

A Collaborative Approach to Land Use and Transport Planning – Access to Auckland’s Eastern Waterfront

Authors: Graham Norman – BE (Civil) (Hons), GIPENZ, Transportation Engineer,
GNorman@globalskm.com
Ida Dowling – BE (Civil) Hons MIPENZ (Transportation) CPEng, Strategic Consulting
and Delivery Section Manager, IDowling@globalskm.com

Presenters: Graham Norman and Ida Dowling

Abstract

The Eastern Waterfront Access Study (EWAS) study been a collaboration between the NZ Transport Agency (NZTA), Auckland Transport (AT) and Auckland Council (AC) to provide a strategic transport response to transport and land use issues in Auckland’s Eastern Waterfront area. The study area is a pinch point and area of convergence between many significant competing demands including private vehicles, public transport, freight, pedestrians, cycling movements and development pressures.

The complex problem in the Eastern Waterfront lent itself to a trial of the Investment Management Standard (IMS¹) process. The innovative workshop based approach led to the identification of problems, benefits and ideal strategic solutions. Transport and land use options were developed collaboratively aiming to address intrinsic problems in the area. Options were developed into integrated packages through a prioritisation process. Outputs from the study have fed into a Programme Business Case as per Treasury’s Better Business Case (BBC) guidelines.

Use of new techniques such as the IMS process and BBC models, highlighted the importance of collaboration between and within organisations. NZTA is looking to roll out these processes widely and the lessons learnt from this study will be useful to the wider transport industry. This presentation discusses the benefits of our collaborative approach and areas where efficiencies could have been achieved.

¹ State Government Victoria, (2004); Investment Management Standard, Department of Treasury and Finance. <http://www.dtf.vic.gov.au/CA25713E0002EF43/pages/investment-management>

Introduction

SKM was commissioned by the NZ Transport Agency (NZTA) and Auckland Transport (AT) to undertake the Eastern Waterfront Access Strategy (EWAS) study in April 2012. The study was a strategic examination of the Eastern Waterfront area in Auckland's city centre and was required to address changes to the land use vision for the area outlined in the Auckland Plan.

From a land use perspective, AC had already undertaken a high level visioning exercise as part of the Auckland Plan and City Centre Master Plan (CCMP). Aspirational drawings had been produced showing extensive redevelopment of the Eastern Waterfront area, including significant changes to the rail corridor to solve severance issues. AC undertook a land use planning exercise for the study area in parallel with the EWAS study.

The Quay Park Land Use Study and EWAS study were intended to be carried out in parallel, with each study informing the other throughout the process. In practice, the collaboration between work streams could have been more effective, with the two studies moving along diverging paths. Once this was recognised, the studies were brought together through the IMS trial.

This paper examines how the introduction of the IMS process influenced the EWAS and Quay Park studies and outlines key learnings and observations made during the course of the project.

Eastern Waterfront Study Area

The Eastern Waterfront is located on the eastern fringe of Auckland's City Centre and is the focus of multiple strategically important transport links. The Southern and Eastern Rail Lines bisect the study area providing important passenger and freight rail services. The study area also accommodates key strategic road links for both passenger vehicles and freight, connecting the motorway network at Grafton Gully with the City Centre, the Ports of Auckland (POAL) the Eastern Bays via Tamaki Drive and Parnell.

Proposed changes to bus services in the City Centre will likely provide additional services travelling through the study area, notably along Quay Street. There are important walking and cycling desire lines through the study area, but currently connectivity and amenity are poor.

The large unanswered question from a transport perspective was whether the Grafton Gully Stage 3 project would be required in some form. The project is still mentioned in transport strategies and uncertainty about it is flagged in the Auckland Plan. From a transport perspective, that was the obvious focal point of the investigation.

Eastern Waterfront Access Strategic Study

The EWAS was jointly commissioned by AT and the NZTA as a response to:

- Uncertainty around the timing and need for the last stage of the Grafton Gully project or a similar scheme to provide direct access to the Port
- Changes to the transport network to enable the CCMP vision for the area

At the outset of the study and prior to the adoption of the IMS process, a problem definition exercise was carried out through engagement with key stakeholders. An assessment of stakeholder feedback, existing and forecast conditions in the study area identified five main problems:

- **Problem 1:** Delays to freight vehicles between the Port and the Grafton Gully motorway connections will become increasingly unpredictable and excessive.
- **Problem 2:** Delays to general traffic using the strategic road network will become increasingly unpredictable and excessive, leading to undesirable through traffic on inner city centre roads.
- **Problem 3:** Delays to bus services will become increasingly unpredictable and excessive.
- **Problem 4:** Poor walking and cycling connections and amenity inhibit active mode share and access to public transport services.
- **Problem 5:** The form and function of the transport network inhibits the development potential of the surrounding land as expressed in the Quay Park Precinct Plan.

Quay Park Land Use Study

Auckland Council conducted a land use study in parallel to the EWAS study to identify development options in the Eastern Waterfront. The land use study team was tasked to develop a vision for the area that:

- Draws its strength from the confluence of landscape, people, history, linkages and activity
- Contributes to economic development by offering a counterpoint to the city centre and Wynyard Quarter areas through a wider range of work places and activities, including building on the knowledge and creative sectors of the Parnell area
- Provides legible transition between the City Centre and Parnell, in its built form and the grain of the street pattern and its land uses and activity

AC and members of the land use study team attended EWAS workshops and described desirable land use outcomes for the Eastern Waterfront area and the implications of changes to the transport network on land use.

Collaboration through the ILM Process

Following the initial investigation carried out as part of the EWAS study, it became evident that problems were not isolated to the transport network. In order to ensure an integrated approach to land use and transport planning, the Investment Management Standard (IMS) was adopted to map investment logic and clearly define benefits across a wider transport and land use context.

A series of IMS workshops were held between the major project investors, NZTA, AT and AC. The workshops followed IMS guidance, taking place in a two-hour workshop format and utilising an experienced facilitator.

Workshop 1: Identify Future Service Needs: An Investment Logic Map (ILM) was produced. Three core problems, benefits were identified in EWAS Workshop 1. These are shown in Figure 1. A percentage weighting has been assigned to each of the problems and benefits to indicate the relative priority of each.

- **Workshop 2: Establish Criteria for Selecting Solution:** Key Performance Indicators (KPI's) were defined for each of the benefits. These were to be used to measure the performance of an investment against the outcomes which were initially sought by an organisation. Public value messages were developed and mapped to the most relevant benefit.
- **Workshop 3: Identify Strategic Response:** A series of strategic interventions were identified. These were required to address the problems and realise the benefits sought. These were further defined outside the workshop to provide a list of project options.
- **Workshop 4: Prioritise Candidate Investment:** Project options were prioritised to focus investment on addressing problems and delivering on benefits in the most effective manner.

The IMS suggests development of an ILM workshop (workshop 1) at the outset of a project, to decide whether there is a valid case for investment. For the EWAS study, the ILM workshop was retrofitted to the study part way through the process, a lot later than the guidelines typically suggest.

IMS Application to Project

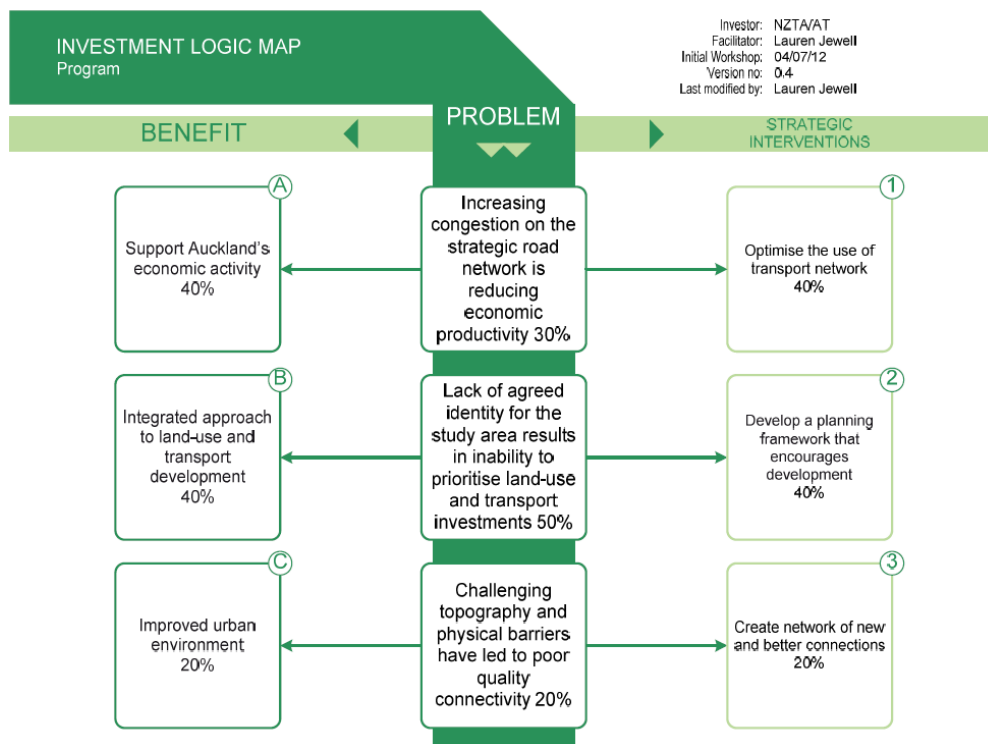
Three problems were identified through the ILM mapping workshop. The highest weighting was given to the problem ***“Lack of agreed identity for the study area results in the inability to prioritise land use and transport investments”***. This was perhaps contrary to what was perceived as the biggest problem from a transport perspective. ***Delay to freight vehicles*** was considered the key problem from the original problem definition exercise.

The difference between the perceived problems and their weightings can be attributed to both the process followed to agree the problems and the people involved in the process. During the initial EWAS problem definition, the process was transport dominated. The EWAS study objectives set out what ‘success would look like’ in the area through the eyes of the transport industry. Although land use issues were considered, these were considered in a transport context. The ILM process encouraged both transport and land use teams to consider the study area more holistically i.e. in terms of both land use and transport problems and benefits therefore beginning the collaborative process towards the development of an integrated solution. The ILM has been included in Figure 1.

Workshop 2 of the ILM process involved the development of Key Performance Indicators (KPI's) from each of the benefits. These are utilised at a later stage of the process and are intended to be used to check on the effectiveness of an investment post implementation. The process of developing KPI's examines how the benefits will be delivered and the measurement of the benefits and will provide a valuable resource later in the programme.

Also at Workshop 2, AC, AT and NZTA worked together to develop “Public Value Messages” for each of the benefits. Development of the public value messages provided a sense check of the likelihood of benefits being acceptable to the stakeholders and public.

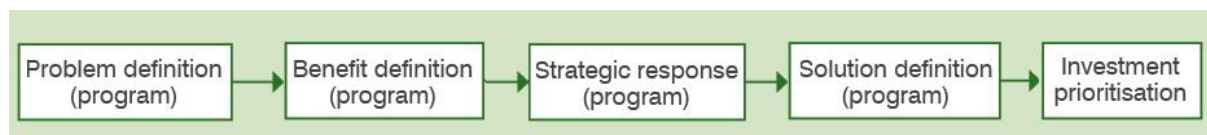
Figure 1: Eastern Waterfront Investment Logic Map



The nature of the problems and benefits identified in the ILM called for an integrated solution requiring both land use and transport input. Workshop 3 aimed to elaborate on the strategic interventions and compile strategic options to address the problems and benefits in the study area. The output of the workshop was a list of 'Strategic Interventions'. These aim to address one of the problems or benefits in the ILM. Whilst each intervention was developed with a particular problem and benefit in mind, many impact on more than one of the problems and benefits.

The next step of the process involved identifying potential projects that responded to each intervention. A total of 27 projects were identified, responding to the nine interventions. Investment Concept Briefs (ICB's) were developed for each project. The ICB's included high level assessment of timeframes, triggers, risks, ability to be implemented, benefits, dis-benefits and indicative cost for each project. After the definition of solutions, the IMS standard recommends prioritisation of investment as shown in Figure 2.

Figure 2: IMS Programme Process



Workshop 4 evaluated project options against KPI's and identified any critical flaws. Options that were mutually exclusive were directly compared with each other. Following this assessment, several of the options dropped out due to poor performance against the benefit framework, significant dis-benefits / impacts or high cost / risk associated with the option.

The study team identified the need to clearly define timeframes, interdependencies between options, trigger points and changing assumptions. Timeframes were considered particularly

important as they had a big influence over addressing the problem over “Lack of agreed identity in the study area”. Interdependencies needed to be established collaboratively between AT, AC and NZTA.

Articulation of the dependencies and project tranches was carried out through a series of working sessions between AC, AT and NZTA. The study team adopted a pragmatic iterative approach to defining these interactions and influences. Transport, land use and mixed led projects were developed as part of the solution definition phase. Land use options were interrogated in terms of the changes to the transport system that were required to enable change. Likewise transport options were interrogated as to the effect that would have on land use and if they produced led to any additional land use opportunities. Mixed projects were looked at from both a land use and transport perspective. Interdependencies between projects were documented and several areas were earmarked for further investigation.

IMS versus Traditional MCAT

Strategic assessments such as the EWAS study have traditionally made use of a Multi Criteria Assessment Tool (MCAT). The traditional evaluation process focuses on documenting the evaluation of the options through a simple and mechanistic process. The MCAT assessment is very focused on the evaluation of options and relies on project objectives (often set from the outset of the project) or LTMA objectives to drive the ranking of projects. The MCAT process is widely regarded as an effective and defensible method to identify strategic solutions to a defined problem.

In comparison, the IMS process places more emphasis on the initial problem identification step. The IMS standard looks to document the logic behind the identification of the problem, how it is addressed and the benefit created by addressing it. The process provides a clear articulation and logically progression from Problem to Solution. The high level nature of the outputs, which the process produces, lends itself to strategic applications. The strength of the process is the story telling aspect. The ILM concept is designed to communicate the investment story on a single page, using language and concepts that are understandable to the layperson.

Lesson Learnt

The EWAS study trialled the use of the IMS Standard. This section discusses the effectiveness of process and how AT, AC and NZTA worked collaboratively to provide an integrated programme.

Timing of the ILM Workshop

For the EWAS study, the ILM workshop was retrofitted to the study part way through the process, a lot later than the guidelines typically suggest. At the time, the EWAS study team had already consulted with stakeholders and completed a problem definition exercise. Similarly, the land use study had also produced a series of land use scenarios based on the development concepts presented in the CCMP. The knowledge gained from these initial investigations meant that the level of information available during this workshop was a lot more than would typically expected. This placed particular onerous on the facilitator who was responsible for steering the conversation and ensuring it remained at the intended high level. As a result of the abundance of information, the ILM process for this project required 2 workshops to disseminate the available information.

By holding the ILM once the project was already underway stakeholders had preconceived and differing visions for the area before the ILM process. The biggest strength in the ILM process is the ability to strip the issues back to the fundamental problems facing a particular area.

As a result of the EWAS ILM workshop, three problems were identified. The key problem was identified as being “the lack of an agreed vision in the study area”. A traditional approach to a transport study may not have necessarily brought this issue out explicitly and therefore the stakeholders may not have reached agreement on how to move forward. The problems outlined during the initial problem definition stage of the EWAS study were in the large consistent with the remaining two problems identified in the ILM.

Continuity of Attendees

The IMS guidance highlights the need to involve the right people at workshops. Two separate ILM workshops were undertaken for the EWAS study. The first was held with high level representatives from each organisation. The second was held with project level representatives from each organisation, including SKM.

Having not been involved in the first workshop, but reviewing the ILM document, it was unclear how the conclusions had been reached and how relevant they were to the initial problems. While the repeated ILM produced a largely similar result with the project level representatives group, it gave the study team a better understanding into the IMS procedure, something which most of the team was unfamiliar with. The remainder of the IMS process was undertaken by this same group of project level representatives.

Importance of the Facilitator

The facilitator plays an important role in framing the discussion during the ILM process. Their role is to place boundaries around the discussion and establish agreement between the parties. A large amount of information was discussed at the ILM workshop for this study. This made it difficult to fit the information into a clear and succinct investment story. Participants were sometimes side tracked by unimportant details and frequently needed to be brought back to the high level discussion.

The group didn't manage to complete the workshop requirements during the allocated 2 hours and required another session to finalise the ILM.

The role of the Facilitator is to probe, challenge potentially preconceived notions and be strong and willing to question the typically strong personality types of leaders of organisations. It is considered important that the facilitator is removed from the problem and does not know what the important points are as this should only be clear as a result of the workshop.

Setting the objectives of the session and developing a clear idea as to what the investor is trying to achieve with the workshop is critical at the beginning of each session to keep the group on track and focused.

Important learning: a strong facilitator is required to keep discussions on track, question preconceived notions and interrogate the investor. An introduction to the IMS process and procedures would be beneficial for all attendees.

Size of Effects Considered

The ILM is essentially a high level problem definition tool. The context in which problems and benefits are considered is of particular importance. If the study area is considered in isolation (looking no further than the study boundary) the problems identified will always be important in the context of the study area. However, when considering the study area from a broader perspective, the problems can potentially shift, as in the EWAS case.

When looking at the Quay Park area in isolation, underutilisation of land was perceived as a problem. When considered in a wider city centre context, development of the Quay Park area could be put in perspective against development plans for the wider city centre. Wynyard Quarter and the Queen Street area had been prioritised for development. Further investigation revealed no real shortage of land within the city centre and fringe area. The perceived problem was deemed a resultant of another problem altogether “A lack of agreed identity in the study area”.

Strategic Response

Workshop 3 of the IMS process looked to “identify the strategic response”. The project team found this exercise particularly useful. The strategic interventions were established in a collaborative environment between AC, AT and NZTA. It makes sense in this situation to deal with land use and transport together as they are intrinsically linked. The strategic interventions are essentially an extension to the strategic interventions identified in the ILM workshop and represent strategic options to deliver the desired benefits. This is the heart of the process and the strong connection between the problems identified in the ILM and these interventions tells a much clearer story to justify investment than a traditional transport assessment.

Prioritisation of Investment

The final stage of the IMS standard seeks to evaluate projects against the benefits and KPI’s identified in previous workshops. The study team found it difficult to prioritise projects at this stage of the programme development due to the fact many of the projects could not be directly compared as they set out to achieve different objects and were often inter related in their ability to deliver benefits. This is reflective of the complex interaction between different transport modes and land uses.

Project options were developed to focus specifically on one of the strategic interventions identified in Workshop 3. Therefore, each option generally only contributed to a single benefit or set of KPI’s. In many cases, while delivering on one benefit, the option undermined the delivery of other benefits or brought about the need for another project to mitigate these effects.

Typically, this IMS process has been used to compare options which provide a solution to a number of the problems identified and deliver on the list of benefits to varying degrees. In this case, comparing between the options is a relatively straight forward process. Trying to prioritise projects within the EWAS study was not found to be an easy task. We believe the following reasons contributed to this difficulty:

- 1) **Each option fundamentally addressed a different problem:** Comparison between options trying to do different things is difficult.

- 2) **Options involved multiple organisations:** While an option may be high on NZTA's list of priorities, it does not mean it is as important to Auckland Council.
- 3) **Projects had different timeframes:** Consideration of project timeframes needs to be inherent in the prioritisation process.
- 4) **Inter dependencies between projects:** Many of the projects on the list were dependent on or influenced by other projects. Defining the inter dependencies between projects needed to be done prior to any prioritisation. This didn't fit easily into the ILM process.

We found that options within the same timeframe, led by the same organisation, focussed on achieving the same benefit and mutually exclusive of other could be directly compared and prioritised. Prioritisation was difficult where options did not meet all of these criteria.

Conclusions and Recommendations

The key conclusions from our study are summarised as follows:

- The Investment Logic Map should be used to determine whether further investment is justified, and if so, in which areas that investment should be focussed. It should be used to define the scope of any further study. This process needs buy in from all stakeholders.
- Prior to the ILM session, an introduction to the ILM principles and expected outcomes would be beneficial.
- The right people need to be involved in the process. A lead investigator should attend all sessions to maintain consistency, but for more technical discussion on KPIs and strategic interventions, it is more important to have subject matter experts there to ensure the decisions are able to be made in the workshop,
- The people involved need to be sufficiently empowered and take ownership for their respective organisations.
- Representatives from each organisation generally had some preconceived ideas regarding problems in the study area. The ILM process and the independent facilitator were effective in getting past these ideas to identify the real problems.
- In a complex urban environment, it is difficult to treat land use or transport in isolation. The process provides a good basis to integrate land use and transport problems and solutions, but both sides need to be open minded and engaged in the process.
- Coordination of a joint land use / transport study is difficult where priorities may be different. Common leadership and approach would be beneficial.
- We did not find prioritisation could be achieved through application of the IMS framework alone due to the complexities arising with a joint land use and transport study. A collaborate workshop method was required to understand the inter relationships between projects and establish tranches.
- A traditional strategic transport assessment has always focused on providing solutions to meet a set of predefined objectives. Our experience through the EWAS study has highlighted that the objectives of a project do not always capture the true problems faced. The ILM process shows its real strength in the ability to identify the real problems, establish the root cause and determine whether they are indeed problems.

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