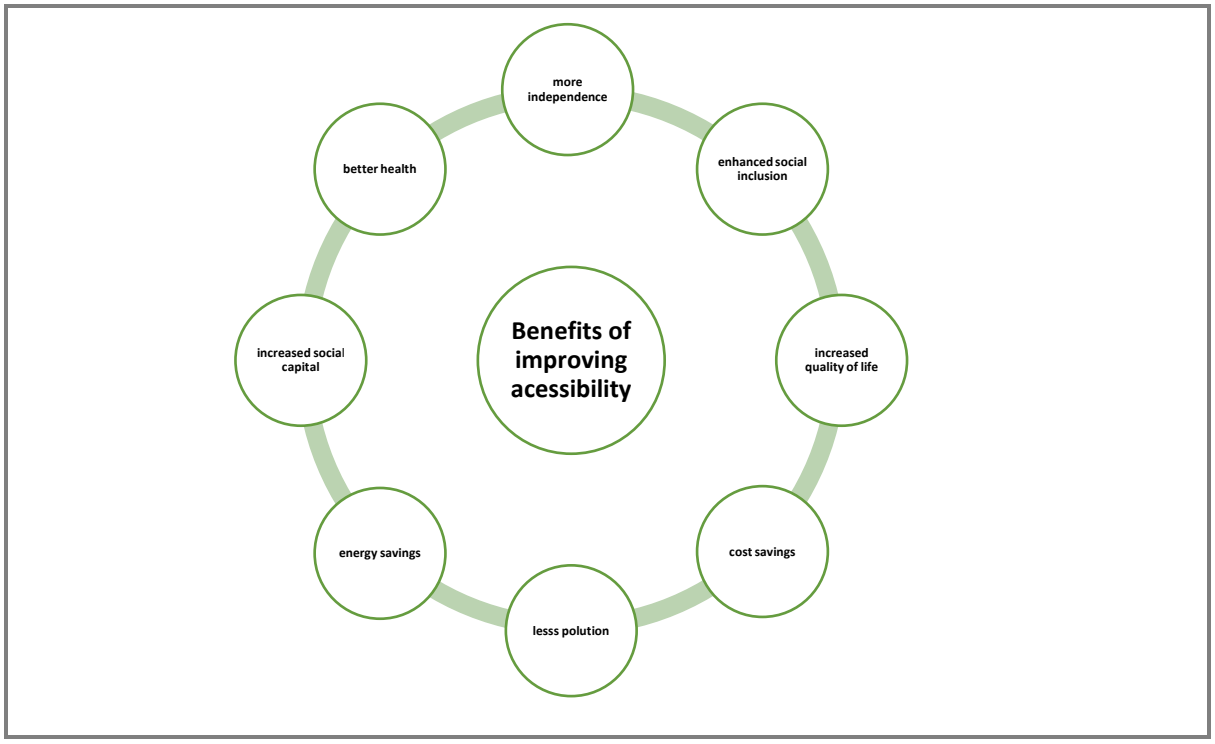
Table one - Mobility Park Permit holder's feedback

• 78% noticed better defined mobility parks. • 24% noticed more mobility parks. • 29% noticed improved kerb cuts. • 37% noticed better footpaths.	Feedback from respondents: *"Less chance of tripping".* *"The improvements that have been made to the kerbs have made it easier and not so bumpy on my mobility scooter".* *Improved access for me and better able to find a disability parking space".* *" Blue paint is good for visibility".*

Improving access has broad benefits

Investing in accessibility is a cost-effective way of contributing to a sustainable economy and tackling the future challenges of demographic, economic and environmental challenges[15]. Improvements will have an effect at an individual and population level. See figure one.

Figure one – Benefits of improving access



Source: http://www.isemoa.eu/docs/50/ISEMOA_promo_leaflet_EN_v3_final.pdf

Benefits to Council

Implementing the audit recommendations will allow Council to:

- Schedule best practice access improvements in routine asset management using committed funding.
- Make the best use of existing infrastructure and provide appropriate levels of service and maintenance.
- Improve liveability in the area.
- Achieve the requirements of the Government Policy Statement Land Transport 2021/22 – 2030/31.

Street Access Audit

The Street Access Audit (Appendix one) is a systematic inspection of the pedestrian network. It identifies and classifies access barriers, provides a risk classification, and costed recommendations.

Infrastructure assessed include:

- Footpaths
- Surface hazards
- Crossings
- Mobility car park spaces
- Bus stops etc.

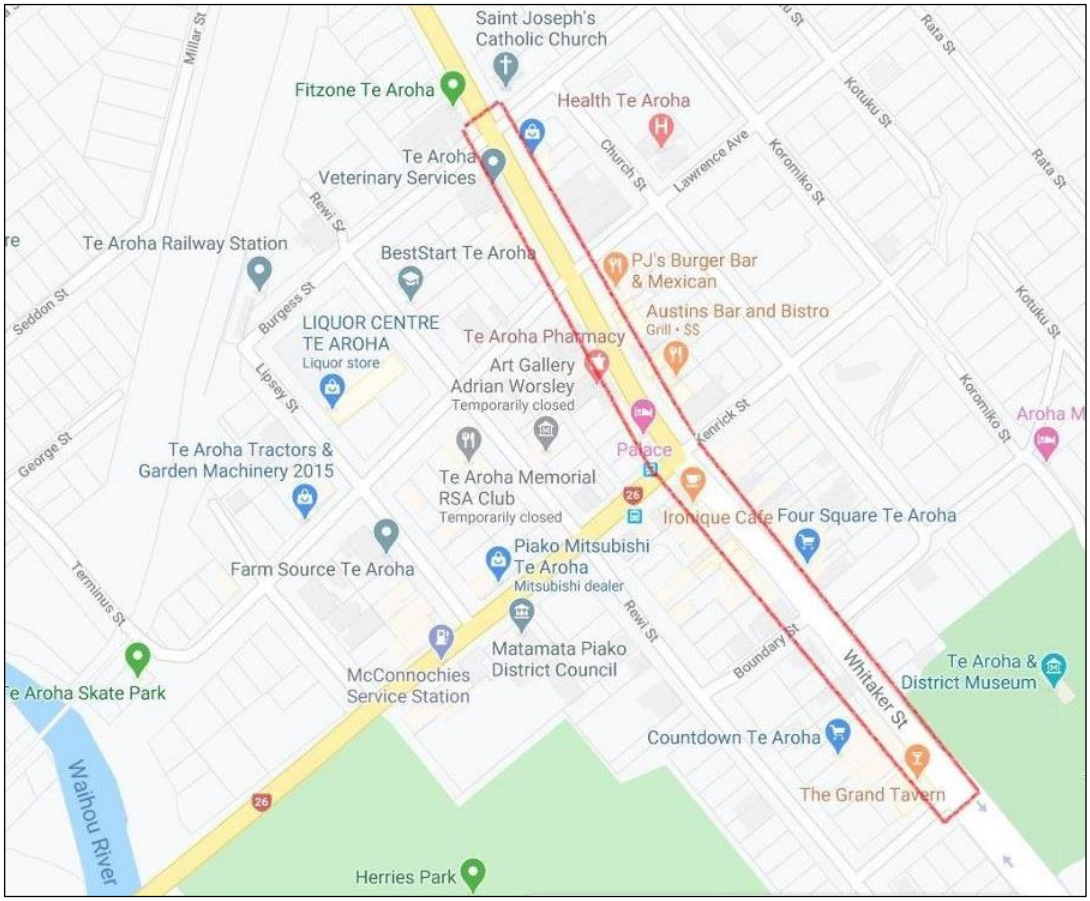
Defects identified are assigned a risk classification:

- Serious – defects likely to cause serious harm.
- Significant – defects likely to have an impact on peoples' movement.
- Minor – defects that are likely to reduce the number of trips made due to increased time and effort required to take the journey.

Te Aroha Street Access Audit

The audit was carried out in August 2020. The area inspected is outlined in red in Map one.

Map one. Audit area – Te Aroha



People in Te Aroha with access needs

The population of Te Aroha is 4554[16] and it is likely that residents belonging to the following population groups will have access needs:

- Older people (54%) of the population are over the age of 65 years
- Younger people (37.3%) of the population are aged 15 years or younger
- Māori (17.7%)
- Pasifika (3.8%)
- Unemployed people – 3.3% of the population 15 years or over are unemployed
- People with low income – 38.3% of people aged 15 years or over earn less than $20,000 annually

Audit findings, recommendations and investment

Overall, the condition of the footpaths was good. A total of sixty-eight defects were identified with seven serious, eight significant and fifty-three minor. Cost estimates were calculated (for construction costs only) the total estimated cost at the time of the audit is $119,500. The estimated costs for serious risks which should be prioritised is $11,000. Improvements to address significant and minor hazards can be progressed via long term maintenance and other planned works with estimated costs being $78,500 and $30,000, respectively.

Serious risks

- Lack of a crossing point on Whittaker Street.
- Many Tactile Ground Surface Indicators (TGSI) (directional and/ or warning indicators), which are essential for people with low vison or blindness to navigate the footpaths, were missing or not clearly visible due to their colour (red).
- Limited access to the footpath from mobility car parking spaces.

Significant and minor risks

- Steep kerbs, poorly installed service covers, and uneven footpaths etc.

Overarching recommendations

- Addressing serious risks should take priority.
- Manage significant and minor risks via the maintenance programme and other scheduled works.
- Ensure that existing cobblestones are well maintained and consider accessibility by not using cobblestones in the future when upgrading areas and planning new developments.

Serious risks

Serious risks are likely to cause serious harm and should be prioritised. Five serious risks were identified with an estimated construction cost (calculated at the time of the audit) of $11,000 (not including NZTA contribution for State Highway 26). Examples of serious risks are provided below in Table Two and full detail is provided in the Engineers Report.

Table two – Serious risks

Location and main function	Defects identified	Summary recommendations	Estimated investment
Whitaker Street (SH.26), between Lawrence Avenue and Burgess Street Northern extent of CBD	• Missing crossing point of SH.26.	• Provide a crossing point opportunity on Whitaker Street near the Salvation Army Family Store. This will link similar shops in the area as well as coffee shops nearby. The installation of a refuge island is highly recommended. • Install flush kerb ramps on both sides of SH.26 to a maximum grade of 1:14 (7.1%).	NZTA investment.
141, 142, 178, and 221 Whitaker Street, Burgess Street Mobility car parking spaces	• Limited access to the footpath on one side of the vehicle only.	• Provide a full width kerb ramp to provide access from both sides of the vehicle at a maximum grade of 7.1% (1 in 14).	$7,000
Rolleston Street and Boundary Street intersections with Whitaker Street (SH.26) Kerb ramps	• Missing or lipped kerb ramps.	• Install/replace kerb ramp with flush kerb ramps with a maximum grade of 7.1% (1 in 14).	$3,000

Significant risks

Significant risks create hazards that will have a significant impact on people's movement. Items identified in this category can be included in long term maintenance planning and with other planned works. Nine significant risks were identified with an estimated construction cost (calculated at the time of the audit) of $78,500. Some examples of significant risks are provided in table three and further description of hazards and remedial action in Appendix two. Full details are provided in the Engineers Report.

Table three – Significant risks

Location and main function	Defects identified	Summary recommendations	Estimated investment
Various locations Footpath	• Uneven footpath surface at six locations.	• Replace footpath with asphaltic concrete or concrete.	$30,000
Various locations Cobblestones	• Loose/unstable cobblestones.	• Replace all cobblestones with coloured concrete.	$30,000
Various locations TGSI's	• Missing TGSI's. • Red TGSI's.	• Install reflectorised yellow warning and directional TGSI's as required.	$14,000

Minor risks

Minor risks may influence the number of trips that people take and/or require increased effort to make the trip. Items in this category can be included in long term maintenance planning and with other planned works. Eight minor risks were identified with an estimated construction cost (calculated at the time of the audit) of $30,000. Some examples of minor risks are provided in Table Four and further description of hazards and remedial action in Appendix two. Full details are provided in the Engineers Report.

Table four – Minor risks

Location and main function	Defects identified	Summary recommendations	Estimated investment*
Whitaker Street / Burgess Street Intersection	• Catchpit in direct crossing location of Whitaker Street on the southeast intersection of Burgess Street. • Refuge island in the direct path of crossing Burgess Street east.	• Install full height kerb and channel around the four curves. Install kerb ramps at the tangent points of the curves to formalise the correct crossing area. This will avoid the traffic island on Burgess Street.	$11,000
176 to 190 Whitaker Street Crossfall	• Steep crossfall (< 8.3%) outside Piako Stationery Supplies.	• Regrade crossfall to less than 7.1% by regrading to the kerb and channel. Consider installing a high faced kerb and channel in this area to achieve a flatter crossfall.	$10,500
Various locations Kerb ramps	• Uneven surface or steep crossfall.	• Replace footpath/kerb ramp with concrete full width to a maximum grade of 7.1% (1 in 14).	$8,000

*Please note that this information covers construction costs only, calculated at the time of the audit.

Recommendations

- Prioritise serious hazards.
- Address significant and minor hazards in long term maintenance and other planned works.
- Ensure that the existing cobblestones and pavers are well maintained to avoid creating trip and vibration hazards and consider accessibility by not using cobblestones in the future when upgrading areas and planning new developments.
- Ensure that accessibility is addressed in the planning and design stage of proposed developments which are beyond the scope of this report. CCS Disability Action can assist with this.
- Join Access Aware. This free nationwide application will allow Mobility Park Permit holders to easily locate Mobility Parks and the Council to efficiently and economically map and monitor Mobility Parking. CCS Disability Action can assist with this.
- Monitor access improvements by measuring diversity of participation. For further information see: https://www.ccsdisabilityaction.org.nz/assets/Uploads/measuring-accessible-journeys-tdg-final-report.pdf.

Conclusion

- Inaccessible footpaths prevent many people from accessing the community. Improving access results in increased community participation and wellbeing. The Street Access Audit incorporates best practice engineering, universal design and the lived experience of disability and provides Councils with a systematic process to improve access using existing asset management processes and funding.
- Systematically improving access will allow Matamata-Piako District Council to improve liveability in Te Aroha.

Appendix one – Street Access Audit

Street Access Audit

The Street Access Audit includes an onsite inspection of the pedestrian network and a community consultation meeting.

Network inspection

This is a systematic onsite inspection (of an area identified by the Council and the auditor) carried out by a Transport Engineer. The process is summarised below:

- Key infrastructure is assessed, and defects are identified, described and location recorded using Mobile Roads, a free collaborative application hosted by Auckland Motorways.
- Defects are assessed using the assessor's knowledge of New Zealand Guidelines (NZS 4121, RTS 14, NZTA Pedestrian Planning and Design Guide etc.) along with an understanding and knowledge of the access needs of vulnerable pedestrians.
- Recommendations regarding remedial action, each recommendation is accompanied by a risk classification.
- The cost of the recommendations is estimated using QV Cost Builder (formerly Rawlinsons Handbook).
- The above information is provided in the Engineers Report that provides Council staff with a practical tool to schedule remedial action according to risk, work programmes and budget constraints.

Appendix two – General recommendations

This section contains additional descriptions of hazards created by defects in footpath infrastructure and remedial recommendations.

Footpath Surface

All surfaces on which pedestrians walk should be firm, stable and slip resistant even when wet[17]. Rough, uneven surfaces make many footpaths impassable. Cobblestones and bricks create slip, trip and fall hazards, navigation hazards for people with sight impairment or blindness. They also generate vibrations which creates considerable discomfort for wheelchair users. Overall, the condition of the cobblestones was satisfactory, however, these need to be replaced over time. A high number of service lids created uneven surfaces surrounding the cover.

Recommendations:

- **Approximately half of the defects involved the surface of the footpath. Improvements can be carried out when conducting normal maintenance.**
- **Replace cobblestones with concrete or asphaltic concrete during normal maintenance or during upgrades.**
- **Require service providers to reinstate footpaths to council standards.**

Footpath crossfall

Crossfall is the slope of the footpath at right angles to the direction of travel. This allows water to drain and generally falls towards the road so surface water does not drain into private property.

Crossfall in New Zealand is generally accepted to be between 2% and 4%. Crossfall greater than 1% creates sideways forces that make it difficult/prevent mobility aide users from using the footpaths and very steep crossfall creates the risk of people falling into live traffic.

A small number of paths have a steep crossfall.

Recommendations:

- **Remediate steep crossfall during ongoing maintenance.**
- **All footpaths should have a crossfall of 1% with an absolute maximum of 2%. Upgrade technical specifications and design standards to ensure a crossfall of 1%.**

Kerb Ramps

- Kerb ramps provide a smooth transition between the footpath and the roadway that can be safely used by all pedestrians. Steep grades and uneven surfaces often prevent users from completing their journeys. Many mobility aide users frequently become trapped in the gutter.

Recommendation:

- **Around 10% of the defects identified involved kerb ramps. Issues involved either being too steep or an uneven surface. Install all kerb ramps at a maximum grade of 1 in 14 (7.1%). The kerb face is to provide a flush transition to the channel and onto the road avoid kerb lips of any size.**

Road Crossings

- People cross the road two to three times every walking trip[18]. To cross the road safely, people need to be able to reach the crossing, see the traffic and be seen by drivers. Accessible kerb ramps and tactile ground surface indicators (TGSI) are also essential.
- Other factors that influence the choice to cross are the time it will take to cross and the availability of accessible pedestrian refuge islands to break the journey. The location of bollards and the quality of lighting also influence the decision to cross.
- Zebra Crossings in low volume traffic areas can create a high risk of injury as drivers become accustomed to small numbers of people using the crossing and may be less likely to pay full attention, while pedestrians may not carefully check that it is safe to cross.
- Serious risks were created by the lack of a crossing point on Whitaker Street, between Lawrence Avenue and Burgess Street.

Recommendations:

- **Place the highest priority on crossings creating serious hazards.**
- **Use the NZTA Pedestrian Crossing Facilities Calculation Spreadsheet to aid with the decision-making process for the most appropriate crossing facility.**

Directional Indicators

Directional surface indicators e.g., Tactile Ground Surface Indicators (TGSI) or tactile delineators (e.g., domes embedded in footpaths) warn low vision or blind people of crossings and provide directional guidance.

Many of the TGSI in Te Aroha are red and cannot be seen by people with visual impairment these create serious hazards and remediation should be given a high priority.

Recommendations:

- **Prioritise the replacement of the TGSI's.**
- **Ensure that new TGSI's are safety yellow.**
- **Follow the guidance provided in RTS 14 – Guidelines for facilities for blind and vision impaired pedestrians[19].**

Mobility Car Parks

Mobility car park spaces are solely for the use of Mobility Park Permit holders who due to a mobility or health issue have difficulty accessing the community. Mobility car park users should not be exposed to live traffic. For further information see: https://www.ccsdisabilityaction.org.nz/mobility-parking/.

Mobility car parks should:

- Provide direct, safe access to footpaths via full length/width flush kerb ramps.
- Be adjacent to key locations and services.
- Be easy to identify via clear signage and blue paint markings on the footpath.
- Provide the required space to load and unload mobility dependant passengers.

There are 472 Mobility Park Permit holders in Te Aroha.

Recommendations:

- Prioritise the upgrade of mobility car parking spaces that create serious hazards.
- Provide full width/length kerb ramps to provide quick access from all parts of the vehicle without having to access the live vehicle path.
- The guidance contained in the *New Zealand Standard 4121 Design for Access and Mobility – Buildings and Associated Facilities* (NZS4121)[20] no longer meets the requirements of Mobility Park users. Technology advances such as the development of larger wheelchairs and longer vans etc., means many permit holders cannot use these parks.

  The audit recommends that the Council exceed the requirements of NZS 4121, these include installing longer and wider parks and marking the location of the park by painting a 1 m blue strip on the traffic lane side of the car park. This improves visibility for drivers looking for a park. These do not represent a significant cost increase and specific recommendations are contained in the Engineers Report.

Access Aware

Around thirty percent of people using Mobility Parks in New Zealand do not have permits. This often means that valid permit holders are forced to abandon their journey. Mobility Park enforcement and providing current information regarding the location of Mobility Parks can be time-consuming and costly for Councils. The free nationwide Access Aware (crowdsourced) smartphone app allows the public to:

- Pin the location of a Mobility Park in the application map.
- Locate Mobility Parks.
- Safely report the misuse of a Mobility Park.

Councils can be provided with real-time reports of park misuse which can be used for enforcement purposes and quarterly summary reports – free of charge.

Recommendation:

- **Join the Access Aware programme, this can be used across the district/ New Zealand and is an economical and efficient way to map the location of and monitor/enforce the use of Mobility Parks.** For further information see: https://www.ccsdisabilityaction.org.nz/mobility-parking/access-aware/.

Street furniture (signage, bins etc.)

Outdoor furniture (alfresco dining), signs, rubbish bins etc. enhance the streetscape and increase its usability. However, poorly placed outdoor furniture and signage can make it difficult for many to negotiate footpaths. While bollards prevent illegal or unwanted traffic movement, grey bollards cannot be seen by people with visual impairment. This puts them at risk of serious harm.

This report supports the review of bins, sandwich boards etc. The recommendations below will contribute to the review.

Recommendations:

- **Ensure there is a two-metre clear path – along building and boundary.**
- **Ensure there is a furniture zone adjacent to the kerb which can incorporate permanent structures such as parking meters, signage, veranda poles etc.**
- **Create a Street Furniture Policy or specification incorporating the above issues.**
- **Liaise with the business operators to ensure the proper placement of shop signage and furniture.**

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