

Melling Station Relocation Assessment

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0	1/11/17	Working Draft for Comment	9(2)(a)			
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1 Purpose and Scope

The purpose of this file note is to provide an outline of the strategic context, options considered and results of a high level transport assessment of the implications of relocating the Melling railway station as part of RiverLink.

2 Strategic Context

The RiverLink project is exploring the implications of moving the Melling railway station south of its current location.

2.1 Making Places Strategy

- Shifting the railway station to the south was first signalled by the Hutt City Council (HCC) in the 2009 Making Places Strategy.
- Moving the railway station is seen as an important part of realising the potential of the central business district (CBD) by making it more attractive to businesses and residents¹.
- As part of RiverLink, the NZ Transport Agency is investigating improvements to the Melling intersection.

2.2 Why move the station?

- The SH2 Melling intersection has significant safety and travel reliability issues. The Melling Intersection Indicative Business Case (IBC) identified that the best way to solve these issues was by constructing a grade separated interchange. The existing Melling station is within the footprint of all of the Melling Interchange options and would need to be moved to realise the benefits of improving this critical pinch point on SH2.

¹ The Riverside Promenade – Building the Future Business Case, Hutt City Council, 2017 states “ Proximity to public transport encourages active multi-modal transport and offers price premiums for nearby properties”.

2.3 What are the opportunities?

○ Melling Station as a Transport Hub

- Significant opportunities exist for a relocated Melling Station to operate as a Metro Station with improved system integration of different transport modes (e.g. improved connecting infrastructure and services – road, rail, bus, walking and cycling into the Lower Hutt CBD and Western Hill suburbs).
- The new station, coupled with the proposed Margaret St walking and cycle bridge makes it easier for both existing and future Hutt City Centre residents to travel by train to/from Wellington.
- The new station, coupled with the proposed Margaret St walking and cycling bridge creates the opportunity for the Melling Station to be the main “Hutt CBD station” to attract trips from Wellington residents.
- Melling Interchange also provides for improved access from the Western Hill suburbs to both the Lower Hutt CBD and to a relocated Melling Station.
- Increased Park and Ride – the new station is proposed to have 400 parks (compared to the 200 existing) along with future Kiss and Ride (drop off lanes).
- Melling Line has spare capacity – this presents a significant opportunity for increased patronage when combined with station, access and park and ride improvements.

○ Revitalisation of City Centre

- A vibrant connection between the city and railway station would attract businesses to locate near the station, refer Figure 1 below for an artist's impression of what the Promenade and Margaret St Bridge could look like.
- Revitalisation is thought to be a function of land value improvement from the proximity of the station to the city centre (i.e. the increase accessibility translates into increased development potential and land values).
- It is assumed that increased land values will stimulate or accelerate development activity²



Figure 1: Artist's Impression of the Making Places Promenade (Source: GWRC, Newsletter 6, June 2017)

² The Riverside Promenade – Building the Future Business Case, Hutt City Council, 2017.

3 Relocation Options

Two possible locations are under consideration as part of the investigation, these are outlined in Figure 2 below. Figure 2 also provides an overview of a number of other RiverLink projects.

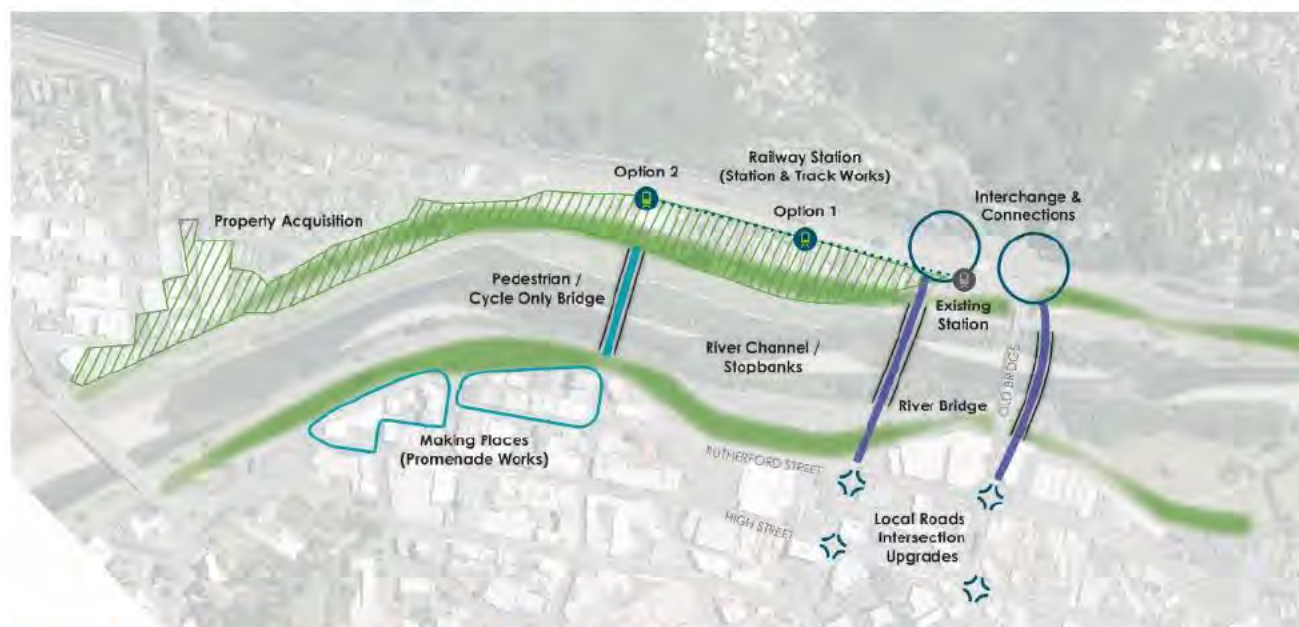


Figure 2: RiverLink Projects and Melling Station Relocation Options

- **Option 1:**
 - The first location being considered for a new station is just 250 metres south of the current station, which is the minimum it could be moved to be away from any interchange footprint due a combination of potential constructability³ and attractiveness⁴ issues.
- **Option 2:**
 - The second location approximately 500 metres south of the current station and directly opposite the proposed pedestrian bridge into the Lower Hutt CBD at Margaret Street. The station could move here to provide excellent access for people travelling to and from the CBD.
- **Inputs and Assumptions:**
 - Margaret St Walking and Cycling Bridge progresses (HCC committed funding)
 - Both options include additional park and ride facilities.
 - Upgraded station features/amenities which will be the same at either location
 - Assume no new Harbour View pedestrian connection over SH2 (except at Melling Interchange).
 - Melling Interchange Option 9 was a proxy for assessment purposes (e.g. walking distances). It is important to note that the Melling Options are in investigation stage with no detailed design undertaken. Refer Appendix A for a schematic of Option 9.
 - Assume Tirohanga road is connected into the Melling Interchange on the western side of SH2.
 - There is no operational requirement for the Western Hutt Station to close as a result of relocating Melling Station to the south, noting that travel time reliability on the line may deteriorate.
 - There is a current working assumption that the project needs to be future proofed to not preclude a Northern Extension of the Melling Line at some point in the future.

³ Constructability issues include the narrow available land footprint, significant earthwork requirements and numerous structures

⁴ Locating the station closer to the interchange would result in a narrow strip of land overshadowed by on and off ramps supported by retaining walls

3.1 Option Assessment

This file note aims to provide a high level summary of what moving the station would mean for current and future users of the station, along with commentary on a number of other considerations (e.g. development potential, timing and impacts on other stations).

Overall, there were few differences between the current situation and the two options. Those items for which there are a difference are outlined in the sections below.

3.1.1 Modal Impacts

The current surveyed modal split for access to the Melling Station, based on surveys undertaken in 2011/12⁵, are summarised in Figure 3 below. Figure 3 highlights that the majority of the trips are by car followed by walking.

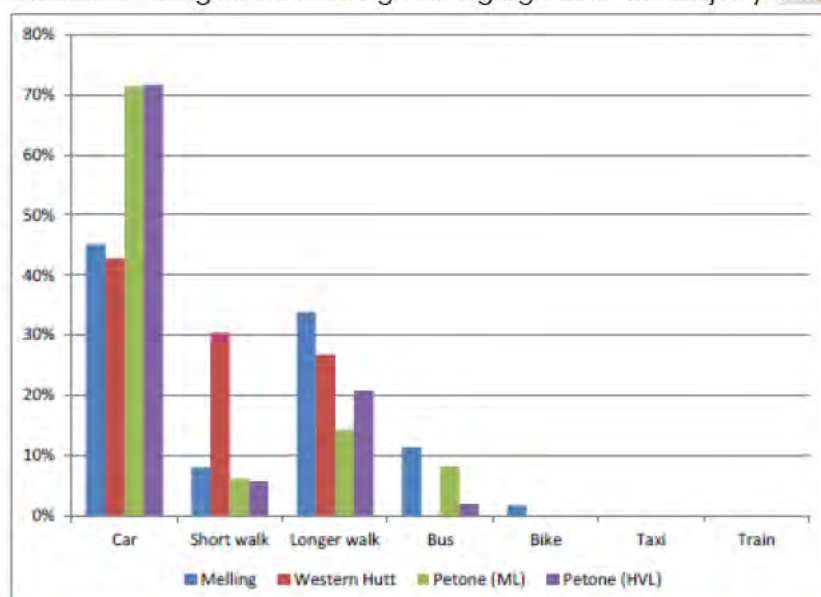


Figure 3: Access by Mode Melling line (Source: GWRC, Analysis of the Rail Survey data 2011/12)

3.1.1.1 Walking Catchment

Mapping software was used to identify the catchment area as well as the number of people⁶ living within 400m, 800m, 1200 and 1600m from each station location, the results are summarised in Figures 4-7 below and in Table 1.

Figures 4-7 also include an overlay of the Melling Station access mode by origin survey information⁷, with key insights⁸ outlined below:

- respondents travelled to Melling Station from both sides of the Hutt River;
- fewer respondents walked to the station from the adjacent hill suburbs than from the valley;
- more people drove to the station from the hill suburbs than from the valley floor;
- respondents that accessed the station by bus all travelled from Belmont; and
- more than twice as many survey respondents travel from north of the station.

Refer Appendix C for the Railway Station Access Mode by Origin data for other stations along the Melling Line and Appendix D for walking catchment maps.

⁵ Greater Wellington Regional Council, Analysis of the Rail Survey data, 2011/12. The Melling line attracted 245 responses.

⁶ 2013 Census, for the employed census usually resident population count aged 15 years and over.

⁷ Greater Wellington Regional Council, Analysis of the Rail Survey data, 2011/12.

⁸ Reproduced from RiverLink, Provision of New Walking & Cycling Connection Across Hutt River & Relocated Melling Station, 2017

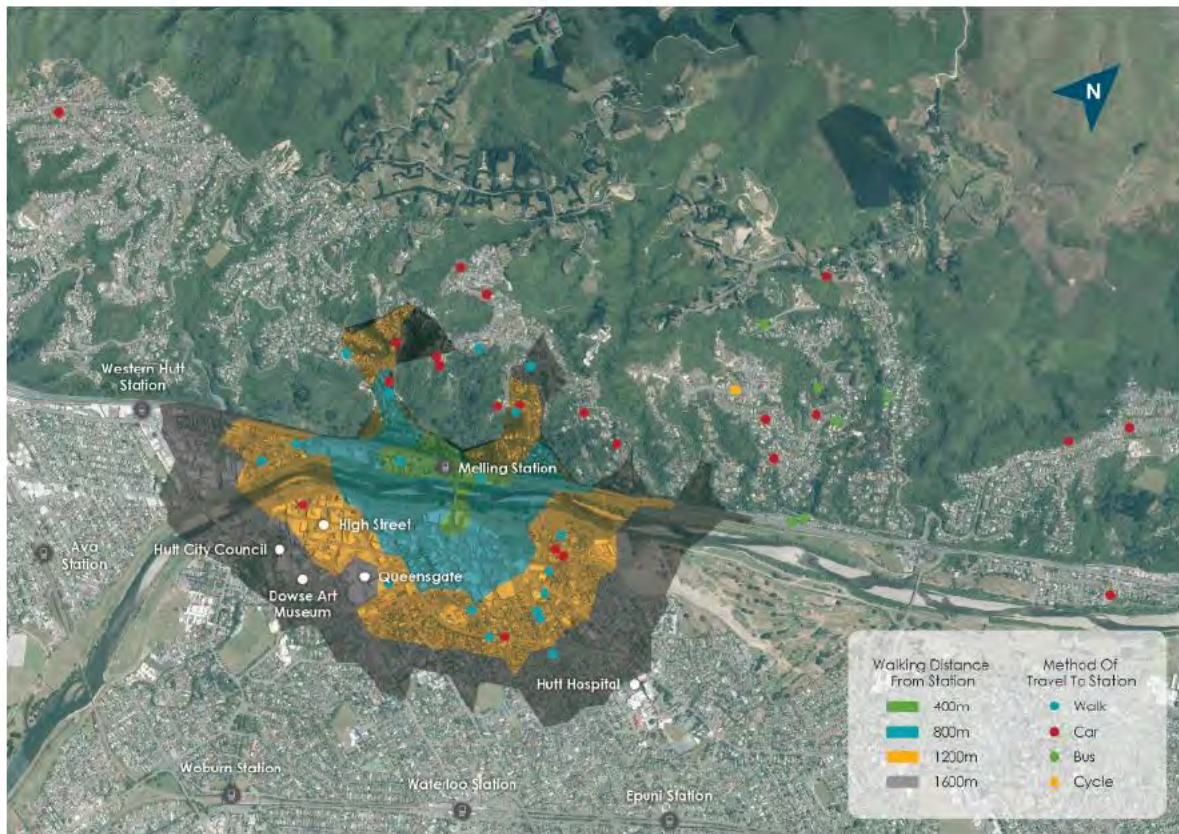


Figure 4: Existing Melling Station Walking Catchment

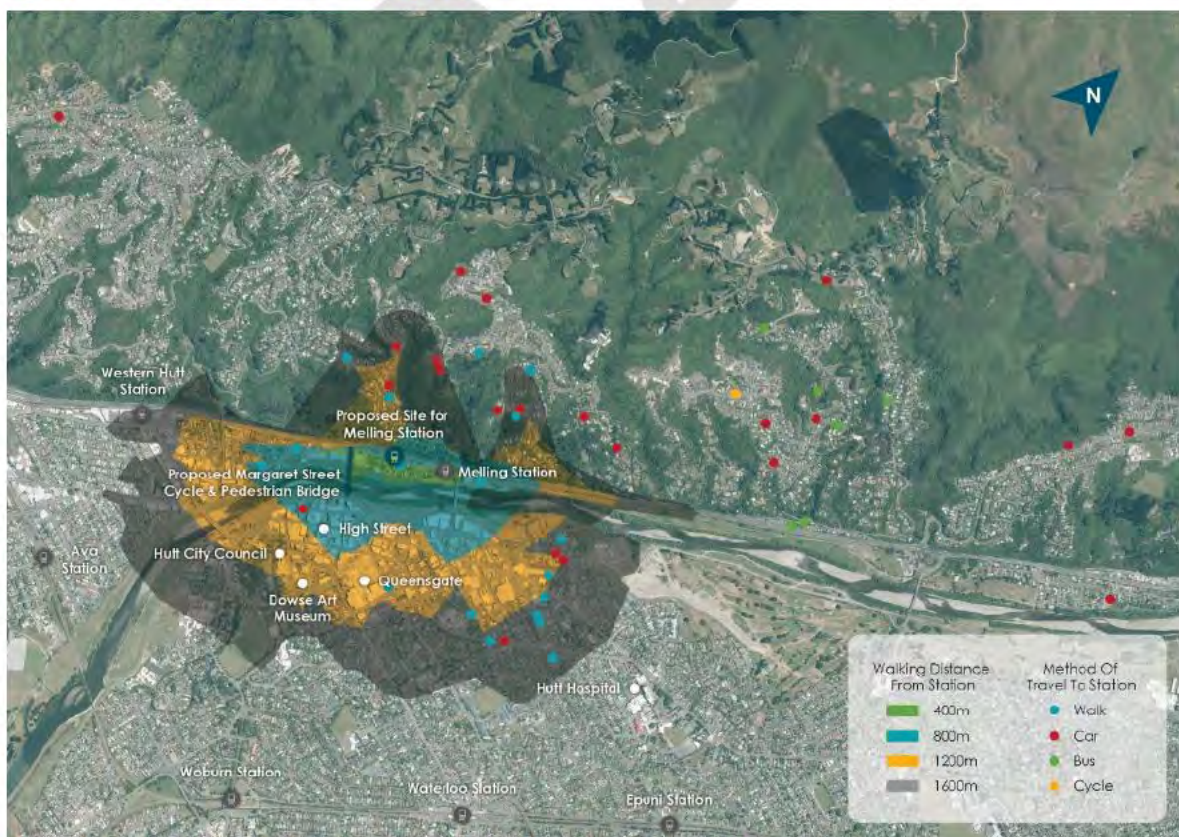


Figure 5: Melling Station Option 1: Adjacent to Interchange Walking Catchment

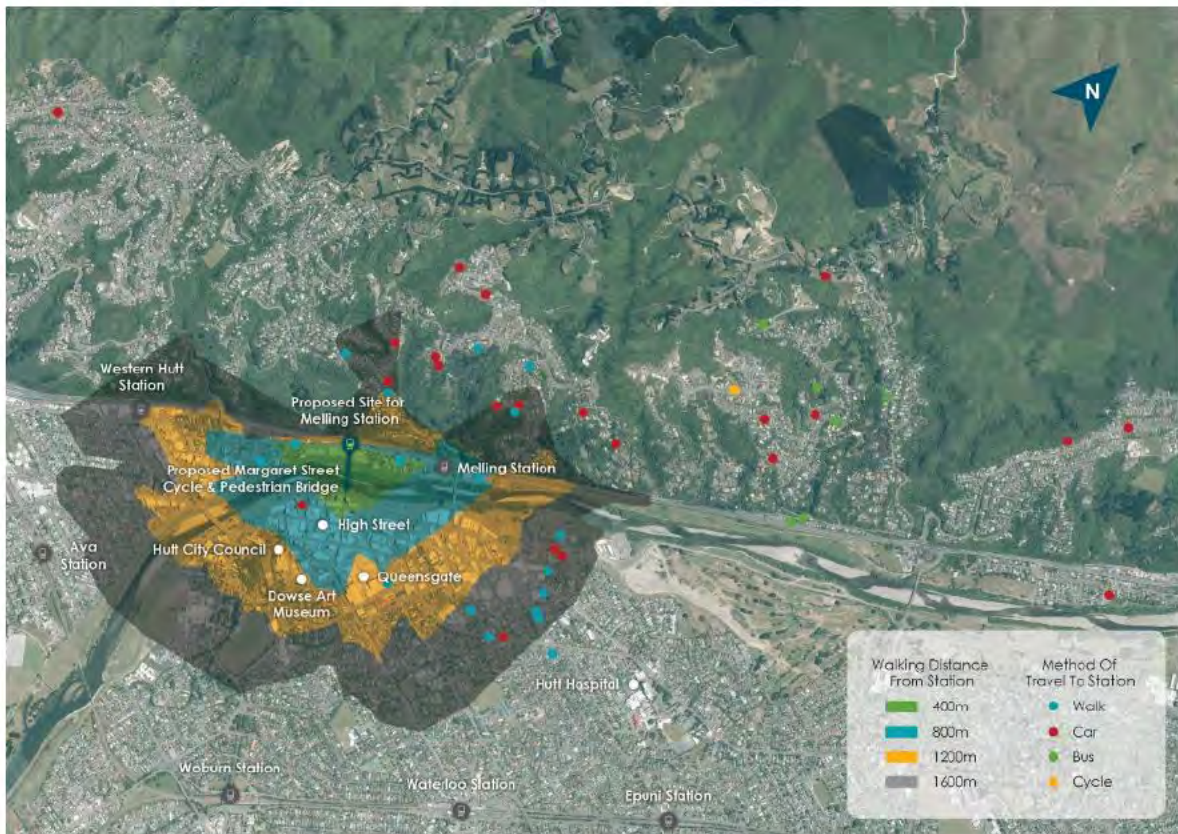


Figure 6: Melling Station Option 2: Relocated opposite Margaret St Bridge Walking Catchment

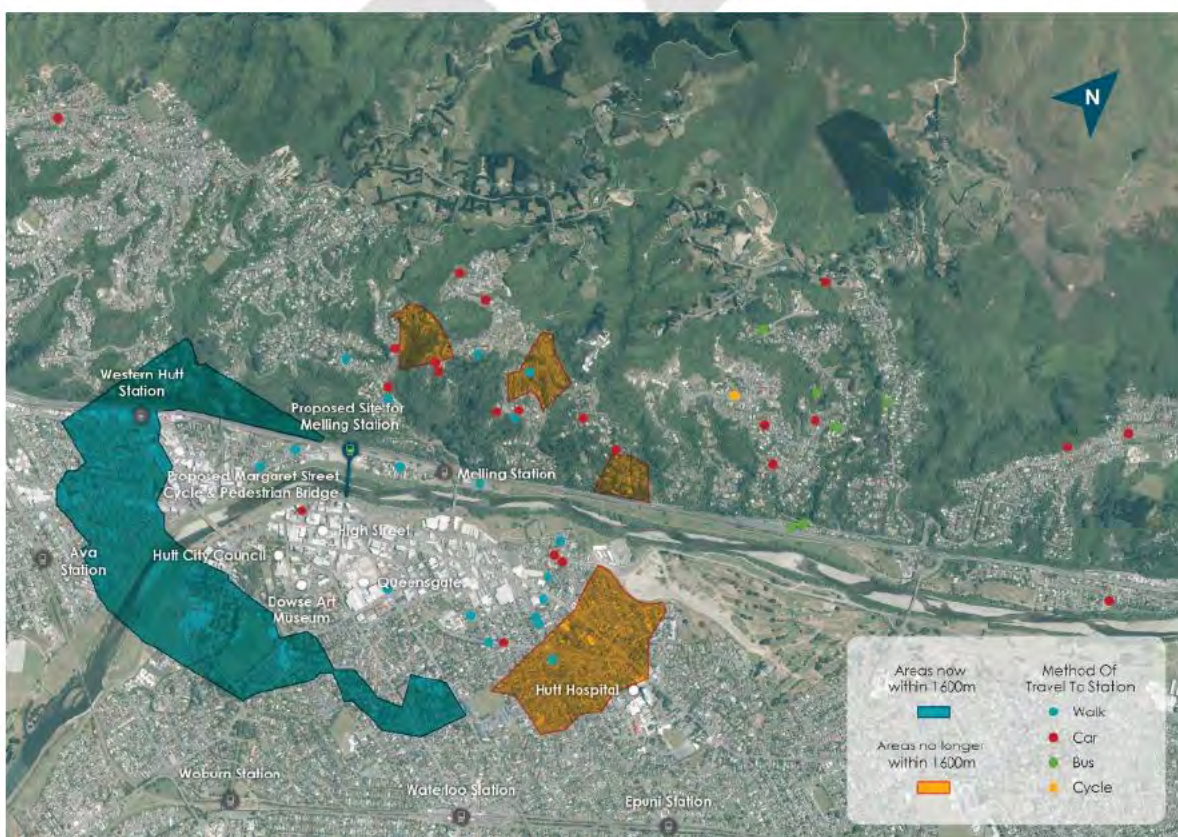


Figure 7: Walking Catchment Difference (Option 2 vs Existing)

Table 1: Walking Impacts

Walking Impacts (42% of current train passengers walk to Melling)		Do Nothing/ Retain Existing Station	OPTION 1: Minimal Relocation (relocated adjacent to Interchange)	OPTION 2: Relocate station approximately 500m south, opposite new Margaret St walking and cycling bridge
Harbour View to Stn	Change in Walking Distance (m)	0	+116m	+286m
	Change in Walking Time ⁹ (min)	0	+0.6min	+2.8min
Tirohanga to Stn	Change in Walking Distance (m)	0	+229m	+399m
	Change in Walking Time (min)	0	+0.0min	+2.2min
Boulcott to Stn	Change in Walking Distance (m)	0	+265m	+435m
	Change in Walking Time (min)	0	+3.4min	+5.6min
Queensgate to Stn	Change in Walking Distance (m)	0	-360m	-530m
	Change in Walking Time (min)	0	-4.6min	-6.8min
Walking Catchment	Population ¹⁰ within 400m	52	48	82
	Population 400 - 800m	231	183	210
	Population 800 - 1200m	887	543	523
	Population 1200 - 1600m	1242	1532	1950
	Difference in Walking Pop Catchment	0	-106	+353
	Difference in Population Catchment (%)	0%	-4%	+15%
	Anticipated CBD Growth (Promenade)	+2,600 new residents (medium growth 20 year horizon)		

Walking catchment analysis results include:

- **Existing:** The existing walking catchment correlates well to the survey results, refer Figure 4, with all 'walking' survey respondents living within a 20min walk (1,600m) of the station.
- **Options:**
 - Catchment analysis for Option 1 shows a slight, 4% reduction in the employed population¹¹ within 1,600m of the station.
 - In contrast, Option 2 shows an increase of approximately 15%¹² in the employed population within 1,600m.
 - Figure 7 shows that the reduction in walking catchment areas to the Western Hills are largely offset by the new areas to the south.
- **Western Hills impact:** The additional distance for Western Hills residents is largely offset by reduced waiting times to cross SH2 with the Melling interchange in place.
 - Option 1: Using this location means that people walking from the western hills would need to walk slightly further but much of the time for this additional distance would be offset by reduced waiting times to cross SH2 as a result of the Melling interchange.
 - Option 2: Moving the station to this location means that people walking from the western hills would need to walk further, but reduced SH2 wait times would mean that it would only be 2-3 minutes longer.
- **Boulcott Impact:**
 - Both options increase the walking distance to travel from Boulcott to the Station. The maximum additional walking time (Option 2) is expected to be approximately five minutes from Boulcott.
 - However, in contrast to Western Hills residents, Boulcott residents also have access to Hutt Valley Line services via Epuni and Waterloo stations.

⁹ Travel time savings were based on a walking speed of 1.3m/s combined with changes in walking distance and signal phasing.

¹⁰ 2013 Census, for the employed census usually resident population count aged 15 years and over.

¹¹ 2013 Census, for the employed census usually resident population count aged 15 years and over.

¹² However, it is noted that a large proportion of the additional population would overlap with the catchment of Western Hutt Station.

- **Increased access to the Lower Hutt CBD and Bus Services**
 - Both options provide improved access to Queensgate Mall and the Bus Hub.
 - Option 2 in particular halves the walking time between the Queensgate and station to 7 minutes.
 - Other points of interest with improved accessibility (i.e. now within a 10-12 minute walk or less) of the station include; Hutt City Council, Dowse Art Museum and High Street.
 - **Future Catchment Impacts:**
 - Multi-storey development along waterfront "The Promenade" is planned as part of Hutt City's Making Places strategy. The Promenade would include restaurants, cafes and medium density apartments, all of which would be located within 5-10 minutes' walk of both the Margaret St Bridge, the relocated Melling Station and the Hutt CBD.
 - There is therefore significant opportunity for the reduction in walking catchment to be offset by planned development¹³.

3.1.1.2 Park and Ride

The park and ride impacts of relocating Melling Station are summarised below and in Table 2.

- **Improved Capacity:**
 - There is currently insufficient park and ride capacity with demand exceeding supply by 25% and this is expected to increase to 70% in the next 20 years¹⁴, based on 2% growth.
 - Increasing park and ride capacity to 400 spaces is expected to account for future growth at Melling Station for a 20 year horizon, based on current modal choice trends. However, due to the impacts of population growth, improved connectivity to the CBD and increasing congestion on the state highway network, it is likely that modal shift to rail could grow at a faster rate. As a result, it is recommended that any future Melling Station contains at least 400 spaces, but future proofed to allow further expansion.
 - **Improved Access:**
 - Survey data shows that approximately half of users accessing Melling Station in the morning peak travel by car - 45%¹⁵.
 - the proposed Melling Interchange means that both Melling Station Relocation options would result in minor travel time savings for park and ride users accessing the station from the Western Hills and the CBD
 - Improved access to the railway station, better connectivity to the CBD and increased park and ride supply, is expected to increase rail patronage on the Melling Line, which is currently operating at just 35% capacity in the morning peak (i.e. 65% available capacity¹⁶). It is noted based on GWRC survey data that a number of residents of the Western Hills currently use the park and ride at Petone. The overall increased demand at Melling could in turn lead to opportunities for service improvements (additional evening or weekend services). This is explored further in the rail modal impacts, Section 3.1.1.4.

¹³ The Riverside Promenade – Building the Future Business Case, Hutt City Council, 2017. The Promenade shows central city projected medium growth is 2,600 residents and 2,700 new workers.

¹⁴ 2010 Beca Melling Station survey analysis supplied by NZTA (Tony Brennand), 2017. It is important to note that the predictions are based on 2010 travel patterns (relationship between observed parking demand and station arrivals), factored to 2017 based on patronage growth.

¹⁵ Greater Wellington Regional Council, Analysis of the Rail Survey data, 2011/12.

¹⁶ Greater Wellington Regional Council, Regional Rail Plan, 2013.

Table 2: Park and Ride Impacts

Park and Ride Impacts (45% of current train passengers drive to Melling)		Do Nothing/ Retain Existing Station	OPTION 1: Minimal Relocation (relocated adjacent to Interchange)	OPTION 2: Relocate station approximately 500m south, opposite new Margaret St walking and cycling bridge
Park and Ride Capacity	Total number of car parks	200	400	400
	Estimated Demand (2017)	250	250	250
	Utilisation/Capacity (2017)	125%	63%	63%
	Future Demand (2037)	340	340	340
	Future Utilisation/Capacity (2037)	170%	85%	85%
Melling CBD (Bunny St) to Melling Station	Driving Distance (m)	1100	930	1099
	Additional Driving Travel Time (min) ¹⁷	N/A	-0.5min	0.0min
Harbour View Rd to Melling Station	Driving Distance (m)	1000	477	646
	Additional Driving Travel Time (min)	N/A	-1.6min	-1.1min
Tirohanga Rd to Melling Station	Driving Distance (m)	900	792	961
	Additional Driving Travel Time (min)	N/A	-0.3min	+0.2min

3.1.1.3 Public Transport – Bus

The bus impacts of relocating Melling Station are summarised in below and in Table 3.

- Melling Railway station is currently serviced by a single peak only commuter bus route #145 – connecting Belmont to Melling Station and on to the Lower Hutt CBD (Queensgate).
- Survey data shows that approximately 11% of users accessing Melling Station travel by bus (and onto Wellington via train)
 - Both Melling Station Relocation options, combined with the proposed Melling Interchange, result in no discernable difference in travel time for this bus service.
- Improved access to the CBD:
 - The existing walking time from the Melling Station to Queensgate bus hub is approximately 14mins, this is expected to reduce to 11mins with Option 1 and halve to just 7 minutes with the direct connection of Option 2, refer Figure 8 below.
 - This improved CBD accessibility is expected to provide a minor increase to bus patronage, particularly for Option 2.
- Further potential to increase bus patronage (and rail) could be realised through additional services which could include; higher frequency loop services (similar to #145 or a separate station to CBD loop service) or adjustments to existing bus routes to include a stop near the proposed Margaret St Bridge.

¹⁷ Travel time savings were based on driving distance reductions, assuming a speed of 20km/h under both the existing and options.



Figure 8: Potential Bus and Train Connections (Source: RiverLink Newsletter 7, September 2017)

Table 3: Public Transport - Bus Impacts

Public Transport – Bus (11% of current train passengers catch a bus to Melling)		Do Nothing/ Retain Existing Station	OPTION 1: Minimal Relocation (relocated adjacent to Interchange)	OPTION 2: Relocate station approximately 500m south, opposite new Margaret St walking and cycling bridge
Station Services	Station Daily Services	1 service (approx. 10 buses per day, 40minute headway in peak periods)		
	Connections/Route	Belmont - Melling Station -Lower Hutt (Queensgate)		
	Bus Travel Time (min)	25min	+0min	+0min
Lower Hutt CBD Services	Walking Distance from station to CBD Bus Hub (m)	1100m	740m	570m
	Walking Time from station to CBD Bus Hub (min) ¹⁸	14min	9min (- 5 mins)	7min (- 7 mins)
	Bus hub services (Lower Hutt Queensgate A)	10	10	10
	Bus hub services (Lower Hutt Queensgate B)	8	8	8

3.1.1.4 Public Transport - Rail

The rail impacts of relocating Melling Station are summarised below and in Table 4.

- Existing:
 - Melling is the terminal station of the Melling commuter rail line. The Melling line carries approximately 425 passengers in the morning peak between 7 and 9 am¹⁹. The line does not operate on weekends or after 6pm on weekdays.
 - The Melling patronage profile is outlined in Figure 9 overleaf, and highlights that there is significant spare capacity in the morning peak hour and that the majority of the boardings occur at Melling and Petone stations.
 - Surveys have shown that the existing station car park is full by 8am (155 spaces), and the secondary car park (Skate Park – 45 spaces) and Pharazyn St are full by approximately 9 am on a typical weekday²⁰, refer Figure 10 below and Appendix B.
 - Surveys have also shown that passenger arrivals at Melling Station also reduce significantly from 8am onwards²¹, despite peak train services operating for a further hour, refer Figure 10 below and Appendix B, possibly reflecting the park and ride availability.

¹⁸ Travel time savings were based on a walking speed of 1.3m/s combined with changes in walking distance.

¹⁹ GWRC, Regional Rail Plan, 2013 – based on 2011 June survey data.

²⁰ Melling Railway Line Survey, Beca, 2010.

²¹ Melling Railway Line Survey, Beca, 2010.

- The parallel between park and ride capacity and the reduction in station arrivals could be explained to some extent by office hours in Wellington; however, significant opportunity exists to utilise the spare capacity on the Melling Line during the peak hour by increasing parking supply. Further, GWRC survey origin/destination survey data, refer Appendix C, shows that a number of residents of the Western Hills currently use the park and ride facilities at Petone, i.e. this could be evidence of capacity overflow effects.

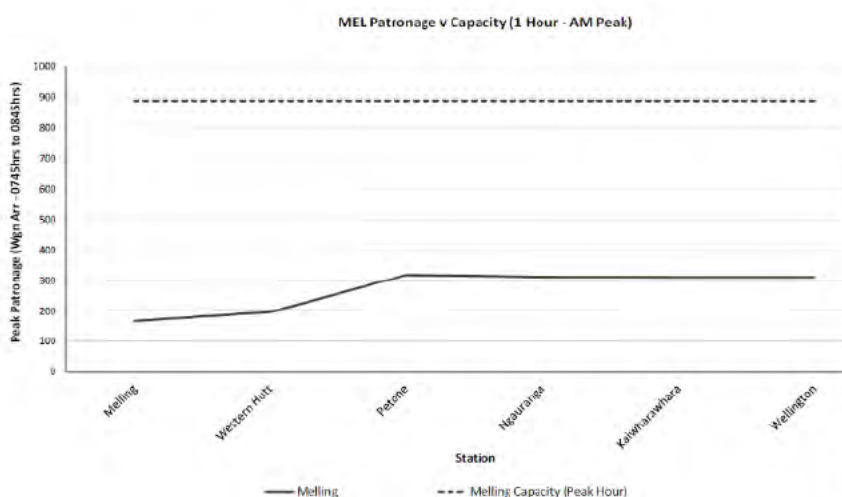


Figure 9: Melling Patronage Profile AM peak hour (Source: GWRC, Regional Rail Plan, 2013 (2011 WPTM))

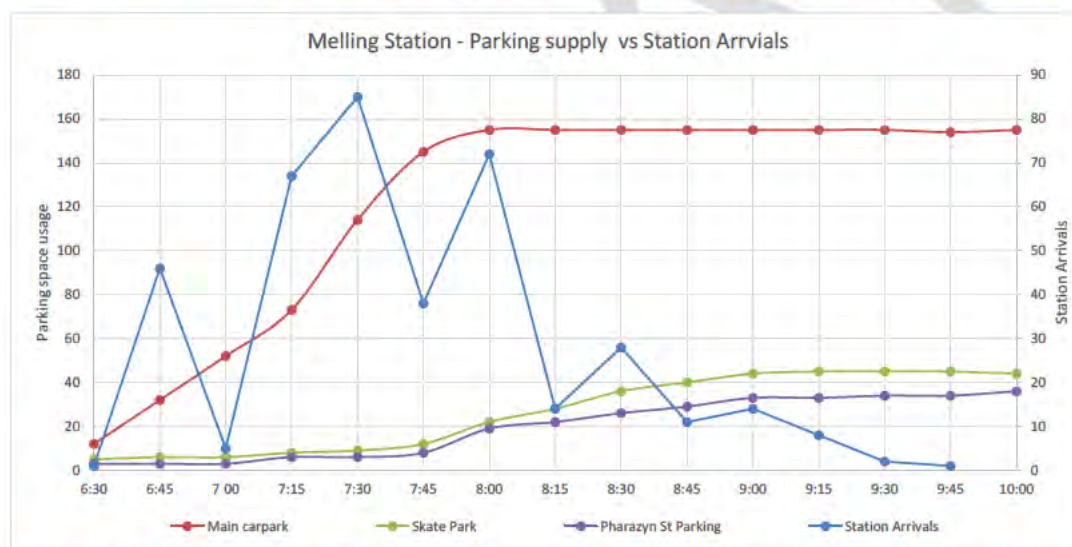


Figure 10: Parking Demand vs Station Arrivals (Source data: Melling Railway Line Survey, Beca, 2010)

Options

- Relocation of Melling Station further south, including the Margaret St Bridge but excluding any improvements in park and ride capacity or services, is expected to:
 - Option 1: Reduce patronage marginally due to increased walking distances impacting on the catchment area.
 - Option 2: Increase the employed population catchment by 15%, but due to overlap of this new area with Western Hutt, the net increase in patronage is expected to be low.
- Opportunities and potential mitigation:
 - 200 additional park and ride spaces, improved railway station amenities (e.g. weather protection) and improved multi-modal access and connectivity (as part of the Melling

Interchange and Making Places programme) is expected to offset any reduction in walking catchment for the options.

- Further, there is significant potential for an increase in patronage when factoring in The Promenade mixed-use developments, including medium density residential, and the impact of direct access to the Lower Hutt CBD. However, it is noted that as the developments will be staged over time, any resulting patronage increases will be gradual.
- The overall potential for patronage growth is however limited by services – Melling is currently a commuter line with limited evening services and no weekend services e.g. the last train departing Wellington on the Melling Line is at 6:07pm. Early consultation feedback indicates that there is some demand for such services and the lack of a later evening peak train impacts travel patterns and station/mode choice.

Table 4: Public Transport - Rail Impacts

Public Transport - Rail		Do Nothing/ Retain Existing Station	OPTION 1:	OPTION 2:
			Minimal Relocation (relocated adjacent to Interchange)	Relocate station approximately 500m south, opposite new Margaret St walking and cycling bridge
Melling Patronage and Capacity Station Services	AM Peak Melling Peak Hour Patronage (2011)	166 (745 – 845 am)		
	AM Peak Hour Capacity at Melling (Theoretical)	19%		
	AM Peak Melling Line Patronage (2011)	311 (745 – 845 am) 425 (7-9 am)		
	AM Peak Hour Capacity at Wgtn (Theoretical)	35%		
	Melling Combined Patronage (2014 Survey ²²)	775 – AM & PM Peak (89%) 98 – Off Peak (11%)		
	Average Weekly Patronage (2014 Survey)	4,400 (20 th /45 busiest in Wgtn)		
	Primary Service Type (Function)	Commuter Line with 5 peak hour services	Commuter, with opportunity for weekend services, promoting Hutt City as a 'Place'	
Western Hutt Patronage	Western Hutt Combined Patronage (2014 Survey)	315 – AM & PM Peak (85%) 54 – Off Peak (15%)		
	Western Hutt Average Weekly Patronage (2014 Survey)	1,800 (39 th /45 busiest in Wgtn)		
Access Trends	AM Peak Rail Patronage Impact	Current	Neutral to minor increase in patronage: Small reduction in walking population catchment will be offset by an increase in park and ride facilities	Minor increase in patronage: Increase in catchment area; however, due to overlap with Western Hutt, this is not considered significant. Improved Park and ride supply will increase patronage.
			Both options have significant potential for future patronage growth	

3.1.1.5 State Highway 2

- o The impact of either station relocation option on SH2 is expected to be minimal, with negligible trips expected to transfer to rail in the peak period based on a worst case scenario of a relocated Melling Station²³ (assuming no increase park and ride capacity or improved service frequency).

²² Tranz Metro Passenger Count Survey, Research New Zealand (for KiwiRail), 2014.

²³ Based on analysis supplied by NZTA (Tony Brennand), 2017.

3.2 Other Considerations

3.2.1 Western Hutt Station

- Concern has been raised that moving the Melling Station further south means that the distance between the Melling and Western Hutt Railway Stations is too close for the line to operate effectively. On this point:
 - Initial discussions with GWRC indicate that there is no operational requirement for the Western Hutt Station to close as a result of relocating Melling Station to the south, noting that:
 - Train operations will be marginally affected (but the line can continue to operate)
 - Travel time reliability on the line may deteriorate due to the proximity of the stations
 - The catchment area for the relocated station will overlap with that of the Western Hutt Station, refer Figure 7 above.
 - Further considerations include the number of businesses located near the station that would be directly impacted (in addition to the typical consideration of the people/catchment affected).

3.2.2 Land use and Development Potential

- At this early stage of investigation, there is currently no preferred Melling Interchange option. As a result, there is a large degree of uncertainty (or flexibility) when considering footprint and land use requirements (e.g. there is still the potential to relocate Pharazyn St to be on top of the stop bank).
 - However, a few overarching principles that may guide any such assessment in the next stage of investigation include:
 - Identify potential uses for the narrow strip of land which will be located between the on ramp and Pharazyn Street earthworks/retaining walls. Refer Figure 11 below. This land is currently earmarked for a future extension of the Melling Line; however other uses may also be able to fit (although the available land narrows further north).
 - Maximise the potential of the more desirable land in the immediate vicinity of the proposed Margaret St Bridge:
 - Option 2 is the optimum location for CBD access for a station platform due to CBD walking catchments; however, it is also likely to be preferred for businesses for the same reason (which may influence park and ride location).
 - From a land use perspective, Option 1 may therefore be preferred, as park and ride facilities could be shifted further north, closer to the interchange. The station itself would then be a short walk from the proposed Margaret St Bridge, through commercial/retail developments.
 - This competing demand and the opportunity cost of land in turn may result in significant potential for exploring Transit Oriented Development (TOD) opportunities to maximise use of available land.
 - For example, the railway station platform could be located opposite the Margaret St Bridge (i.e. Option 2), surrounded by commercial or mixed use land in the immediate vicinity, with the park and ride for the station located further to the north, on the narrower piece of land (similar to Option 1).
 - Alternatively, multi-storey development could be considered, with the station located on the ground floor and mixed commercial/residential use developments located above, surrounded by shared parking (both general and park and ride).



Figure 11: Indicative Melling Interchange Option 9 Schematic

3.2.3 Cost

- At this stage of investigation, in the absence of detailed designs, the baseline capital costs for the station and track works will be comparable irrespective of option location, with previous rough order cost estimates in the \$8-15M²⁴ range for a new station.
- However, there will be minor differences between the options relating to railway line extension/relocation and connecting infrastructure.

3.2.4 Project Timing

- Partners are still determining when different parts of Riverlink will progress. Railway station relocation scenario timing will be dependent on the exact form of the different River Link elements and funding commitments.
- For the purposes of this assessment, there is considered to be one main scenario with regards to project timing (which is not considered to differ by option) based on the following:
 - The Margaret St Bridge most likely cannot occur before the stop bank works due to the bridge abutments/changes in elevation and connecting infrastructure;
 - There is very little benefit in relocating the railway station prior to the Margaret St Bridge being in place; and
 - Relocation of the railway station has to occur before, or at the same time as, the Melling Interchange works due to footprint requirements.

²⁴ Raumati Station cost \$15M including pedestrian bridges and other ancillary works.

- ### 3.2.5 Resource Management Act Considerations

- Overall, from a Resource Management Act (RMA) perspective there is little to differentiate the two Melling Station relocation options.



3.2.6 Consultation

Key findings from the June 2017 RiverLink consultation on the potential Melling Station relocation is reproduced below:

Melling railway station

There may be an opportunity to move the railway station closer to the CBD and to build a pedestrian/cycle bridge linking the railway station to the CBD.

Of the 50 people who responded to the question about where the railway station should be located, 48% prefer that the Melling railway station be moved to the location opposite the CBD. See pie chart below for a breakdown of responses.

Melling railway station

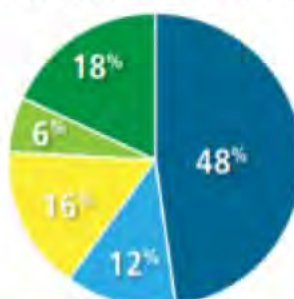
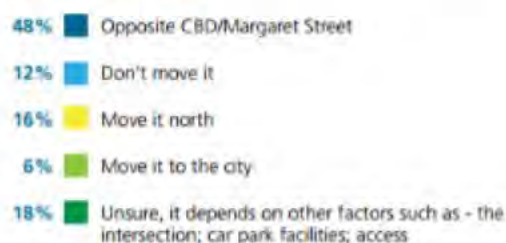


Figure 13: Melling Railway Station Relocation Survey (Source: RiverLink Newsletter 6, June 2017)

Key findings to date from the October on-going "Tell us what you would like at a new Melling railway station?" online survey include:

- **Top 5 preferred railway station amenities**, in order of importance (1 being most important):
 1. weather protection;
 2. pedestrian and cycling access to station;
 3. security cameras and lighting;
 4. monitors with real time schedules; and
 5. more parking spaces.
- **Top 5 preferred railway station small businesses**, in order of importance (1 being most important):
 1. mini mart;
 2. restaurants/take away;
 3. childcare;
 4. doctors; and
 5. key cutting/shoe repair.
- **Free text comment trends:**
 - pushing rail further to the north
 - pushing rail across the river to the CBD
 - disadvantaging residents of Western Hill suburbs & Boulcott
 - need for weekend/evening services
 - the need to consider public toilet facilities

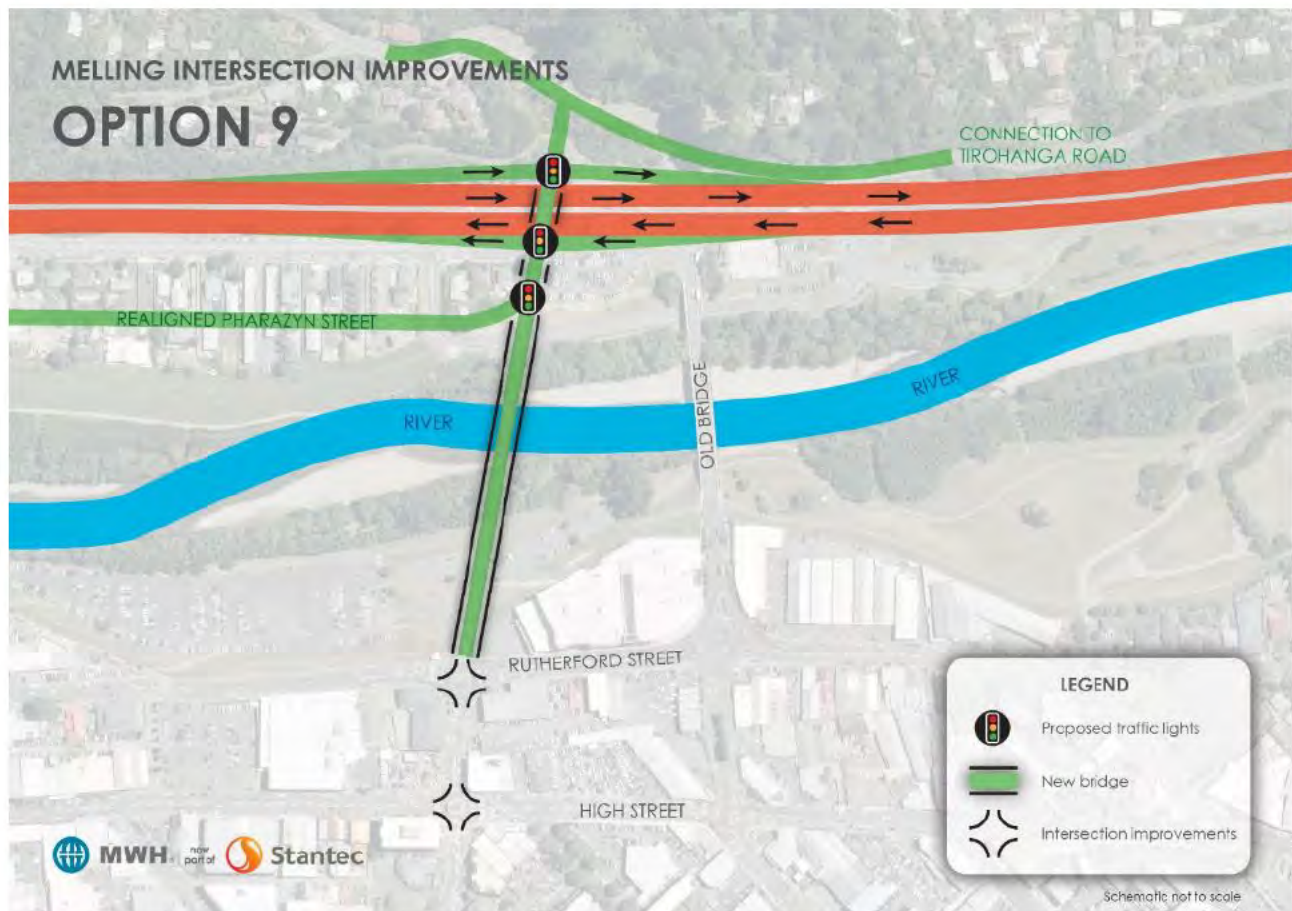
4 Summary

The RiverLink project is exploring the implications of moving the Melling Railway Station south of its current location to better connect with the Hutt CBD via a new pedestrian bridge at Margaret St. Shifting the railway station to the south was first signalled by the Hutt City Council in the 2009 Making Places Strategy.

As part of RiverLink, the NZ Transport Agency is investigating improvements to the Melling intersection. However, all short listed Melling interchange options would require the station to be moved to enable the interchange to operate safely and efficiently.

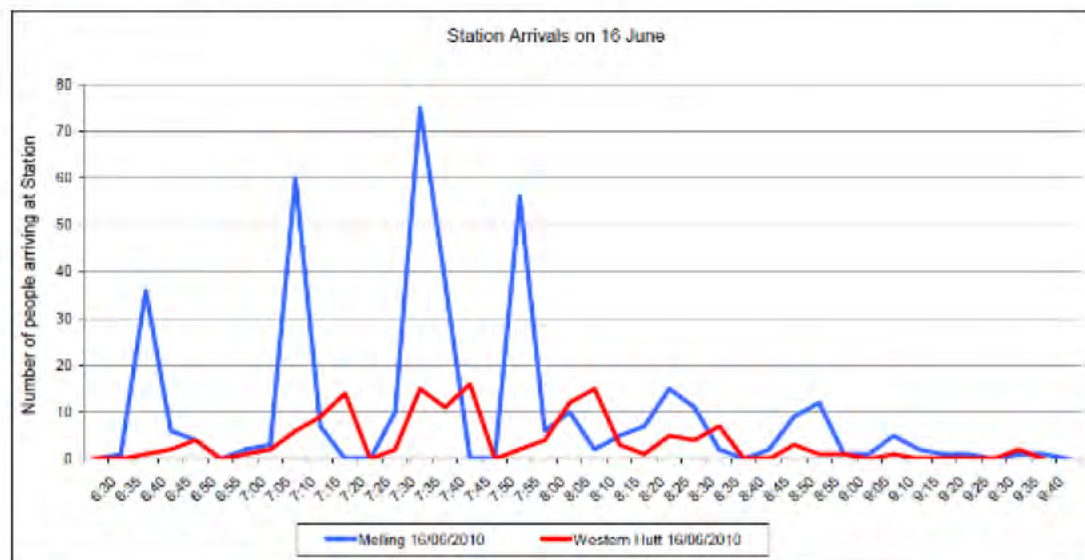
- Two locations were identified:
 - Option 1: The first location being considered for a new station is just 250 metres south of the current station, which is the minimum it could be moved to be away from any interchange footprint due a combination of potential constructability and attractiveness issues.
 - Option 2: The second location is approximately 500 metres south of the current station and directly opposite the proposed pedestrian bridge into the Lower Hutt CBD at Margaret Street.
- On balance, the differences between the two Melling Station relocation options are minimal, with both options having beneficial aspects.
 - Walking:
 - Both options increase the walking distance to travel from the Western Hills and Boulcott to the Station. However, particularly for Western Hills residents this additional distance is offset by reduced waiting times at the new Melling interchange. The maximum additional walking time (Option 2) is expected to be two minutes from the Western Hills and five minutes from Boulcott.
 - Moving the station, especially Option 2, brings a number of key destinations to around a 10 minute walk or less:
 - Queensgate
 - Lower Hutt Bus Hub (Queensgate)
 - Hutt City Council
 - Dowse Art Museum
 - High Street
 - Both options provide excellent connectivity to future mixed-use development signalled for the Hutt CBD, especially Option 2.
 - Park and Ride:
 - Both relocation options facilitate additional park and ride spaces and neither option significantly increases travel time by car.
 - Bus:
 - Both options show negligible difference for existing bus users accessing Melling station from Belmont (currently the only existing service).
 - The existing walking time from the Melling Station to Queensgate bus hub would be reduced from 14 minutes to nine minutes under Option 1 and just seven minutes with Option 2.
 - Rail:
 - Rail patronage changes are expected to be minimal; increased park and ride is expected to offset any reduction due to increased walking distances.
 - However, there is significant potential for increased patronage when either of the relocation options are combined with future development of the CBD and expansion of rail services (e.g. weekend and evenings)
- Although there are no significant differences in the impacts and benefits of the two options, the area in immediate vicinity of the western side of the Margaret St Bridge is expected to be highly desirable for a variety of land uses (e.g. parking, railway station, commercial development and recreational).
- Accordingly, it is recommended that further consideration of Transit Oriented Development (TOD) is undertaken in the next phase of investigation, with the aim of maximising use of the land area in order to unlock the full potential of the site and complement the existing Making Places and RiverLink Strategy.

Appendix A: Melling Interchange Option Schematic

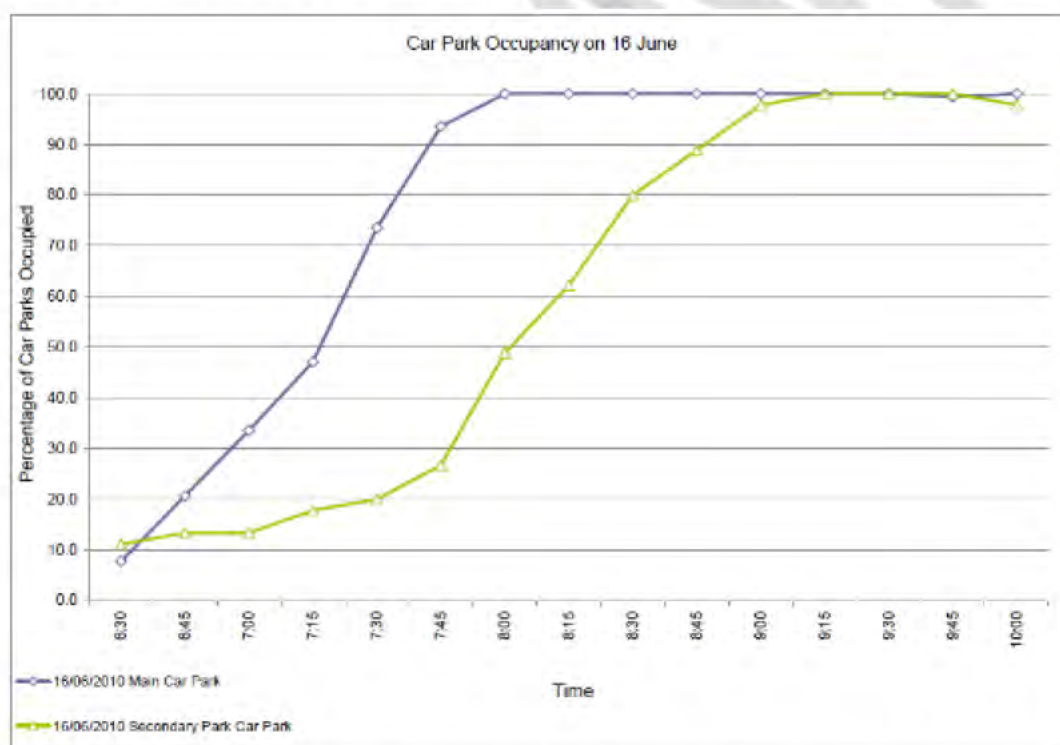


Appendix B: Railway Survey Data (2010)

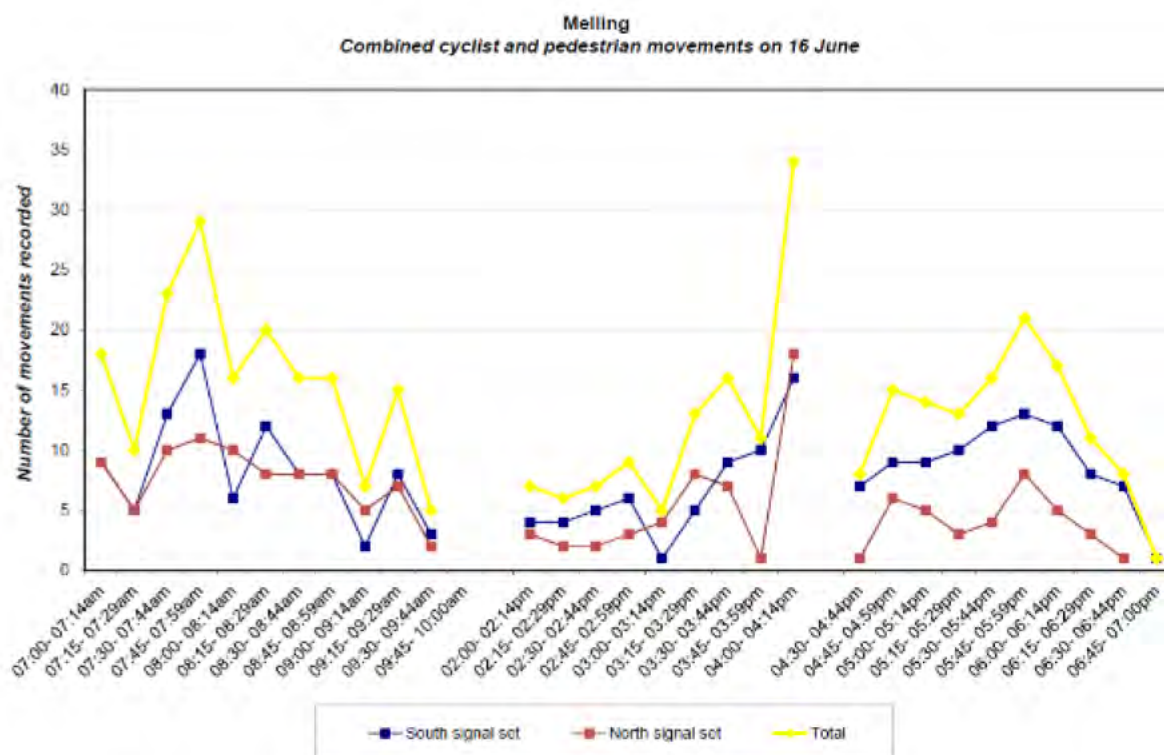
Source: Melling Railway Line Survey, Beca, 2010



ARRIVALS TO MELLING STATION 16 JUNE 2010



CAR PARK OCCUPANCY 16 JUNE 2010 (MELLING RAILWAY LINE SURVEY, NZTA)

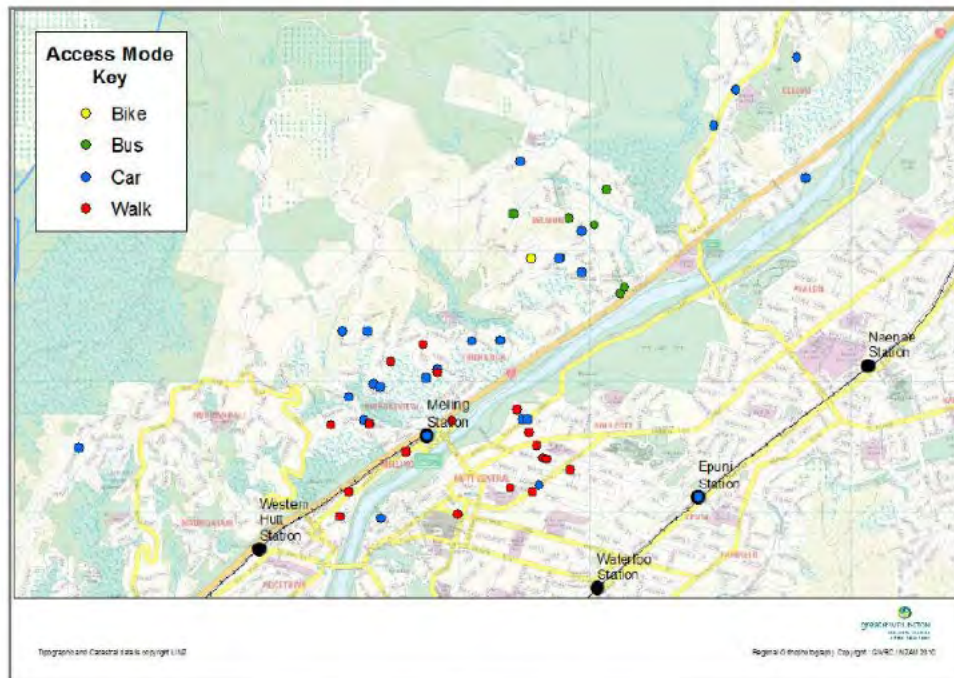


Source: Cyclist and Pedestrian Survey- Melling and Kennedy Good, Beca, 2010

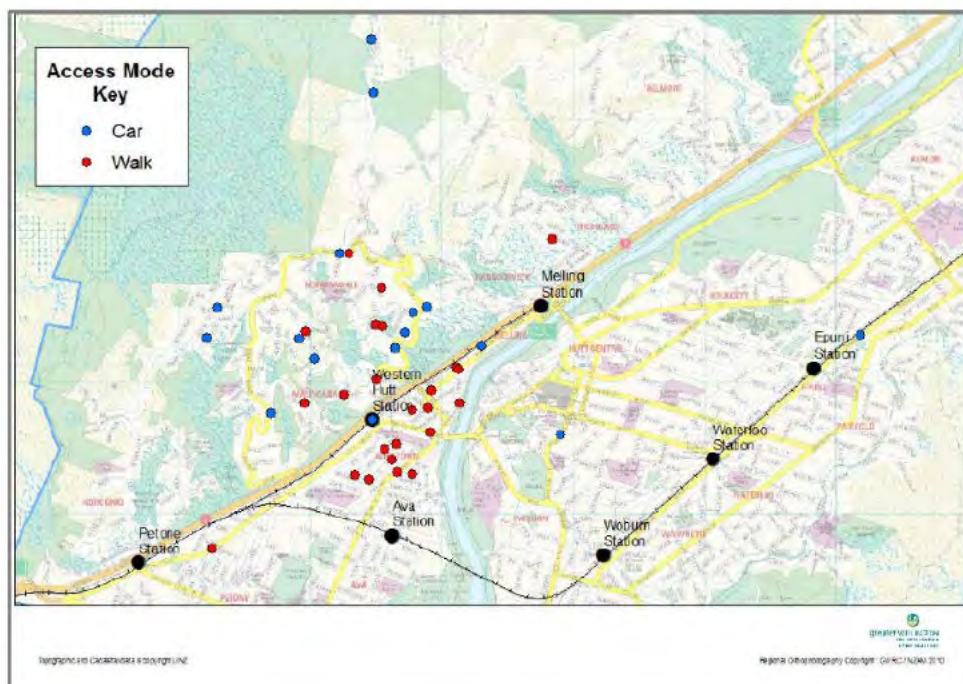
Appendix C: Railway Station Access Mode by Origin, Melling Line

Source: GWRC, Analysis of Rail Survey Data 2011/12, Appendix D: Station Access Mode by Origin, Melling Line

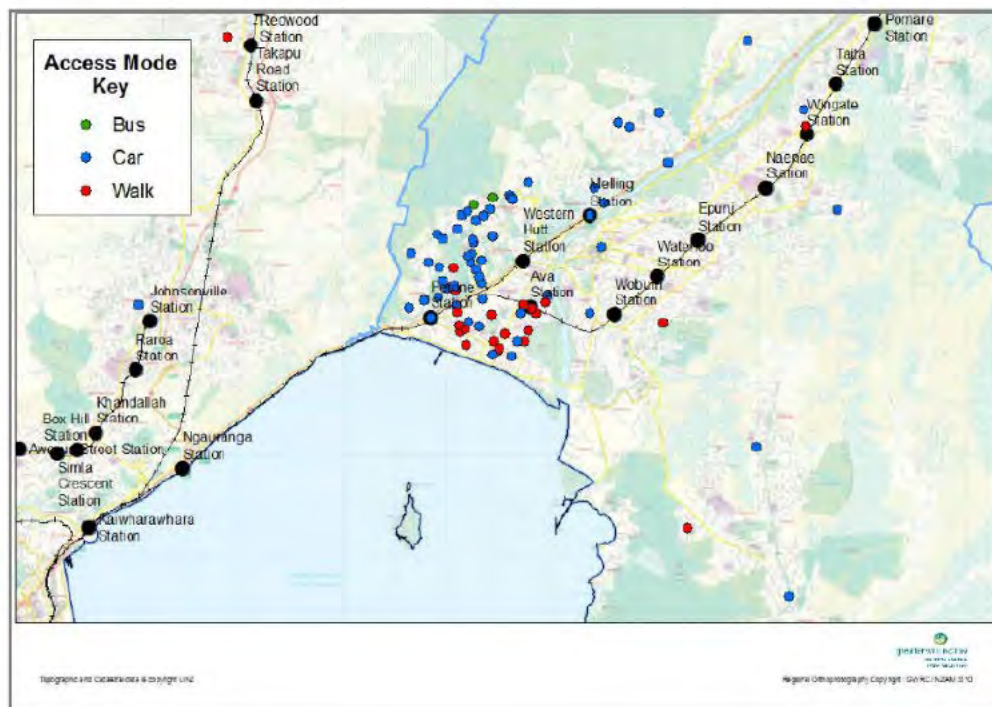
Melling Station



Western Hutt Station



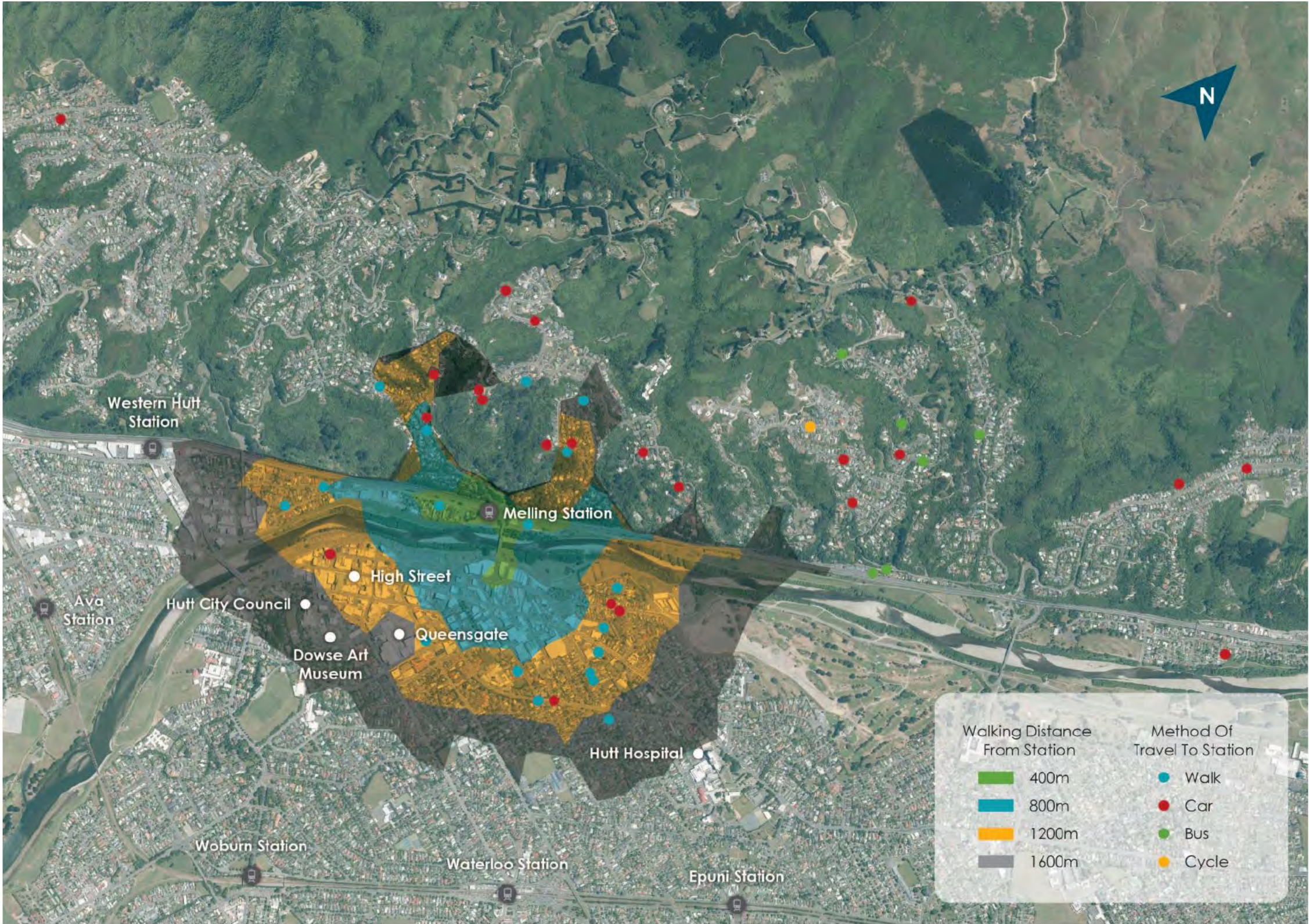
Petone Station



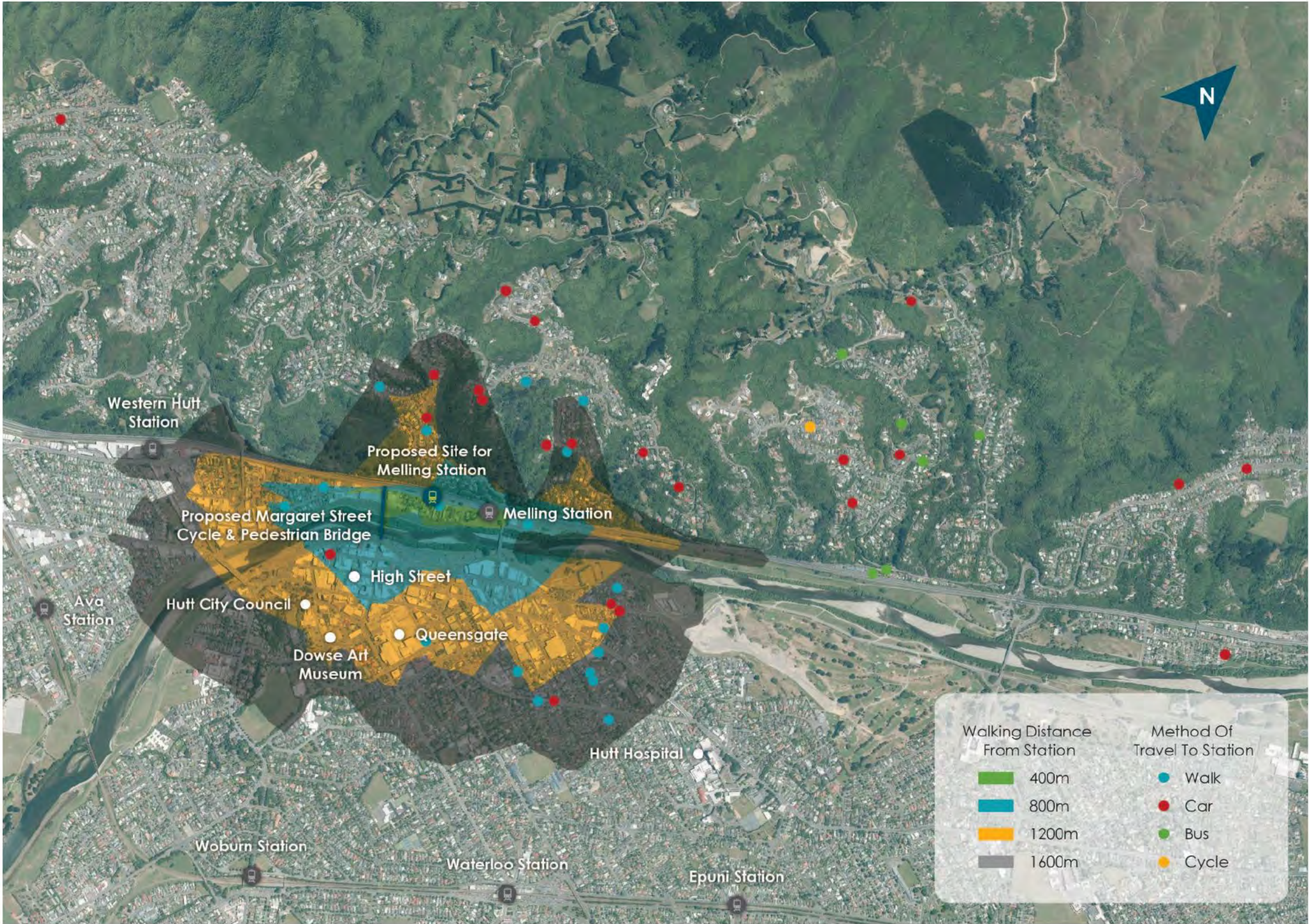
Appendix D: Walking Catchment Maps

DRAFT

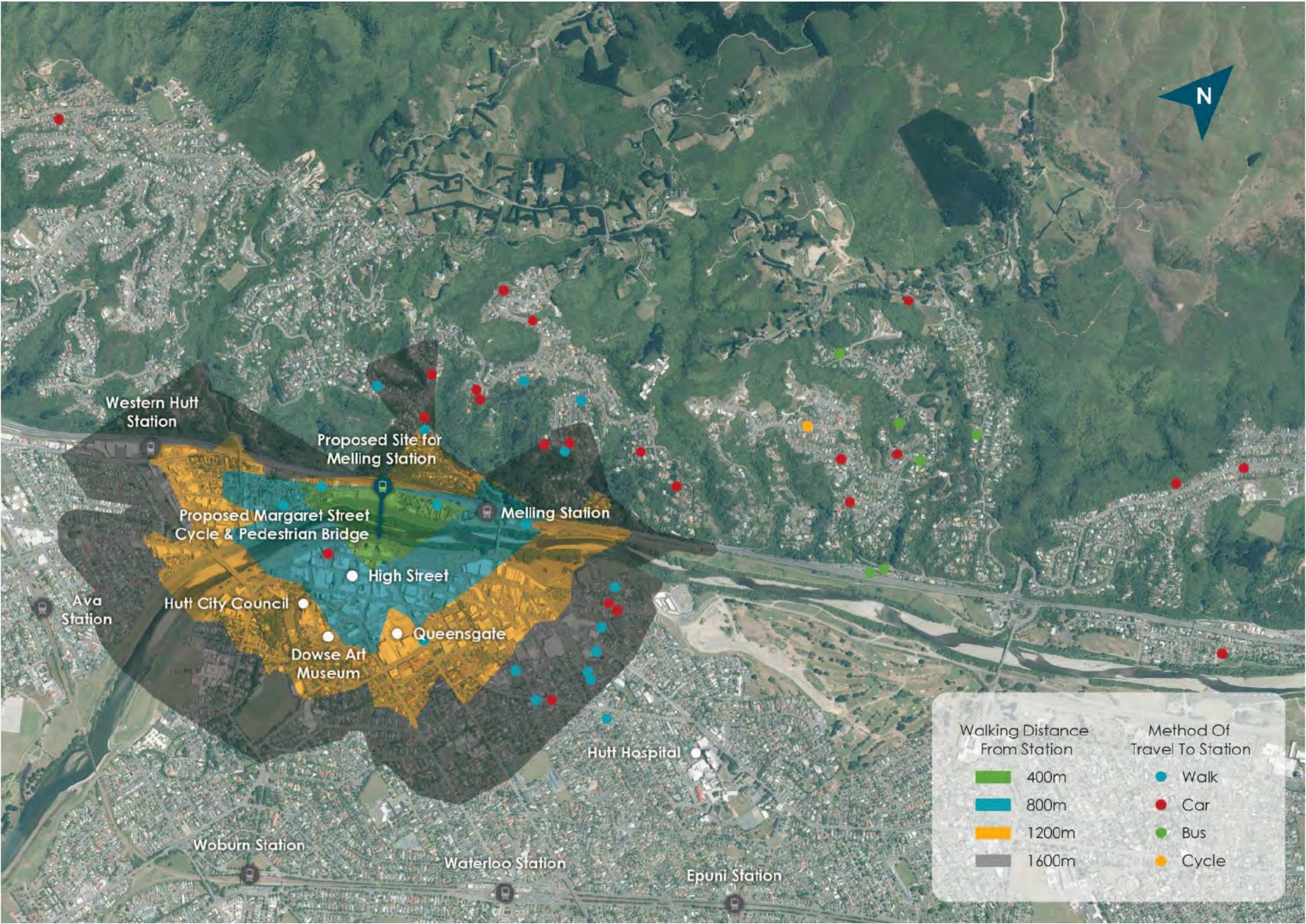
Melling Station – Existing



Melling Station – Option 1: Adjacent to Interchange



Melling Station – Option 2: Opposite Margaret Bridge



Melling Station – Existing vs Option 2: Change in catchment

