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Christchurch Central City Transport Concept

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Abstract

In 2001, Christchurch City Council (the Council) developed and adopted the first stage of a central city Revitalisation Strategy to counter threats, both real and perceived, to the longer-term vitality of the central city.

The transport element of this strategy included several projects, but upon developing these it was realised that specific transport related projects needed to be part of a larger integrated picture. In the last three years, the Council has developed this larger picture, which is known as the Christchurch Central City Transport Concept (the concept).

Although in its early days, the concept will be a blueprint for transportation planning and is also likely to influence land use. It is also intended to assist with the Council's overall plans to revitalise the central city. The concept aims to reclaim the streets for all users who walk, cycle or catch a bus, whilst maintaining good access for car users. The concept takes a holistic view of transport planning throughout the central city, is consistent with the aims of the Revitalisation Strategy, and is sufficiently robust yet flexible to deal with external influences in the future.

The concept was driven by a diverse working party made up of politicians, business leaders and transport user groups. Bringing these diverse groups together during the process to a consensus was a difficult, but successful challenge.

This paper outlines the process used to develop the concept, and describes the challenges that were encountered. It describes the concept that was adopted by the Council, and explores the compromises that were needed to reach consensus, whilst minimising the impacts on integrity of the concept principles.

Finally, this paper explores the challenges ahead to translate the concept into projects, and briefly describes the work currently underway. This paper has relevance for central city areas throughout New Zealand, through enabling comparison with concepts developed elsewhere or through providing a potential framework for developing a concept.

1 Why was a concept needed?

1.1 Christchurch Central City Revitalisation Strategy

In 2001, Christchurch City Council (the Council) adopted a central city¹ Revitalisation Strategy to counter threats, both real and perceived, to the longer-term vitality of the central city due to issues such as changing employment patterns and major investment in suburban retail and other development.

The Revitalisation Strategy development included a public consultation process, which elicited over 900 responses, and proposed a vision, objectives and priorities for action. Feedback from consultation showed that important issues included transport and parking, and repeatedly included requests for more/better/free parking, improved pedestrian facilities including crossings and wider footpaths, and improved public transport.

The Revitalisation Strategy set out a vision and general objective, and outlined some short, medium and long-term projects. The vision is *'a vibrant, exciting, safe and sustainable Central City heart; a heart with a strong and healthy economy, environment, culture and society'*. The general objective is *'to enhance and promote the Central City (the area within the four avenues) as a centre of community, culture, commerce, education, celebration and environmental excellence and sustainability for the existing and future citizens of Christchurch. To make the Central City a great place to live, work, play, shop, socialise, invest, visit and learn'*.

It established core principles for projects and identified short and medium-term priorities to assist revitalisation. Specific transport projects in line with suggestions from the consultation process included:

- A slow movement core to provide greater priority for slow modes;
- Free short-term off-street parking;
- Increasing use of the four avenues² through signal priority and street median closures; and
- Investigating a proposal to 'swap' Lichfield and Tuam Streets to extend the central city core.

1.2 The catalyst and framework for developing the concept

In 2002, Council investigated changing Tuam Street from a two-way street to one-way eastbound and Lichfield Street from one-way eastbound to two-way. However, public consultation resulted in almost all submissions against all or parts of the proposal. As a consequence of this strong opposition, the proposal was put on hold and the Council decided to engage in a wider central city transport review under the guidance of a Central City Transport Working Party (the Working Party).

1.2.1 Working Party set up

The Working Party was established in 2003 and comprised five councillors, the Chairman of the Mayoral Forum, three representatives of central city businesses, an Environment Canterbury councillor, the NZ Automobile

¹ For readers unfamiliar with Christchurch refer to Appendix A for a street map of the central city

² Bealey Avenue, Fitzgerald Avenue, Moorhouse Avenue, Deans/Harper Avenue

Association, the Road Transport Association, SPOKES³, a bus company representative, and the chair of the local Community Board.

1.2.2 Working Party objectives

The Working Party initially developed its views on an ideal transport system in the central city over three meetings. The Working Party considered that the vision for the central city needed to:

- Provide a clear long term strategic focus that enables decisions to be based on the achievement of set objectives; and
- Be future proof and adaptable to be amended as and when demographics and physiographics change.

The Vision statements derived from this work were:

- A central city where people want to come to shop, be entertained, visit, work and live;
- Attractive streets which are very pedestrian friendly and which operate as places of social and economic exchange;
- A balance of hard and soft landscapes; and
- Environmentally sensitive and sustainable.

1.2.3 Assessment criteria

The Working Party developed the following criteria to assess alternative options:

- Stakeholder views - acceptance and understanding of key stakeholders.
- Transport analysis – travel time, travel safety and travel reliability.
- Economic assessment.
- Quality of service – accessibility, legibility and quality.
- Environmental quality – amenity, urban form, personal security, noise and air quality.

2 Towards developing a draft concept

Identifying and developing options, and selecting a preferred option was based on the following process:

- Step 1 identified and short-listed one-dimensional options, starting with nine public transport options, eight general traffic options and four cycling options, and moved through various selection process to arrive at three short-listed options known as the Slow Movement Core, Pedestrian Heart and Status Quo.
- Step 2 developed details for the three short-listed options and assessed them against the criteria agreed by the Working Party.
- Step 3 involved further analysis on some additional issues, primarily parking, that resulted from the outcomes of the Stage 2 assessment and feedback from the Working Party.
- Step 4 was for the Working Party to develop and agree on a draft concept. The draft concept that was chosen is a combination of the Slow Movement Core and Pedestrian Heart. Because of the complexity of

³ A cycling organisation

the options, they were broken into components and agreement was sought on each component, with the recommended option being the sum of the agreed components.

2.1 Step 1 – Identify and short-list options

2.1.1 Individual options

Characteristics of the individual options that were identified are as follows:

- The public transport options included variations to bus routes to and from the existing Bus Exchange⁴, eliminating or reducing buses passing through a central core⁵, constructing additional bus interchanges, replacing the Bus Exchange with a bus station⁶, and introducing light rail.
- The traffic options included removing the one-way system⁷ and road hierarchy, introducing a central core with a reduced speed limit with varying degrees of restrictions to traffic, and dividing the central city into quadrants to prevent all through-traffic.
- The cycling options included introducing cycle facilities on arterial routes, providing direct routes based on desire lines, and separating cyclists from large traffic volumes by providing 'green corridors'.

These options were presented to the Working Party, who provided extensive comments on the advantages and disadvantages of each. Using these comments together with a technical assessment, an initial short-listing process reduced these to four public transport options, six traffic options, and one combined cycling option. Light rail was considered to be an unlikely option within the 20-year time horizon of the Working Party, but was identified for separate investigation outside this project.

2.1.2 Integrating and short-listing integrated options

The selected public transport and traffic options were combined to produce 24 integrated options, which all inherently incorporated the combined cycling option. These integrated options were short-listed to three options through the following three sieving processes:

- A logical compatibility assessment reduced the options to 13. For example, removing buses from a central core whilst maintaining full car movements is almost certainly illogical hence was rejected.
- A strategic consistency assessment, which scored options against the Revitalisation Strategy vision and the Working Party's objectives, reduced the options to six.
- A preliminary multi-criteria assessment, which scored options against the criteria confirmed by the Working Party, reduced the options to three.

The results were presented to the Working Party, who endorsed the selection outcomes and decided that the three short-listed options should be described in detail and analysed using the assessment criteria. The favoured options were centred on introducing either a 'slow movement core' or a 'pedestrian heart'. Although the status quo failed this analysis, it was retained as a base against which to compare the other options.

⁴ On the north side of Lichfield Street between Colombo Street and Manchester Street. The Bus Exchange is the central city public transport interchange for passengers

⁵ In Stage 1 the core size and boundaries had not been defined

⁶ Would allow buses to layover between services

⁷ Montreal/Durham/Madras/Barbadoes Streets (north-south) and Salisbury/Kilmore/Lichfield/St Asaph Streets (east-west)

2.2 Step 2 – Develop the options and assess in detail

2.2.1 The options

Identifying a specific central core size was difficult, but based on general urban form principles, the core considered for analysis was bounded by the inner anticlockwise one-way system⁸ (approximately an area of 1000 by 750 square metres). It was accepted that other areas outside the core could also warrant similar treatments as the core. These included the area around the Arts Centre⁹, Victoria Street and High Street.

The Slow Movement Core aimed to reduce congestion and conflict between modes, without restricting access. Streets within the core would have a 30 km/h speed limit, to encourage traffic to use the one-way system or four avenues. Traffic management measures would be needed to actively reduce speeds and discourage longer distance trips. Refer to Appendix B for a possible illustration.

The Pedestrian Heart aimed to reduce congestion and conflict between modes, through providing a greater balance between modes. In particular, there was a greater promotion of pedestrian activity and amenity within the heart. It is important to emphasise that few, if any, streets would be fully pedestrianised. Instead pedestrian activity and amenity would be improved by reducing general traffic flows and speeds in the core, improving crossability of streets and widening footpaths.

In the Pedestrian Heart, approximately half the streets within the core would be similar to those in the Slow Movement Core. Remaining streets would have operating speeds below 30 km/h and other traffic management measures to discourage non-essential traffic. Refer to Appendix B for a possible illustration. It was also proposed that part of Colombo Street¹⁰ allow unrestricted access to buses, cyclists, pedestrians, and possibly taxis. Other vehicles would be restricted, although service vehicle access would be required at certain times.

2.2.2 Stakeholder views

To gauge stakeholder understanding and acceptance of the options, nine focus groups held with central city users and interest groups identified the following:

- There was high enthusiasm for the wider Revitalisation Strategy vision with a need for it to be supported by an effective transportation system.
- The transport system should be determined by a central city 'product', with many participants struggling to understand what the product was. This made it more difficult for them to judge the options.
- There was overall high support for the one-way system to provide accessibility to the central city, whilst some negative aspects of amenity and high speeds were noted.
- Parking was seen as the single largest issue in the central city. It was considered to be fragmented with insufficient on-street parks, insufficient spaces in some buildings, and high parking costs.
- The Status Quo was not viewed as a realistic option due to issues with parking, accessibility, congestion and conflict between modes.
- The Pedestrian Heart was seen as the most acceptable option because it helps to create a more desirable central city product and reduces conflict between modes. The Slow Movement Core was positioned between the Status Quo and Pedestrian Heart in terms of support.

⁸ Kilmore Street, Madras Street, Lichfield Street, Cambridge Terrace and Durham Street

⁹ Worcester Street and surrounding streets between Rolleston Avenue and Cambridge Terrace

¹⁰ Possibly between Hereford Street and Lichfield Street

- Central city users as a whole favoured the Slow Movement Core and Pedestrian Heart more than some interest group participants, although other interest group participants were strongly in favour of the Pedestrian Heart.
- The Slow Movement Core and Pedestrian Heart as presented were seen as incomplete for resolving issues with parking, accessibility, congestion, and public transport. For public transport, some thought that light rail should be included. Many did not understand that the public transport issues as presented did address many of the issues being raised. However, they were not covered in sufficient depth due to the constraints of the focus group framework for this study.

2.2.3 Traffic modelling and transport analysis

The options were tested using a micro-simulation transportation model developed for the central city. Key findings were:

- The Slow Movement Core and Pedestrian Heart would reduce traffic volumes in the core by approximately 15%, compared to the Status Quo, with displaced vehicles generally moving to the one-way system. These estimates were considered conservative, because the model did not allow for behavioural changes, such as changing the time of trip or travel mode.
- There would be a 15 second increase on an average vehicle journey time of 4.5 minutes in the Pedestrian Heart. This would be offset by savings experienced by pedestrians who would have greater priority in the core area.
- There was negligible change on travel distance, despite the traffic restrictions such as those proposed for Colombo Street in the Pedestrian Heart.
- In terms of travel reliability, which can be considered as variability in travel times, the Pedestrian Heart had an average 3% increase in unreliability for all central city trips, although within the core area reliability improves. This shows that whilst trips within the core were slower, they were also more reliable.

Both the Slow Movement Core and Pedestrian Heart had only minor overall effects in terms of travel times and associated measures. However, there were local effects that would need further investigation beyond this study.

In contrast to travel times, the Slow Movement Core and Pedestrian Heart were expected to have very positive effects on road safety for vehicles, cyclists and pedestrians. For vehicles, anticipated crash cost savings were in the order of 45% and 60% for the Slow Movement Core and Pedestrian Heart respectively, reflecting reduced conflict and speed reductions. For pedestrians and cyclists, injury savings were in the order of 30% and 50% within the core.

2.2.4 Economic assessment

To gauge economic impacts, a qualitative assessment was undertaken. A quantitative assessment was not carried out on professional advice, primarily due to a lack of data. Interviews were held with sample businesses representing the retail, entertainment, accommodation, commercial and educational sectors. These businesses thought that both the Slow Movement Core and Pedestrian Heart would increase the time that people spent in the central city, but retailers in particular thought that introducing access restrictions to private vehicles in the Pedestrian Heart may deter local people from visiting. Tourism spend should increase for both the Slow Movement Core and Pedestrian Heart because they generally are not dependent on the private vehicle, and the amenity will make the central city a more attractive place to spend time.

A literature review found that many large-scale conversions of city streets to pedestrian malls in the United States had not been very successful, with conversions back to allowing vehicle access. However, it was important to understand this context before comparing with Christchurch. Both the Slow Movement Core and Pedestrian Heart were regarded much smaller scale measures compared to the United States examples, and in this context they were closer to many, more successful, examples in Europe.

In summary, caution was expressed with the Pedestrian Heart because of the current reliance on the private vehicle in coming to the central city. However, it considered that perceived impacts on accessibility and congestion can be mitigated by phased implementation coupled with good publicity.

2.2.5 Quality of service

The journey quality of service relates to the ability of getting to a destination (accessibility), the ease of getting there (legibility and mobility) and the enjoyment of getting there (quality). Both the Slow Movement Core and Pedestrian Heart would have very positive impacts on quality of service for pedestrians and cyclists, and very minor negative overall effects for motor vehicles. However, there were local effects identified that would need further investigation beyond this study.

Both the Slow Movement Core and Pedestrian Heart were expected to slightly decrease legibility for vehicles, reflecting small changes in travel distance. The Pedestrian Heart would have a small overall decrease in accessibility for vehicles, due to access restrictions on Colombo Street and the possibility of another pedestrian precinct. This would be offset by increased accessibility for pedestrians, as mid-block crossings will reduce trip suppression for groups such as the elderly or disabled.

The Slow Movement Core and Pedestrian Heart options would also have small decreases in quality for vehicles due to small increases in travel times and congestion. However, pedestrians and cyclists will have very large increases in quality, which is due to fewer vehicles and lower speeds in areas with high numbers of pedestrians and cyclists.

2.2.6 Environmental quality

Environmental quality issues relate to amenity, the urban form, personal security, noise and air pollution. Both the Slow Movement Core and Pedestrian Heart would significantly improve amenity, although the Pedestrian Heart would achieve higher gains due to the greater degree of treatment.

Urban form was much more difficult to evaluate because change occurs much more slowly and because there is a strong coupling between land use and the transport system. That is, changes to the transport system could lead to subsequent effects on land use that may not be envisaged now. The Slow Movement Core and Pedestrian Heart were rated similar in terms of effects on work, live, play and shop land uses.

Traffic modelling showed that both the Slow Movement Core and Pedestrian Heart would have negligible average change on noise and air pollution, but there may be local areas of higher or lower levels compared to the Status Quo. The focus groups stakeholders considered both the Slow Movement Core and Pedestrian Heart would improve feelings of personal security.

2.3 Step 3 – Further analysis on key issues

2.3.1 Parking

The accessibility issue raised by the focus groups was linked to being able to access parking. To address this, a parking plan was developed to manage parking, which would be suitable for integration with either the Slow Movement Core or Pedestrian Heart.

As background, there are approximately 38,000 spaces within the four avenues, comprising 9500 on-street spaces, 12000 'public' off-street spaces and the balance being private off-street spaces. The Council 'controls' approximately one-third of this total. In Council parking buildings, approximately 1000 spaces are long-term parking. The average daily occupancy is approximately 50%, and average peak occupancy between 10:30am and 2:30pm is approximately 85% or practically full.

2.3.2 Parking objectives

To support the options, parking objectives were developed and supported by the Working Party. These objectives are to:

- Provide easy access to and user-friendly parking;
- Provide easy to find parks, thus minimising circulating traffic and congestion;
- Provide easy to service parking costs, such as parking charges that use 'round' figures for rates;
- Match parking type supply with parking type demand;
- Plan for growth; and
- Manage expectations and provide certainty.

The Working Party considered on balance that maintaining the existing total parking supply was as a fundamental issue to seek to achieve. There was diversity of views ranging from increasing supply to decreasing supply and this was agreed to be a mutually acceptable outcome.

2.3.3 Managing growth

The parking plan aimed to manage growth in parking demand as follows:

- **Commuter Parking.** Via other modes, park'n'ride, new developments providing their own supply, and private sector investment opportunity. This is in line with the RLTS¹¹ objective of managing commuter growth via other modes.
- **Visitor Parking.** Ability to convert 1000 spaces in parking buildings (40% growth possible). If a new facility is justified then it must be in right place.

2.3.4 Parking zones

The proposed parking plan was based on the following three zones, with a specific focus for each:

- **Core.** Focus on mainly short-term and ancillary parking. Shift emphasis to shorter-term spaces. Provide medium-term spaces in either on-street clusters or in nearby off-street facilities within the ring. Charge on-street spaces in accordance with the scarce resource concept.

¹¹ Canterbury Regional Land Transport Strategy

- **Ring** (immediately surrounding the core). Focus on medium-term visitor parking. Base on a search pattern around facilities. Accept displaced core meter parking by removing long-term parking from Council off-street facilities. Review options for additional off-street facilities on the ring to cater for demand foci.
- **Peripheral** (between the ring and four avenues). Provide for local residents, residential visitors and long term commuter parking, largely as now. Treat special precinct areas on case-by-case basis.

2.4 Step 4 – Develop and agree a draft concept

2.4.1 Decision making framework

The complexity of options and the perceived similarity of the Slow Movement Core and Pedestrian Heart made it difficult for the Working Party to make a decision. To mitigate this, the options were broken into components, and each component was assigned to them as appropriate. The following table lists the components in each option:

Component	Description	SQ	SMC	PH
Core	The area where through-traffic would be discouraged and general amenity would be significantly improved. It will be bounded by the anticlockwise one-way system, which is defined as the 'ring'.		✓	✓
Precincts outside core	The principles and treatments within the core are needed for other smaller areas with recognised amenity within the four avenues.	✓	✓	✓
One-way system	Would be maintained to provide good motor vehicle access to, from and around the core, and to define the core ring. Implementation of mitigation measures to upgrade amenity, improve crossing points for pedestrians and cyclists, and to manage speeds would need to be considered.	✓	✓	✓
Streetscaping	An overall design concept was needed to provide an overall central city theme or 'brand', but also be flexible to allow the individuality of different precincts to be reflected.		✓	✓
Bus Exchange	The current Bus Exchange would be maintained, but would be needed to improve public transport efficiency and effectiveness.		✓	✓
Parking	The parking plan as outlined previously.		✓	✓
Restricted speed environment treatments	A 30 km/h speed limit would be implemented in the core and special precincts, to reduce speeds and discourage through-traffic.		✓	✓
Slow street environment treatments	Needed on the additional streets for the Pedestrian Heart, to provide high pedestrian amenity by discouraging non-essential traffic. The working party was comfortable with adopting this treatment on some streets, but wanted to see an illustrative example of a possible street layout before giving agreement.			✓
Pedestrian precincts	Pedestrianised streets would not be an essential element of the concept, although there remains the provision to implement them if warranted by future land use changes.			✓
Bus street on Colombo Street	The bus-only street on Colombo, at least between Hereford and Lichfield Streets, was proposed to provide reliable access to and from the Bus Exchange for the north-south routes.			✓

SQ = Status Quo, SMC = Slow Movement Core, PH = Pedestrian Heart

2.4.2 Initial agreement on a draft Concept

Agreement was sought from the Working Party on each component after discussion to enable the support for an option to be built up on a rational and manageable basis. During the discussion, the Working Party agreed to the entire Slow Movement Core and all components of the Pedestrian Heart except the pedestrian precincts. This resulted in a 'first draft' concept, but there was concern with the bus street on Colombo Street, uncertainty about components associated with the Bus Exchange, and the desire to see an illustrative example of a street

treatment layout. This required further analysis to provide the Working Party more confidence in the robustness of the concept.

2.4.3 Street treatment types

The core must have a sense of 'entry' and reinforce the nature of the area throughout, because people entering by any mode need to realise that they have entered and are in a special area. Three street treatment types were proposed for the core and special precincts, with increasing degrees of physical measures to discourage private motor vehicles.

There would be variety within each street type. Two streets may be designated with the same treatment, but the actual design for each will need to be tailored to suit their different contexts. This proposal was agreed by the Working Party on the basis that individual street treatments would be identified beyond this process.

2.4.4 Bus-only street on Colombo Street and the Lichfield-Tuam Corridor

The Pedestrian Heart maintained on-street Bus Exchange platforms on Colombo Street, which was considered unacceptable by the Working Party. To locate all bus platforms off-street in an expanded facility, alternative sub-options were considered. All were compatible with the proposed concept, but each had benefits and difficulties in different aspects. Because of the complexity involved, it was felt that striving for resolution at a conceptual level would result in significant delay in confirming a concept. Hence, it was concluded that the concept could work with varying sub-options for the Lichfield-Tuam Corridor.

2.4.5 Adoption of a draft Concept

The Working Party unanimously endorsed the draft concept in September 2004, based on the premise that it was sufficiently robust to adapt to variations of possible street treatments details and more importantly, to cater for different sub-options for the Lichfield-Tuam Corridor. Councillors subsequently adopted the endorsed draft concept for the purposes of undertaking an 'inform-consultation' process. This concept is a hybrid of the original Slow Movement Core and Pedestrian Heart options.

3 Towards developing a final concept

3.1 Consultation

An inform-consultation process was undertaken, because the Working Party work and focus group research undertaken during development of the draft concept was considered sufficient to provide a balanced picture of community views as well as the concept being consistent with the Revitalisation Strategy.

For subsequent projects including the Lichfield-Tuam Corridor, an 'ask' process was recommended. This would need to include in-depth dialogue with potentially impacted groups to obtain feedback on a range of issues and options, and be in line with the Local Government Act requirements.

Only 24 submissions were received during the consultation period, which was very low in the context of 700 submissions received two years prior on the Lichfield-Tuam Swap Project. Of note was the absence of submissions from many stakeholder organisations and other known individuals. Much of this can be attributed to either having these organisations or individuals as members of the Working Party, or them being in close contact with members of the Working Party.

There was very positive support for the overall concept, with most concerns being about detailed or specific issues. Likewise there was general support for the core, special precincts and enhanced pedestrian and cyclist facilities, with concerns relating to vehicle access rather than reduced speeds. Some favoured more precincts and/or pedestrian precincts. There were no strong themes on parking, or public transport, and little if mixed comment was expressed on the one-way system.

Strong views were expressed for linking the draft concept to land-use strategies. The draft concept was developed with the best information to hand, and was designed to be flexible to respond to land-use changes that may result from these strategies. To ensure ongoing consistency with and integration between transportation and land-use objectives, reviews of the concept every three to five years were recommended.

3.2 Final steps

The consultation results were presented to Council in June 2005. Due to concurrent developments, some councillors wanted some clear and rapid decision making on the Lichfield-Tuam Street Corridor and the long-term future of the Bus Exchange. In particular, there was strong desire by some to convert Lichfield Street to a two-way street to assist with central city revitalisation, without converting Tuam Street to a one-way street.

Preliminary traffic modelling indicated that conversion was possible, but there were major issues including congestion at intersections, safety issues at two-way intersections, providing access to and from the Bus Exchange, access to parking buildings, and provision of bus and cyclist measures. The modelling indicated that the concept could cater for maintaining Lichfield Street as one-way, swapping the Lichfield Street one-way function with Tuam Street or simply making Lichfield Street two-way.

The draft concept was based on a clear outcome for providing a single bus interchange near the current Bus Exchange. Subsequent initial analysis for an expanded Bus Exchange resulted in no successful resolution, and if a change in location were required then the concept would need review.

After several meetings, Councillors adopted a final concept in October 2005.

3.3 Compromises needed to reach consensus

With a major challenge being the diversity of opinion, the following table highlights some compromises that were needed to agree the concept:

<i>Issue or Conflict</i>	<i>Compromise</i>
More parking versus less parking	Maintaining the total current parking supply was mutually acceptable.
One-way streets, and the impacts they have on the central city	The one-way streets were seen as important in providing good car access to the Core, but needed significant amenity improvements and better facilities for cyclists and pedestrians.
More pedestrian malls versus no pedestrian malls	The business members of the Working considered that malls were poor for business, whilst some members of the public support more pedestrian malls. The Concept does not include more pedestrian malls, but allows for them to be considered in future if warranted by land-use changes.
Good car access versus high amenity	There was acceptance that access and amenity are not necessarily mutually exclusive objectives if good design is adopted. Good car access is provided to the Ring and parking facilities but not into the Core.
Private cars versus buses	See comments relating to the Bus Exchange.
Bus Exchange location	Some Councillors want the Bus Exchange shifted away from the central city area, as they believe that the buses cause congestion and air pollution. This was not able to be resolved and is now subject to a separate study.

<i>Issue or Conflict</i>	<i>Compromise</i>
Lichfield Street	The arguments of the amenity versus traffic function of Lichfield Street was not able to be resolved, apart from ensuring that the Concept could work with either a one or two-way Lichfield Street. This is now subject to a separate study.

4 The concept

The concept is described below:

- ***Slow Core.*** Defines the central city area where through-traffic will be discouraged but no new access prohibitions are proposed and general amenity is significantly improved. It will be bounded by Kilmore Street, Madras Street, Lichfield Street, Cambridge Terrace and Durham Street, which is defined as the core ring or boundary. Speed limits lower than 50 km/h should be applied, perhaps progressively, but the aim will be to ensure that street treatments will prevent motorists from travelling fast.
- ***Precincts outside the Core.*** Allows the principles and treatments within the core to be applied to other smaller areas with recognised high amenity within the four avenues. Examples include around the Arts Centre and Museum, Victoria Street and High Street, but the concept allows for other precincts to be added as agreed.
- ***Accessibility.*** Good motor vehicle access will be provided to, from and around the core, and to define the core ring. This will be primarily achieved by maintaining the one-way system, but measures will be implemented to upgrade amenity, improve crossing points for pedestrians and cyclists, and to manage speeds. The exception is Lichfield Street, which may be converted to a two-way street, whilst also maintaining Tuam Street as a two-way street.
- ***Streetscaping Design Plan.*** A streetscaping design plan is needed to provide an overall central city theme or 'brand', but it also needs to be flexible to allow the individuality of different precincts or sub-areas to be reflected. It is important that the core stands out, but all areas within the four avenues are included.
- ***Bus Exchange.*** The Bus Exchange will need to be expanded or replaced to improve public transport efficiency and effectiveness. The expanded Bus Exchange project is being developed under a separate study. Defined bus corridors will be provided along Colombo Street and Lichfield and/or Tuam Streets if the expanded Bus Exchange remains near its current site.
- ***Parking.*** Parking will be developed around the three-zone concept, as described above. Issues associated with residents versus commuter parking will need to be considered into the inner suburbs beyond the four avenues. The concept allows for the market to supply additional off-street commuter parking according to commercial justifications. Park and ride will also be investigated.
- ***Street Treatments.*** All streets in the core will be treated with one of the following street treatment types:
 - a) **Low** – improves amenity through measures such as kerb build-outs and landscaping, but continues to give priority to motor vehicles.
 - b) **Medium** – adds pedestrian priority at selected crossing points to the low treatment, through pedestrian platforms or speed cushions.
 - c) **High** – actively discourages non-essential traffic through extensive street narrowing, landscaping and other treatments.

5 Summary

5.1 Conclusions

The project aimed to develop a 20-year transport concept for the central city, which would inform the implementation of future transport projects. This was to avoid the issues with the earlier Lichfield-Tuam Swap Project, which was seen by many people as being an isolated initiative without an overarching strategy.

We believe that we have achieved this outcome, which was strengthened by the involvement of the Working Party to represent the diversity of stakeholder views. A major achievement was being able to work with the Working Party over time to allow them to constructively develop a concept. The members came to realise the difficulties involved in developing a strategy and understand why some personal objectives could not always be achieved.

Whilst some of the major transport issues in Christchurch pertaining to the Bus Exchange and Lichfield Street remain, the context of these within the overall central city have been identified and the concept has allowed a mechanism for these to be resolved.

The time lag between the draft to final concept resulted in prolonged debate by councillors, particularly as the reasoning for the initial decisions faded away. It is very important to ensure that the Council maintains momentum for implementing the concept to avoid the reversion back to isolated decision making.

5.2 Challenges ahead to translate the Concept into projects

Significant challenges to translate the concept into projects include the need to:

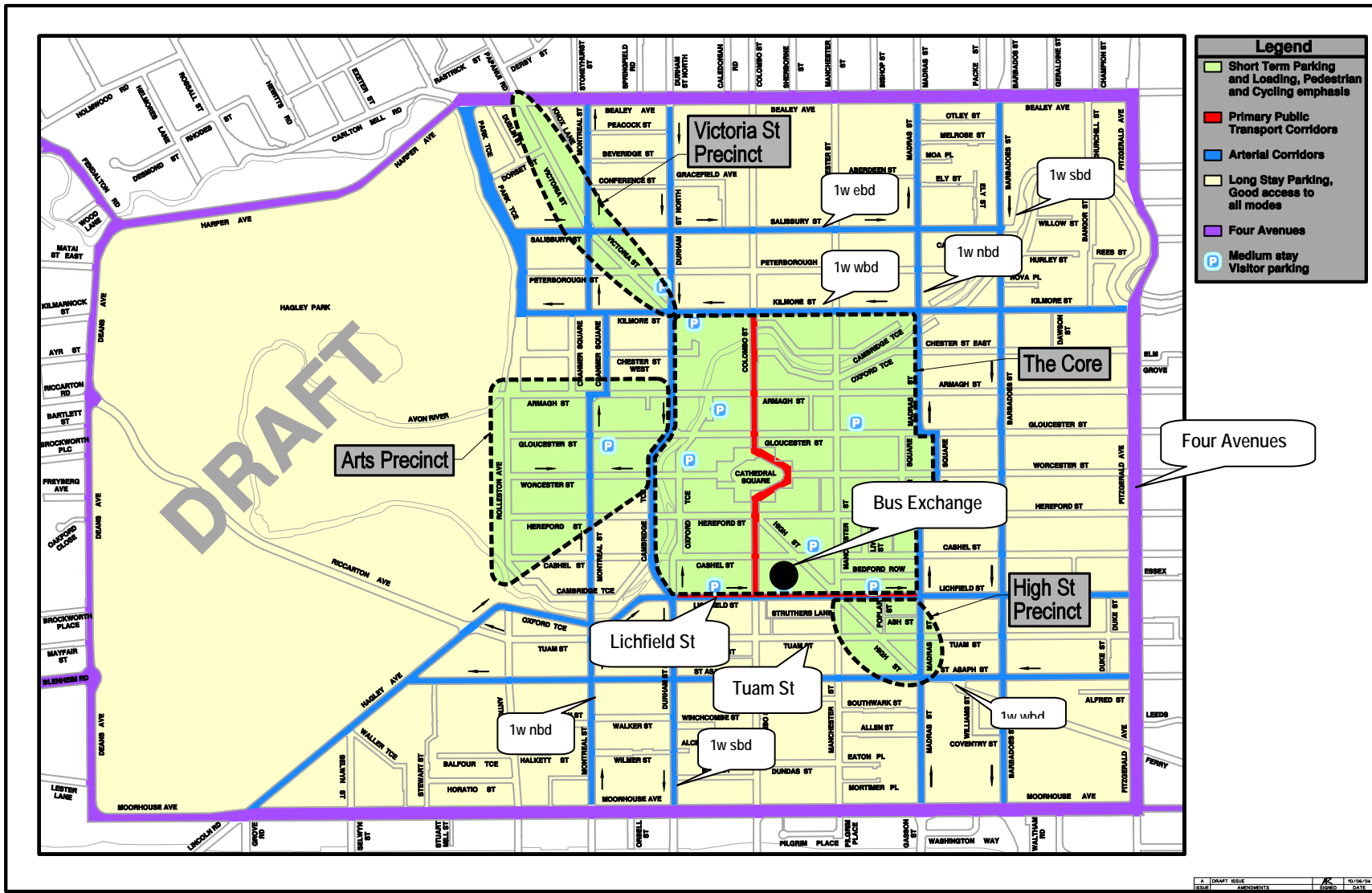
- Plan and prioritise projects;
- Match expectations with available funds;
- Maintain momentum to actually implement the concept principles; and
- Ensure that the concept is sufficiently flexible to cater for other trends.

Currently, the priorities for implementing the concept are to:

- Develop the Streetscaping Urban Design Plan and Parking Plan, as inputs to developing the street designs.
- Undertake the Lichfield-Tuam Corridor Project and Bus Exchange expansion or replacement.
- Establish the core gateways and Core projects, based on revitalisation priorities.

The Streetscaping Urban Design Plan, the Parking Plan, the Lichfield-Tuam Corridor Project and the Bus Exchange Project are underway at the time of writing.

Appendix A – Street Map



Legend

- Short Term Parking and Loading, Pedestrian and Cycling emphasis
- Primary Public Transport Corridors
- Arterial Corridors
- Long Stay Parking, Good access to all modes
- Four Avenues
- Medium stay Visitor parking

Appendix B – Sketches of Possible Street Treatment Types



Early sketch of a possible Slow Movement Core Street



Early sketch of a possible Pedestrian Heart Street