

Owen Shinkwin

From: Michael MacAree
Sent: 09 June 2011 10:48
To: 'Jeremy Ward'
Cc: David Clements; Owen Shinkwin
Subject: RE: Mahon LAP

Jeremy,

I would be available on Monday (after 11am), Tuesday (pm for an hour), Thursday at between 11am -1pm. My colleague Owen Shinkwin is on Holidays and I would like at least one of us to attend. I also note that the next CASP meeting is on the 22nd of June, if the NTA is invited (Request from our Director to Dan Buggy) then this may be another opportunity. Let me know if any of the dates next week would suit, we would be happy to host a joint meeting if required.

(Note: contact name of third person is David Clements rather than Eoin Farrell as I had previously stated).

Regards,

Mick Mac Aree

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 09 June 2011 10:40
To: Michael MacAree
Subject: Mahon LAP

Hi Michael

It was great to talk to you yesterday and to make an initial contact.

We are having a bit of a 'mare trying to arrange the meeting due to people being on leave so I just wanted to get back to you briefly.

As discussed, we understand that it would be desirable to get together to have a "hello"/ general meeting first and then to talk about the specifics of the Mahon LAP (what we are trying to achieve / assumptions / predications, etc.).

We are currently considering the possibility of either:

- Meeting the NTA first; or
- Meeting both parties together.

Either would have pluses and minuses, but it is clear that we should get the higher level objectives discussed before going into detail. We are also considering whether to come to Dublin [e.g. NTA in the morning and NRA in the afternoon].

If we need to try and arrange the meeting next week on Tuesday or Wednesday we were wondering if your colleagues (Owen Shinkwin and Owen Farrell) would be available to meet even if you weren't. This isn't ideal but may be a compromise to make things happen. Would it be possible for you to forward their contact details? If this isn't possible then we may have to fall-back to an NRA meeting followed by an NTA meeting. This is due to a commitment that has been made.

Thanks very much for your eagerness to engage on integrating land use and transportation in Cork. We look forward to this and to working with you and the NTA very much.

Best regards

Jeremy

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

Owen Shinkwin

From: Jeremy Ward <jeremy_ward@corkcity.ie>
Sent: 09 June 2011 12:52
To: Michael MacAree
Cc: David Clements; Owen Shinkwin; Ann Bogan
Subject: RE: Mahon LAP

Mick

We have now decided to go ahead with the meeting on Friday 17 June 2011. We therefore hereby request your attendance at the following:

1. A general meeting with representatives from Planning + Development and Roads and Transportation at 11am in City Hall, Cork [if you wish to arrive earlier and go for a coffee with people that would be fine but people from Dublin normally tend to travel on the 8am train and arrive to the building at 11am]. This would be a hello and give you a chance to raise issues [would you like to suggest an agenda for this?];
2. A meeting on Mahon LAP from 12pm with a distilled group [from the above] and 3 representatives from the NRA [Richard Bowen, Paul Moran and Tara Spain].

I can't be precise at this stage who will be attending on behalf of the City Council but the aim is to make the meeting both integrated and representative of both Directorates. I am led to believe that Denis O'Mahony, Director of Services will be in attendance and would therefore chair the meeting. Also in attendance will be Ann Bogan [Senior Planner], the Planning Policy Section manager.

I will forward documentation to you and the NRA between now and the end of tomorrow so that you will have ample time to have a look before attendance. I could give you a call to run through the documentation if this would be of benefit.

It is regrettable that Owen Shinkwin will not be able to attend but we can meet him at the next meeting. I hope that this is acceptable to you and Owen.

When you come to City Hall please come to the Planning Counter and we will bring you to meeting room 1.1.

See you next week.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: Michael MacAree [<mailto:mickm@nationaltransport.ie>]
Sent: 09 June 2011 10:48

To: Jeremy Ward
Cc: David Clements; Owen Shinkwin
Subject: RE: Mahon LAP

Jeremy,

I would be available on Monday (after 11am), Tuesday (pm for an hour), Thursday at between 11am -1pm. My colleague Owen Shinkwin is on Holidays and I would like at least one of us to attend. I also note that the next CASP meeting is on the 22nd of June, if the NTA is invited (Request from our Director to Dan Buggy) then this may be another opportunity. Let me know if any of the dates next week would suit, we would be happy to host a joint meeting if required.

(Note: contact name of third person is David Clements rather than Eoin Farrell as I had previously stated).

Regards,

Mick Mac Aree

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 09 June 2011 10:40
To: Michael MacAree
Subject: Mahon LAP

Hi Michael

It was great to talk to you yesterday and to make an initial contact.

We are having a bit of a 'mare trying to arrange the meeting due to people being on leave so I just wanted to get back to you briefly.

As discussed, we understand that it would be desirable to get together to have a "hello" / general meeting first and then to talk about the specifics of the Mahon LAP (what we are trying to achieve / assumptions / predications, etc.).

We are currently considering the possibility of either:

- Meeting the NTA first; or
- Meeting both parties together.

Either would have pluses and minuses, but it is clear that we should get the higher level objectives discussed before going into detail. We are also considering whether to come to Dublin [e.g. NTA in the morning and NRA in the afternoon].

If we need to try and arrange the meeting next week on Tuesday or Wednesday we were wondering if your colleagues (Owen Shinkwin and Owen Farrell) would be available to meet even if you weren't. This isn't ideal but may be a compromise to make things happen. Would it be possible for you to forward their contact details? If this isn't possible then we may have to fall-back to an NRA meeting followed by an NTA meeting. This is due to a commitment that has been made.

Thanks very much for your eagerness to engage on integrating land use and transportation in Cork. We look forward to this and to working with you and the NTA very much.

Best regards

Jeremy

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450

E: jeremy_ward@corkcity.ie

Owen Shinkwin

From: Michael MacAree
Sent: 16 June 2011 17:06
To: David Clements
Subject: FW: Mahon LAP: Integration of land use and transport
Attachments: 20110325 CCC C8132300 Modelling Methodology Note 1_5.pdf; 20110329 C81323 Mahon KPI Development v2_3.pdf; 20101221 P81323 CC Mahon Traffic Modelling Proposal v2.1.pdf; 150611 Transport Stakeholders Background Note v1.3.pdf; 150611 MLAP Transport Stakeholders agenda v1.3.pdf

Info from Cork

Mick

From: Ann Bogan [mailto:ann_bogan@corkcity.ie]
Sent: 15 June 2011 17:41
To: Michael MacAree
Subject: FW: Mahon LAP: Integration of land use and transport

Mick,

I attach Agenda, briefing note and some background documents for our meeting at 12.00 on Friday on the Mahon Local Area Plan transport issues. Tara Spain, Paul Moran and Richard Bowen from the NRA are attending, as well as myself, Jeremy Ward and Erin O'Brien from Planning Dept and Liz Kidney and John Gibson from the Roads and Transportation Dept.

Jeremy, Liz and myself will meet you around 11.00 to have a more general discussion on planning and related transport issues in Cork.

See you on Friday,

Regards,

Ann

*Senior Planner,
Planning Policy Section,
Planning and Development Directorate
Cork City Council,
City Hall,
Cork*

021 4924331

From: Jeremy Ward
Sent: 15 June 2011 16:50
To: Ann Bogan
Subject: Mahon LAP: Integration of land use and transport

Ann

Further to our meeting of 4pm please find the following documents to be issued to those attending Friday's meeting:

- Proposed Agenda;
- Briefing Note.

In addition, I also enclose the following MVA documents as background information:

- Modelling Proposal [seen in February by the NRA];
- KPI [Objectives] Note; and
- Study Methodology.

If you need anything else or require any changes please don't hesitate to ask.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450

E: jeremy_ward@corkcity.ie

Information Note

Project Title:	Mahon Traffic Assessment
MVA Project Number:	C8116100
Subject:	Study Methodology
Note Number:	3 Version: 1.5
Author(s):	Sean Kearns
Reviewer(s):	Michelle Steel
Date:	25 March 2011

1 Introduction

- 1.1.1 MVA Consultancy were commissioned by Cork City Council (CCC) in February 2011 to undertake the Mahon Traffic Assessment. This note details the methodology for the development of traffic forecasts for each of three development options supplied by CCC.

2 Development Options

- 2.1.1 Three 2021 development options have been provided by CCC. These are, in summary:

- Option 1: Do Little
- Option 2: Mix + Streets
- Option 3: Transformation

- 2.1.2 The table below summarises each option in terms of total development to be added to Mahon: (The data in the supplied spreadsheets consists of type of development, car parking provision, specific sub-area decompositions, etc.)

Table 2.1 Development Data Summary

Option	Title	Quantum		
		Residential	Employment Floor Space	R+LS Floor Space
1	Do Little	841	116,466	6,600
2	Mix + Streets	2569	114,112	18,950
3	Transformation	2914	204,958	20,256

3 Transport Assessment Overview

3.1.1 This section describes the study methodology in detail. For convenience of description the methodology has been broken in to three phases. Each is described in turn below.

Phase 1: Traffic Model Setup

3.1.2 The strands of work forming the **first phase** of the assessment process are:

- **Development of an appropriate 2010 base year.** The Mahon Traffic Model (MTM) is currently based to 2008 traffic conditions. According to NRA traffic counters on the N25, traffic near Mahon has decreased by nearly 9% in the past 3 years. We will use this information to estimate an appropriate reduction in Mahon area traffic to create a 2010 based MTM;
- **Development of the 2021 Do Nothing model.** This model will be used as a platform to which the additional traffic associated with each of the three development options can be added. To forecast traffic from 2010 to 2021 we can use the Cork Docklands traffic model, to ensure that the following key aspects are included in the 2021 MTM:
 - traffic growth per NRA factors for National Routes;
 - Docklands development per the Docklands LAP; and
 - appropriate 2021 transport infrastructure (highway and PT).
- **Development of 2021 Public Transport Impacts.** For this task outputs of previous CATS models will be used to examine mode share impacts for bus only PT infrastructure in 2021 (i.e. Do Nothing vs Do Bus). To prepare for later tasks involving 2031 forecasts, this model will also be used to determine BRT related mode share impacts in Mahon;

3.1.3 The three steps above form Phase 1 of the transport assessment process. This important phase establishes the foundation for the work to assess the various development options. The key outputs from this phase are:

- The 2010 Base Year Mahon Traffic Model (2010MTM);
- The 2021 Do Nothing Mahon Traffic Model (2021MTM); and
- The 2021 PT Impact Model (2021MTM_PT) which includes the effects of updated bus routes through the Mahon area (via the CATS model).

Phase 2: Calculation of Travel Demand Growth

3.1.4 In parallel to the processing of the above preparatory phase, the following items of work are taking place (forming Phase 2):

- **Processing of the three development options** sent by Jeremy Ward (Option 1 received 16/03, Option 2 received 23/03. Option 3 received 22/03). The data comprising these options are presented in separate spreadsheets. For each option, development levels and uses are specified in detail for each sub-area. This includes information for specific developments. This information must be carefully extracted, transferred to a common spreadsheet and processed in a consistent fashion so that the Travel Demand Growth for each of the options can be estimated using the methodology described below;
- **Methodology for Development of Travel Demand Growth.** To translate the floor area associated with a new development into travel demand growth, appropriate trip rate estimates must be chosen – usually based on traffic patterns for similar developments. To be consistent with the previous Mahon study, trip rates for particular development types have been taken

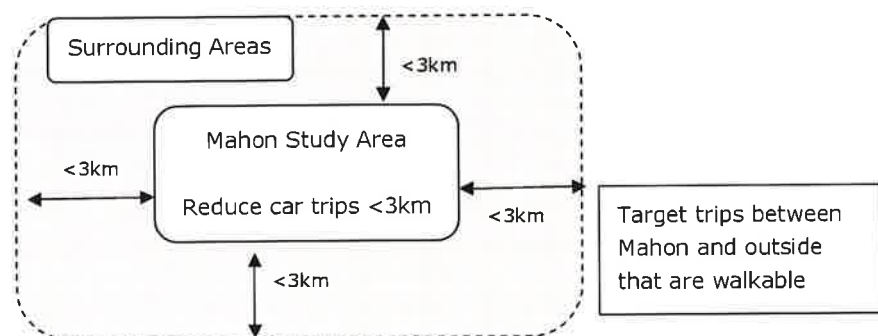
from the Arup Report 'Employment Densities—Report for English Partnerships and the Regional Development Agencies (July 2001)'. The steps involved in producing traffic growth from the input development data are as follows:

- Tabulate floor area growth for each development within each of the sub-areas;
- Select and apply an appropriate AM peak trip production and attraction factor appropriate for the type of activity associated with the development;
- Sum total new trips generated across individual developments within a sub-area (corresponding to a model zone) as a whole;
- Apply the appropriate mode share derived from the CATS PT Impact Model (obtained in Phase 1 above) to determine the number of new car trips associated with each option;
- Add the new car trips to 2010 base level to derive the 2021 baseline level of forecasted traffic for the area.

Phase 3: Application of Smarter Travel

- 3.1.5 The above methodology takes no account of the Smart Travel Policy supported by Cork City Council, which has set clear targets for car, public transport, walking and cycling mode share. Obtaining the target Smarter Travel mode shares can be achieved through PT services and infrastructure, particular configurations of land use mix, geographical integration, and by demand management measures.
- 3.1.6 To assess the impact of Smarter Travel Initiatives, the trip rates which were obtained above will be split according to future targets for car and non-car mode share. In particular, there will be a noticeable shift from car to walking and cycling.

Figure 1 Selective Walking Mode Share Increase



- 3.1.7 Figure 1 above helps to illustrate the approach to increasing mode share towards walking and away from car. The study area is shown as the central rectangle. Trips within this area are predominantly less than 3km. Clearly much of the Smarter Travel target can be achieved from transfer some of these internal trips. However, scope also exists to achieve the targets by reducing small distance trips by car entering and leaving the area. This is indicated by the 3km wide region bounding Mahon.
- 3.1.8 These shifts from car to walking will linked to supporting transport measures as they come on line. These will include variations on the transport network as provided in the options list such as bus lane infrastructure. Increased walking and cycling measures such as mixed use, additional walking and

cycling links, improved infrastructure etc. will help improve the non-car mode share and the likely impact will be tested in the modelling scenarios.

Car Parking Provision

- 3.1.9 Data on parking rates in the future have been provided. As final scenarios, sensitivity testing for car parking provision will be done to ensure vehicle numbers entering areas are in line with parking limits.

Conclusion

- 3.1.10 The outputs from the above process will be various estimates of traffic demand in matrix form, with each matrix adjusted according to the assumed impact of sustainable transport measures on the level of demand for car travel. These demand matrices will then be assigned to the appropriate network scenario. Following this, KPI measures (as outlined in Information Note 2) will be generated from the model runs so that a comprehensive scenario comparison can be achieved to inform the study recommendations.

Jeremy Ward
Cork City Council
Planning Department
City Hall
Cork
Ireland

Ian Byrne
Direct Dial + (0)1 5426002
ibyrne@mvaconsultancy.com

21 December 2010

Our Ref: P8132300
Your Ref: Re: Mahon Assessment - MVA Fee Proposal

Dear Jeremy,

Following our recent discussions and on receipt of the Brief for Traffic Modelling received from Noel Tummon on 21st December, I am pleased to submit this fee proposal for undertaking the proposed Mahon traffic modelling assessment. A breakdown of tasks and fees associated with each is provided below. The anticipated work process is broken down in to 4 work groups, representing Information Gathering, Objectives Development, Model Setup, and Analysis, respectively.

Mahon Scenario Traffic Modelling — Task Breakdown

The first stage of the project will be to meet with you to formalise the approach and address any queries that you may have. Developing a clear and mutual understanding of the requirements for this project is an important part of the information gathering process. We plan to make use of our previous work on the CATS Strategy and the Mahon Transport Strategy where we will utilise the CATS public transport model and the Mahon Local Area Traffic Model.

Work Group 1 Information Gathering

Work Group 1	Information Gathering	Cost
Key Tasks	Inception Meeting	€1,250
	Review of relevant planning data	€750
	Development phasing assessment	€950
	Strategic Context and understanding (i.e. Docklands etc.)	€500
	Preliminary mode share assumptions	€250
	Inception Report	€900
Total Fee for this Work Group		€4,600

Work Group 2 Objectives Development

A key follow-on task from the Information Gathering stage is the development of clear objectives for the Mahon area that can be linked to the required assessment of impacts. Therefore a set of Key Performance Indicators will be developed in conjunction with the Objectives. Clear and effective analysis of traffic and other transport impacts in Mahon will be enabled by the outcomes from this work group.

Work Group 2	Objectives Development	Cost
Key Tasks	Development of LAP Vision Statement	€725
	Set out Transport Objectives	€750
	KPI Development	€750
Total Fee for this Work Group		€2,225

Work Group 3 Model Setup

This work involves setting up, generating test cases, verifying outputs, and readying the models for the required transport analysis of the Mahon area. We will utilise the CATS Public Transport model because it is necessary to ensure full consistency with previous modelling results obtained for that study in relation to public transport provision for the Mahon Area (i.e. BRT and bus services). For the highway assessment we will use the Mahon Local Area Models (AM & PM) that were previously developed as part of the Mahon Transport Assessment undertaken in 2008. These models will be used in tandem to test both public transport and highway interventions as stipulated in the scope of works in the brief.

Work Group 3	Model Setup	Cost
Key Tasks	Review of available traffic modelling tools	€1,099
	Development data collation	€1,830
	Mapping development to model zoning system	€1,137
	Setting up forecast matrices from proposed growth	€1,049
	Traffic Modelling Development Report	€1,100
Total Fee for this Work Group		€6,215

Work Group 4 Analysis

This work group is the most intensive. Building on the previous tasks, we will carefully determine the appropriate modelling inputs and assumptions for analysis of the full range of desired options. These will be varied in order to produce robust assessment of the variable attribute of the overall scheme. Of

particular interest will be the impact of varying transport demand according to land use alternatives (build-out and density) on the overall transport network, i.e., roads and public transport. From this analysis, variations on the transport network can be determined and tested that influence the net impact on the network. This process iterates because transport and land-use change have to be tested separately and then used to produce a new scenario that combines desirable aspects of both. The evolving set of infrastructure and development testing will be tracked in an assessment matrix. Key Performance Indicators and transport objectives developed in previous tasks will be mapped to this to enable the overall assessment and formulate recommendations.

Work Group 4	Analysis	Cost
Key Tasks	BRT impact review	€1,100
	Develop infrastructure trigger points	€1,487
	Mode share adjustment scenario development	€1,250
	Production of phased development model runs	€2,350
	Production of phased mode share intervention runs	€2,600
	Production of development / infrastructure assessment matrix	€2,150
	Production of traffic and transport report	€4,051
Total Fee for this Work Group		€14,988

Work Programme

Deliverable or Milestone	Start Date	Completion Date
Work Group 1	10/1/2011	14/1/2011
Work Group 2	17/1/2011	21/1/2011
Work Group 3	24/1/2011	26/1/2011
Work Group 4	27/1/2011	4/3/2011
Total		8 Weeks

Fee Proposal

Fee for undertaking the above tasks will be €28,028 excluding VAT. Expenses will be €750 in addition. Also assumed in the cost is four meetings including inception meeting, two interim meetings and a final meeting.

Team Member	Rate per Day	Number of Days	Cost €
Ian Byrne (Project Director)	€750	10	€7,500
Sean Kearns (Project Manager)	€500	18	€9,000
Jessica Hanney (Transport Planner)	€500	4	€2,000
David Conlon (Modeller)	€397	24	€9,528
Totals		56	€28.028

Total Fee Proposal including expenses will be €28,778, excluding VAT.

Conclusion

I trust you will find the above scope of works in order and that it meets your requirements on this project. I would be happy to discuss any of the items in the work programme in further detail. Please do not hesitate to contact me in relation to this matter for clarification or further information.

Yours sincerely

Ian Byrne

MVA General Manager for Ireland

Cork City Council

Comhairle Cathrach Chorchai
City Hall
Cork

Planning Policy Section
Planning + Development Directorate



Project:	Mahon Local Area Plan 2011 Mahon land use and transport integration
Purpose of meeting:	Transport and Traffic Meeting with NTA + NRA
Date:	15 June 2011 [v1.2]
Time / venue:	12pm Friday 17 June 2011 @ Room 1.1, City Hall, Cork

Proposed Agenda

1. Core Strategy for Cork City
2. Mahon: development and proposed Mahon Local Area Plan
 - Land use and development options
 - Transport
3. Mahon Transportation
 - Aims and Objectives [KPI Note]
 - Methodology and Assumptions
 - Non-car movements [targets, infrastructure, funding and delivery]
 - Feedback on the approach from NTA and NRA
4. Way forward

Jeremy Ward [15 June 2011]

Information Note

Project Title:	Mahon Transport Assessment
MVA Project Number:	C8132300
Subject:	KPI Development
Note Number:	2 Version: 2.3
Author(s):	Sean Kearns
Reviewer(s):	Jessica Hanney; Ian Byrne
Date:	29 March 2011

1 Introduction

1.1 To undertake the Mahon Transport Assessment it is crucial to establish:

- **Study Objectives:** How these should be defined in the context of Department of Transport guidelines and in the context of the Mahon LAP development, including use of appropriate Department of Transport guidelines for the development of transport objectives;
- **Key Performance Indicators (KPIs):** which are used to measure performance of the strategy, i.e., a means of measurement that is used to assess if the desired outcome is achieved; and
- **Linking Objectives and KPIs:** Once study objectives are defined and KPIs are identified an iterative assessment process is undertaken to identify the best performing strategy.

2 Study Objectives

2.1 The Department of Transport guidelines used for the appraisal of transport strategies and schemes are recommended for use in the Mahon Study. These guidelines include the following five key categories:

- Economy;
- Environment;
- Accessibility and Social Inclusion;
- Integration; and
- Safety.

2.2 These objectives need to be tailored for the Mahon Study and are described in more general terms below.

ECONOMIC OBJECTIVES

- 2.3 Transport investment contributes to economic growth through the improvement of the efficiency and effectiveness of transport systems. Transport can also contribute to economic growth by encouraging new activities, improving accessibility and by enhancing the appeal of an area through street design or improvements in the built or natural environments. Economic objectives can be defined in a number of ways depending on the tools which are available to realise change.

ENVIRONMENTAL OBJECTIVES

- 2.4 Environmental objectives are concerned with conservation of Bio-diversity, Cultural Heritage, and Landscape.

ACCESSIBILITY AND SOCIAL INCLUSION

- 2.5 Accessibility is usually defined as 'ease-of-reaching'. The objective relates to providing access for people from varied areas with differing availability and means of transport, to facilities in different locations. This is usually considered from the point of view of residents, such that certain areas in which residential development predominates may be categorised by their ease of access to the main facilities provided by the town. Consideration of accessibility from such areas is helped by further defining the availability of car or access to public transport.
- 2.6 Social inclusion is concerned primarily with accessibility for those without a car and those whose mobility is impaired. A sub-objective within the Social Inclusion objective is that of equity. This is primarily concerned with ensuring that the benefits of a transport strategy are reasonably well distributed across society. Differing groups of people will have differing levels of need. An equitable strategy would generally prioritise the needs of the disadvantaged or those with special needs. This includes disabled or elderly people, but more generally is a group described as having no car available.

INTEGRATION

- 2.7 According to the Department of Transport guidelines, a number of aspects of integration need to be considered. For the Mahon study, it will be necessary to demonstrate some consideration of modal consideration (i.e., integrating amongst transport modes), and effectively integrating land uses with transport infrastructure in ways that promoted sustainable development and efficient use of resources.

SAFETY OBJECTIVES

- 2.8 The safety objective is concerned with the reduction in injuries and loss of life, or of damage to property and loss of income.

3 Performance Measurement

- 3.1 Performance measurement is used to determine if the study recommendations achieve the desired outcomes. Therefore, performance indicators (or KPI's) must be measurable and clearly related to the desired outcome.

- 3.2 Targets may then be set for each performance indicator, for example overall traffic speeds in the network may be set to the base year speed. These targets can be optimistic, be should be realistic. This allows successful scenarios to be identified. Furthermore, the particular attributes which influence a KPI one way or another (for example provision of bus priority, or the location and density of a development) can be fine tuned to obtain a transport and land use scenario that meet the targets and, therefore, satisfy study objectives.

4 Study Objectives and Indicators

- 4.1 The table below summarises the 17 key objectives that form the basis for the development of the Mahon Study. It also sets out the KPIs that will be used in the assessment process to measure progress towards achieving the objectives. Many of the KPIs will be derived from the Mahon Traffic Model but some other will require independent data and analysis (for example, use of accident statistics or bus lane utilisation estimation).

Table 1 Linking Objectives and KPIs

Efficiency and Economic Objectives	Key Performance Indicators
1. Support improved economic competitiveness	Queues
2. Facilitate jobs growth	Journey times
3. Transport Reliability and Quality	Utilisation of bus lane infrastructure
4. Minimise Impact on N25	Change in traffic volumes/ queues of those travelling along the N25
Environmental Objectives	Key Performance Indicators
5. Support Smarter Travel objectives	Overall modal share
6. Reduce car dependency	Modal shift away from car
7. Minimise transport related impacts on air quality, noise and vibration	Emissions calculations (output from SATURN model)
8. Minimise transport energy consumption	Fuel consumption statistics (output from SATURN model)
9. Improve attractiveness of the public realm	AADT / Speeds
Accessibility and Social Inclusion Objectives	Key Performance Indicators
10. Develop integration between transport modes	Greater frequency of service
11. Support social inclusion	Intersection of catchment areas among transport corridors
12. Increase accessibility to opportunities and services (employment, retail, leisure)	Catchment areas of new links / services to vulnerable groups or deprived areas
	Average trip length by trip purpose (e.g. home to work, home to shopping)

13. Enhance transport and land use integration	Density around public transport nodes
--	---------------------------------------

Integration Objectives

Key Performance Indicators

14. Consistency with government integrated transport policy, balanced regional development and social inclusion

Reduced in-vehicle journey times
Reduced walking time associated with interchange

15. Geographical Integration, i.e., Reduce travel demand through lower distances

Modal shift towards walking, cycling, and public transport

Safety Objectives

Key Performance Indicators

16. Reduce health risks

Quantification of accident reductions in terms of fatalities and personal injuries (requires existing data for the area).

17. Reduce incidence of accidents and fatalities

Lower speed
Lower traffic flows

Cork City Council
Comhairle Cathrach Chorchai
City Hall
Cork

Planning Policy Section
Planning + Development Directorate



Project:	Mahon Local Area Plan 2011
	Integration of Land use + Transportation
Purpose	Progress Report on LAP
Date:	15 June 2011 [v1.3]
Author:	Jeremy Ward
Reviewers:	Noel Tummon + Ann Bogan

Introduction

The purpose of this note is to outline the issues relating to progress on the integration of land use and transportation for the proposed *Mahon Local Area Plan 2011*.

Location

Mahon forms part of the south-east of Cork City and is located on a peninsular of land surrounded on three sides by water:

- the River Lee and Blackrock Village to the north,
- Lough Mahon to the east;
- Douglas Estuary to the south.

Context [abridged]

Mahon was developed from the 1980s onwards as a mixed-tenure residential suburb to Cork City, laid over a historic network of lanes and houses. The area also includes industry and office uses that were developed over the same period, and a substantial District Centre [Mahon Point] that was opened in 2005. The area includes some large employers, including the CSO and RCI [a call centre]. Recently the area has seen some intensification in use in response to the development of Mahon Point Shopping Centre, which opened in 2005.

Mahon is earmarked in the Cork Public Transport Feasibility Study for the development of a Bus Rapid-Transit (BRT) service. Appendix One includes a brief summary of the transport context to the Plan.

Planning Policy Context

The development plan forms the primary planning policy context to the proposed local area plan. This is, in turn, founded upon *CASP 2001-2021* [as amended by the 2008 update].

Within Metropolitan Cork the City offers the most accessible location for development served by a range of transport modes – and also the best prospect for future shifts to smarter travel modes.

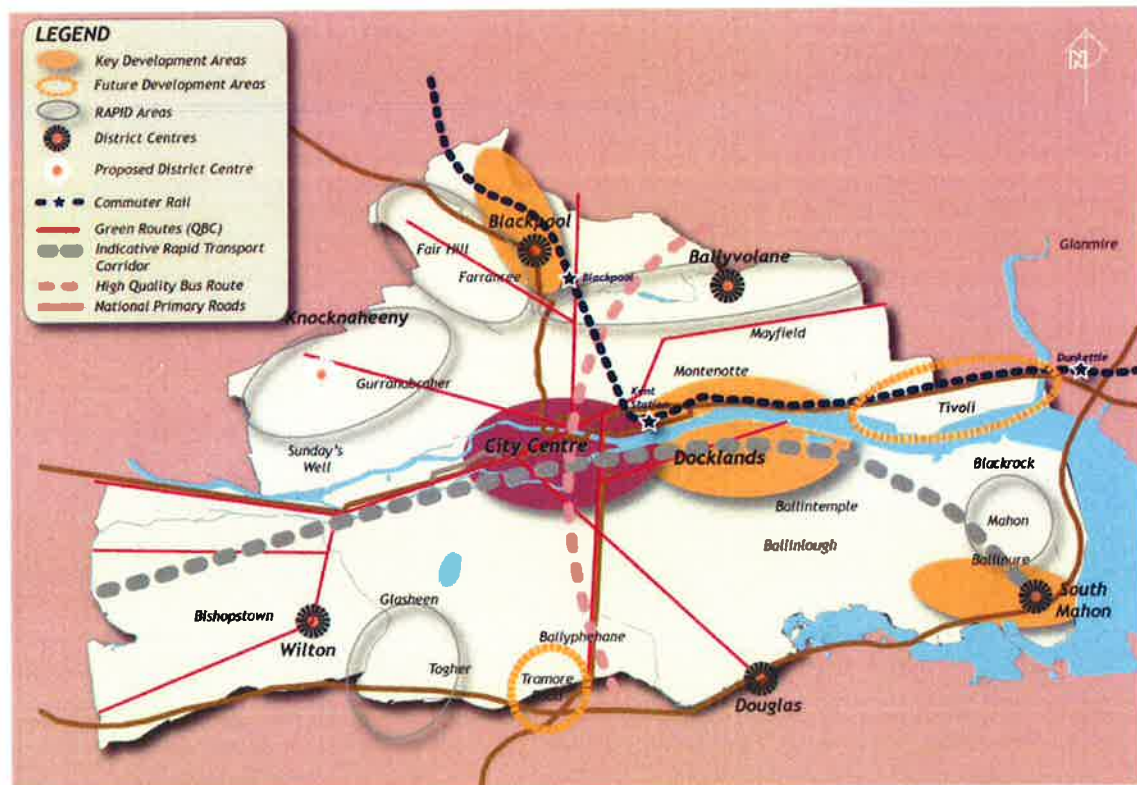


Figure 2.3 Core Strategy Map

Within Cork City the Mahon area forms a key part of Cork City's Core Strategy [see above]. Mahon is one of three Key Development Areas in the city:

- The primary focus for development in the City and the region is the City Centre and Docklands;
- Blackpool is the key development area in the northern side of the city; and
- Mahon is the key development area on the southern side of the city.

Both suburban locations are proposed to benefit from:

- Rail / rapid transit and complementary bus-based transport;
- Significant employment growth in proportion to projected growth in Docklands and the City Centre;
- Residential development in proportion to the proposed employment-related development;
- A District-Centre to provide a focus for retail and place-based activity in the area as a whole;
- Significant proportions of non-car based movement, including significant proportions of walking and cycling.

At a metropolitan scale it is therefore strategically very desirable to develop Mahon as it offers an accessible location. It is intended that both Mahon and Blackpool will grow at a rate that supports the City Centre and Docklands, and therefore is mutually supportive of an expanding public transport system.

The alternative to the growth of Blackpool and Mahon is development in locations that are either car-borne [e.g. the Airport Business Park or the Doughcloyne area] or accessible to heavy rail but are incapable of delivering short distance walking and cycling trips [e.g. Little Island], and which therefore are still very dependent upon the car. These would therefore be very likely to have a significant negative impact on the national roads network.

The development of Mahon therefore makes sense strategically for the city and metropolitan area, as well as from a transportation perspective. It therefore offers great benefits for the national road network as the negative impacts are optimized.

The Mahon Local Area Plan

The local area plan will include a long term strategy for the development of the Mahon area for 2011-2031. The local area plan will be a 6 or 10 year local area plan.

The overall aim of the local area plan is to create a high quality neighbourhood with an urban character focused upon its three key assets:

- The Mahon Point Shopping Centre and existing heart of Mahon at Avenue de Rennes;
- The Bessboro House grounds and its potential to be a neighbourhood park and focus for a new residential community and the waterfront amenity walk along Douglas Estuary / Lough Mahon; and
- The proximity of Mahon to the City Centre and Docklands.

The zoning objectives for sites are most likely to be changed in the *City Plan 2015-2021* unless there is an urgent need to make changes by Variation to the current development plan. One of the key issues that the plan needs to address is the link between land use and transportation and the need to ensure that Mahon is developed in a way that ensures non-car transportation.

Proposed Development Options

The following options have been developed and are currently being tested in terms of their transportation impacts through the assessment.

	Tranche 1		Tranche 2		Totals	
	Units	NRFS	Units	NRFS	Units	NRFS
Option 1	1354	109,013	0	0	1354	109,013
Option 2	1662	86,751	1105	86,702	2767	173,453
Option 3	1187	107,122	1850	94,953	3037	202,075
Option 4	1354	109,013	1525	94,953	2879	203,966

NRFS = Non-Residential Floorspace / Development additional to Nov. 2010 completions.

Development tranches are not time-bound but the initial ambition is that Tranche 1 would be 2011-2021 and Tranche 2 would be for 2021-2031.

Option 1: “Trend”

This development option is based upon the current trend and models existing non-residential commitments and existing residential commitments and sites currently zoned for residential use (on Jacob’s Island and smaller sites in Mahon). Tranche 2 for this option is blank because this would lead to an untenable development option with only commercial and employment development.

Option 2 – “Mixed Use”

This option seeks to generate a mix of residential and non-residential uses throughout the key development zones [Mahon Industrial Estate, Bessboro House, Mahon Technology Park and Mahon Point Shopping Centre]. The southern half of the Mahon Industrial Estate will remain in non-residential use. Uses are blended at a medium-grain [within blocks].

Option 3 – “Mixed Use with more extensive residential neighbourhood”

This option seeks to generate a mix of residential and non-residential uses throughout the key development zones [Mahon Industrial Estate, Bessboro House, Mahon Technology Park and Mahon Point Shopping Centre]. Uses are generally blended at a coarse scale to reflect the likely market conditions. An additional block of the Mahon Industrial Estate will move to residential use, creating the conditions for a more cohesive neighbourhood west of the former railway line.

Option 4 – Blend of Option 1 [Tranche 1] and Option 3 [Tranche 2]

This is a pragmatic option that takes the “commitments” of Option 1 and the more ambitious mix of Option 3 [Tranche 2].

Mahon Transportation + Traffic Assessment

Purpose of the commission

The assessment builds upon an assessment that was completed in 2008, which developed a local traffic model. The purpose of this commission is to enable the City Council to understand the transportation and traffic implications of the development strategy options that have been prepared for the Mahon plan area.

The over-riding transportation aims are:

- To reduce the car dependency of Mahon by providing the right infrastructure and services to maximise the contribution of green modes of transport to movement and accessibility within and to / from the area; and
- To ensure that car-based access to and within Mahon is optimised, whilst balancing this with a range of other factors, including character of place, amenity of residents, impact of vehicles on the area and the strategic traffic context.

In particular the study will provide a greater understanding of:

- The development capacity of the area;
- Whether rapid transit to Mahon is feasible and at what development level;
- The capacity of the road network, including the implications of development on the existing local road network and also the impact on the national roads network (particularly the N25 / South Ring Road);
- What infrastructure (e.g. road network and traffic management upgrades) and transportation measures (e.g. bus services) are necessary to meet the needs of the evolving Mahon area; and
- When infrastructure should be delivered over the next 20 years to ensure that Mahon is accessible.

The Methodology

The development strategies will be tested using two complementary methods:

- The “Mahon Saturn traffic model” is being used to test the development options in relation to the impact of a range of road network changes in order to inform understanding of capacity, infrastructure, services and trigger points. This will assess the impact of employment-related movement at the AM peak and combined employment / retail-related movements at the PM peak;
- The “CATS Omnitrans model” will test the strategic movements of people to / from Mahon and also assess public transport options, and the corresponding delivery strategy (including trigger points).

The following notes are attached:

Study **Proposal** [prepared by MVA];

Study **KPI Note** [prepared by MVA dated]; - key points for discussion:

Study **Methodology Note** [prepared by MVA dated] – key points for discussion:

- transfer to walking and cycling [predicated on infrastructural investment / smarter travel / mobility management];
- Transfer to public transport [predicated on investment];

It is envisaged that the Car Parking Standards will be amended from Zone 3 to Zone 2b standards in relation to Tranche 2, or earlier in the event that there is a level of commitment to the rapid transit project. The relevant car parking provision maximums can be found in Table 17.10 of the *City Plan 2009-2015*.

Infrastructure

The City Council have identified:

- A range of walking and cycling network improvements;
- A range of public transport infrastructure and service improvements;
- A range of possible road network improvements; and
- A number of traffic management improvements to optimise use of the available road-space.

The diagram below illustrates the road infrastructure elements that are being tested:

- Link onto N25 from Skehard Road;
- Link onto N25 from Mahon Point Shopping Centre;
- Link from N25 to Bessboro;
- Linkage across the former railway lane for green-modes and all-traffic options.



Initial Indications

Some preliminary model runs have given initial output that indicates that Option 3 provides the best land use and transportation solution. This is because:

- It provides the greatest potential for transfer from residential to short and medium trips [walking and cycling]; and
- It provides the greatest potential for transfer from residential along the entire rapid transit corridor to the system.

APPENDIX ONE

TRANSPORT CONTEXT TO THE LOCAL AREA PLAN

The area has benefited from the delivery of the N25 [South Ring Road] and the Jack Lynch tunnel in 1999, which provided vehicular routes from Mahon to the north and east without the need to travel through Cork City Centre. In addition, the N25 provided access to the west and south without the need to travel through the City Centre or Douglas.

The 2006 census showed the following modal split for those travelling to / from work / school in the SE ward:

24%	walking	84%	<5km
4%	cycle	12%	5-9km
5%	bus	4%	10km+
63%	Driving / passenger		

This illustrates:

- Weak non-car travel at the moment;
- Huge potential for a shift to non-car travel for short [walking / cycling] and medium-length journeys within Cork City and its immediate environs.

A Mahon Transport Assessment was undertaken in 2008, including the construction of a [local] Mahon Saturn Traffic model. This showed the need to develop Mahon in a way that encourages a strong mix of residential as well as non-residential uses. Previously the perceived wisdom was that the future of the area was as a commercial / employment location to complement existing residential areas.

The *Cork Public Transport Feasibility Study* [June 2010], or *CATS Study* as it is often referred to, proposes a rapid transit route that will connect Mahon to the City Centre and further west via Docklands. The provision of the extended route to Mahon is dependent upon progress in developing Docklands. It is envisaged that this extension will be delivered from 2021 onwards. The Mahon Traffic assessment will seek to identify trigger points for the development of the rapid transit system to Mahon.

The area is currently served by the following public transportation:

- No.2 route – connecting Mahon to the City Centre; and
- No.10 route – connecting Mahon to other locations on the southside of Cork [including UCC, CUH and CIT].

In addition to CATS Study findings regarding public transport, additional analysis using OMNITRANS will be undertaken to refine findings in relation to the BRT system and bus-based services.

Owen Shinkwin

From: David Clements
Sent: 20 June 2011 16:17
To: Frank McCabe
Cc: John Nott
Subject: FW: Mahon LAP: Integration of land use and transport
Attachments: 20110325 CCC C8132300 Modelling Methodology Note 1_5.pdf; 20110329 C81323 Mahon KPI Development v2_3.pdf

Hi Frank,

Mick would like you to have a look at the attached reports on a methodology for modelling related to the Mahon Local Area Plan in Cork. We're trying to give some advice on the usefulness of the approach they are taking, particularly how walking and cycling can be looked at, and we would like to get back with something by the end of the week.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305
david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Michael MacAree
Sent: 16 June 2011 17:06
To: David Clements
Subject: FW: Mahon LAP: Integration of land use and transport
[Info from Cork](#)
Mick

From: Ann Bogan [mailto:ann_bogan@corkcity.ie]
Sent: 15 June 2011 17:41
To: Michael MacAree
Subject: FW: Mahon LAP: Integration of land use and transport
Mick,

I attach Agenda, briefing note and some background documents for our meeting at 12.00 on Friday on the Mahon Local Area Plan transport issues. Tara Spain, Paul Moran and Richard Bowen from the NRA are attending, as well as myself, Jeremy Ward and Erin O'Brien from Planning Dept and Liz Kidney and John Gibson from the Roads and Transportation Dept.

Jeremy, Liz and myself will meet you around 11.00 to have a more general discussion on planning and related transport issues in Cork.

See you on Friday,

Regards,

Ann

Senior Planner,
Planning Policy Section,
Planning and Development Directorate
Cork City Council,
City Hall,
Cork
021 4924331

From: Jeremy Ward

Sent: 15 June 2011 16:50

To: Ann Bogan

Subject: Mahon LAP: Integration of land use and transport

Ann

Further to our meeting of 4pm please find the following documents to be issued to those attending Friday's meeting:

- Proposed Agenda;
- Briefing Note.

In addition, I also enclose the following MVA documents as background information:

- Modelling Proposal [seen in February by the NRA];
- KPI [Objectives] Note; and
- Study Methodology.

If you need anything else or require any changes please don't hesitate to ask.

Regards

Jeremy Ward

Senior Executive Planner

Planning Policy Section

Planning + Development Directorate,

Cork City Council, City Hall, Cork

Tel: 021-492-4450

E: jeremy_ward@corkcity.ie

Information Note

Project Title:	Mahon Traffic Assessment		
MVA Project Number:	C8116100		
Subject:	Study Methodology		
Note Number:	3	Version:	1.5
Author(s):	Sean Kearns		
Reviewer(s):	Michelle Steel		
Date:	25 March 2011		

1 Introduction

- 1.1.1 MVA Consultancy were commissioned by Cork City Council (CCC) in February 2011 to undertake the Mahon Traffic Assessment. This note details the methodology for the development of traffic forecasts for each of three development options supplied by CCC.

2 Development Options

- 2.1.1 Three 2021 development options have been provided by CCC. These are, in summary:

- Option 1: Do Little
- Option 2: Mix + Streets
- Option 3: Transformation

- 2.1.2 The table below summarises each option in terms of total development to be added to Mahon: (The data in the supplied spreadsheets consists of type of development, car parking provision, specific sub-area decompositions, etc.)

Table 2.1 Development Data Summary

Option	Title	Quantum		
		Residential	Employment Floor Space	R+LS Floor Space
1	Do Little	841	116,466	6,600
2	Mix + Streets	2569	114,112	18,950
3	Transformation	2914	204,958	20,256

3 Transport Assessment Overview

- 3.1.1 This section describes the study methodology in detail. For convenience of description the methodology has been broken in to three phases. Each is described in turn below.

Phase 1: Traffic Model Setup

- 3.1.2 The strands of work forming the **first phase** of the assessment process are:

- **Development of an appropriate 2010 base year.** The Mahon Traffic Model (MTM) is currently based to 2008 traffic conditions. According to NRA traffic counters on the N25, traffic near Mahon has decreased by nearly 9% in the past 3 years. We will use this information to estimate an appropriate reduction in Mahon area traffic to create a 2010 based MTM;
- **Development of the 2021 Do Nothing model.** This model will be used as a platform to which the additional traffic associated with each of the three development options can be added. To forecast traffic from 2010 to 2021 we can use the Cork Docklands traffic model, to ensure that the following key aspects are included in the 2021 MTM:
 - traffic growth per NRA factors for National Routes;
 - Docklands development per the Docklands LAP; and
 - appropriate 2021 transport infrastructure (highway and PT).
- **Development of 2021 Public Transport Impacts.** For this task outputs of previous CATS models will be used to examine mode share impacts for bus only PT infrastructure in 2021 (i.e. Do Nothing vs Do Bus). To prepare for later tasks involving 2031 forecasts, this model will also be used to determine BRT related mode share impacts in Mahon;

- 3.1.3 The three steps above form Phase 1 of the transport assessment process. This important phase establishes the foundation for the work to assess the various development options. The key outputs from this phase are:

- The 2010 Base Year Mahon Traffic Model (2010MTM);
- The 2021 Do Nothing Mahon Traffic Model (2021MTM); and
- The 2021 PT Impact Model (2021MTM_PT) which includes the effects of updated bus routes through the Mahon area (via the CATS model).

Phase 2: Calculation of Travel Demand Growth

- 3.1.4 In parallel to the processing of the above preparatory phase, the following items of work are taking place (forming Phase 2):

- **Processing of the three development options** sent by Jeremy Ward (Option 1 received 16/03, Option 2 received 23/03. Option 3 received 22/03). The data comprising these options are presented in separate spreadsheets. For each option, development levels and uses are specified in detail for each sub-area. This includes information for specific developments. This information must be carefully extracted, transferred to a common spreadsheet and processed in a consistent fashion so that the Travel Demand Growth for each of the options can be estimated using the methodology described below;
- **Methodology for Development of Travel Demand Growth.** To translate the floor area associated with a new development into travel demand growth, appropriate trip rate estimates must be chosen – usually based on traffic patterns for similar developments. To be consistent with the previous Mahon study, trip rates for particular development types have been taken

from the Arup Report 'Employment Densities—Report for English Partnerships and the Regional Development Agencies (July 2001)'. The steps involved in producing traffic growth from the input development data are as follows:

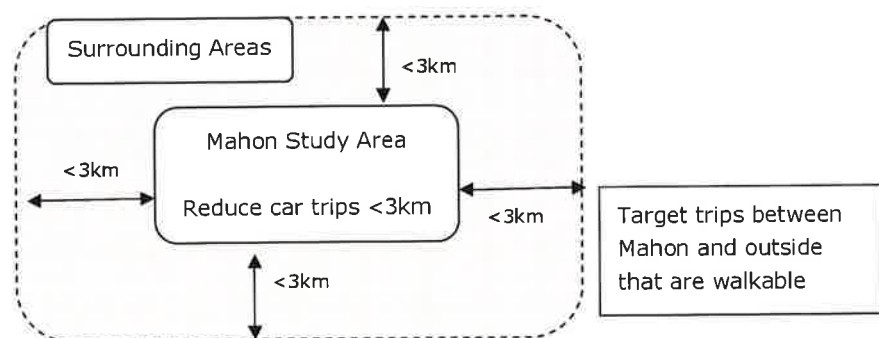
- Tabulate floor area growth for each development within each of the sub-areas;
- Select and apply an appropriate AM peak trip production and attraction factor appropriate for the type of activity associated with the development;
- Sum total new trips generated across individual developments within a sub-area (corresponding to a model zone) as a whole;
- Apply the appropriate mode share derived from the CATS PT Impact Model (obtained in Phase 1 above) to determine the number of new car trips associated with each option;
- Add the new car trips to 2010 base level to derive the 2021 baseline level of forecasted traffic for the area.

Phase 3: Application of Smarter Travel

3.1.5 The above methodology takes no account of the Smart Travel Policy supported by Cork City Council, which has set clear targets for car, public transport, walking and cycling mode share. Obtaining the target Smarter Travel mode shares can be achieved through PT services and infrastructure, particular configurations of land use mix, geographical integration, and by demand management measures.

3.1.6 To assess the impact of Smarter Travel Initiatives, the trip rates which were obtained above will be split according to future targets for car and non-car mode share. In particular, there will be a noticeable shift from car to walking and cycling.

Figure 1 Selective Walking Mode Share Increase



3.1.7 Figure 1 above helps to illustrate the approach to increasing mode share towards walking and away from car. The study area is shown as the central rectangle. Trips within this area are predominantly less than 3km. Clearly much of the Smarter Travel target can be achieved from transfer some of these internal trips. However, scope also exists to achieve the targets by reducing small distance trips by car entering and leaving the area. This is indicated by the 3km wide region bounding Mahon.

3.1.8 These shifts from car to walking will be linked to supporting transport measures as they come on line. These will include variations on the transport network as provided in the options list such as bus lane infrastructure. Increased walking and cycling measures such as mixed use, additional walking and

cycling links, improved infrastructure etc. will help improve the non-car mode share and the likely impact will be tested in the modelling scenarios.

Car Parking Provision

- 3.1.9 Data on parking rates in the future have been provided. As final scenarios, sensitivity testing for car parking provision will be done to ensure vehicle numbers entering areas are in line with parking limits.

Conclusion

- 3.1.10 The outputs from the above process will be various estimates of traffic demand in matrix form, with each matrix adjusted according to the assumed impact of sustainable transport measures on the level of demand for car travel. These demand matrices will then be assigned to the appropriate network scenario. Following this, KPI measures (as outlined in Information Note 2) will be generated from the model runs so that a comprehensive scenario comparison can be achieved to inform the study recommendations.

Information Note

Project Title:	Mahon Transport Assessment
MVA Project Number:	C8132300
Subject:	KPI Development
Note Number:	2 Version: 2.3
Author(s):	Sean Kearns
Reviewer(s):	Jessica Hanney; Ian Byrne
Date:	29 March 2011

1 Introduction

1.1 To undertake the Mahon Transport Assessment it is crucial to establish:

- **Study Objectives:** How these should be defined in the context of Department of Transport guidelines and in the context of the Mahon LAP development, including use of appropriate Department of Transport guidelines for the development of transport objectives;
- **Key Performance Indicators (KPIs):** which are used to measure performance of the strategy, i.e., a means of measurement that is used to assess if the desired outcome is achieved; and
- **Linking Objectives and KPIs:** Once study objectives are defined and KPIs are identified an iterative assessment process is undertaken to identify the best performing strategy.

2 Study Objectives

2.1 The Department of Transport guidelines used for the appraisal of transport strategies and schemes are recommended for use in the Mahon Study. These guidelines include the following five key categories:

- Economy;
- Environment;
- Accessibility and Social Inclusion;
- Integration; and
- Safety.

2.2 These objectives need to be tailored for the Mahon Study and are described in more general terms below.

ECONOMIC OBJECTIVES

- 2.3 Transport investment contributes to economic growth through the improvement of the efficiency and effectiveness of transport systems. Transport can also contribute to economic growth by encouraging new activities, improving accessibility and by enhancing the appeal of an area through street design or improvements in the built or natural environments. Economic objectives can be defined in a number of ways depending on the tools which are available to realise change.

ENVIRONMENTAL OBJECTIVES

- 2.4 Environmental objectives are concerned with conservation of Bio-diversity, Cultural Heritage, and Landscape.

ACCESSIBILITY AND SOCIAL INCLUSION

- 2.5 Accessibility is usually defined as 'ease-of-reaching'. The objective relates to providing access for people from varied areas with differing availability and means of transport, to facilities in different locations. This is usually considered from the point of view of residents, such that certain areas in which residential development predominates may be categorised by their ease of access to the main facilities provided by the town. Consideration of accessibility from such areas is helped by further defining the availability of car or access to public transport.
- 2.6 Social inclusion is concerned primarily with accessibility for those without a car and those whose mobility is impaired. A sub-objective within the Social Inclusion objective is that of equity. This is primarily concerned with ensuring that the benefits of a transport strategy are reasonably well distributed across society. Differing groups of people will have differing levels of need. An equitable strategy would generally prioritise the needs of the disadvantaged or those with special needs. This includes disabled or elderly people, but more generally is a group described as having no car available.

INTEGRATION

- 2.7 According to the Department of Transport guidelines, a number of aspects of integration need to be considered. For the Mahon study, it will be necessary to demonstrate some consideration of modal consideration (i.e., integrating amongst transport modes), and effectively integrating land uses with transport infrastructure in ways that promoted sustainable development and efficient use of resources.

SAFETY OBJECTIVES

- 2.8 The safety objective is concerned with the reduction in injuries and loss of life, or of damage to property and loss of income.

3 Performance Measurement

- 3.1 Performance measurement is used to determine if the study recommendations achieve the desired outcomes. Therefore, performance indicators (or KPI's) must be measurable and clearly related to the desired outcome.

- 3.2 Targets may then be set for each performance indicator, for example overall traffic speeds in the network may be set to the base year speed. These targets can be optimistic, be should be realistic. This allows successful scenarios to be identified. Furthermore, the particular attributes which influence a KPI one way or another (for example provision of bus priority, or the location and density of a development) can be fine tuned to obtain a transport and land use scenario that meet the targets and, therefore, satisfy study objectives.

4 Study Objectives and Indicators

- 4.1 The table below summarises the 17 key objectives that form the basis for the development of the Mahon Study. It also sets out the KPIs that will be used in the assessment process to measure progress towards achieving the objectives. Many of the KPIs will be derived from the Mahon Traffic Model but some other will require independent data and analysis (for example, use of accident statistics or bus lane utilisation estimation).

Table 1 Linking Objectives and KPIs

Efficiency and Economic Objectives	Key Performance Indicators
1. Support improved economic competitiveness	Queues
2. Facilitate jobs growth	Journey times
3. Transport Reliability and Quality	Utilisation of bus lane infrastructure
4. Minimise Impact on N25	Change in traffic volumes/ queues of those travelling along the N25
Environmental Objectives	Key Performance Indicators
5. Support Smarter Travel objectives	Overall modal share
6. Reduce car dependency	Modal shift away from car
7. Minimise transport related impacts on air quality, noise and vibration	Emissions calculations (output from SATURN model)
8. Minimise transport energy consumption	Fuel consumption statistics (output from SATURN model)
9. Improve attractiveness of the public realm	AADT / Speeds
Accessibility and Social Inclusion Objectives	Key Performance Indicators
10. Develop integration between transport modes	Greater frequency of service
11. Support social inclusion	Intersection of catchment areas among transport corridors
12. Increase accessibility to opportunities and services (employment, retail, leisure)	Catchment areas of new links / services to vulnerable groups or deprived areas
	Average trip length by trip purpose (e.g. home to work, home to shopping)

13. Enhance transport and land use integration	Density around public transport nodes
<hr/>	
Integration Objectives	Key Performance Indicators
14. Consistency with government integrated transport policy, balanced regional development and social inclusion	Reduced in-vehicle journey times Reduced walking time associated with interchange
15. Geographical Integration, i.e., Reduce travel demand through lower distances	Modal shift towards walking, cycling, and public transport
<hr/>	
Safety Objectives	Key Performance Indicators
16. Reduce health risks	Quantification of accident reductions in terms of fatalities and personal injuries (requires existing data for the area).
17. Reduce incidence of accidents and fatalities	Lower speed Lower traffic flows
<hr/>	

Owen Shinkwin

From: Frank McCabe
Sent: 21 June 2011 12:56
To: David Clements
Cc: Michael MacAree
Subject: RE: Mahon LAP: Integration of land use and transport

Dave,

Having read both documents – I would have the following initial comments:

- (a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.
- (b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR.
- (c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, DM and parking measures as suggested in the MVA report.

I am available over the next 3 days to discuss these comments in more detail.

Frank

From: David Clements
Sent: 20 June 2011 16:17
To: Frank McCabe
Cc: John Nott
Subject: FW: Mahon LAP: Integration of land use and transport

Hi Frank,

Mick would like you to have a look at the attached reports on a methodology for modelling related to the Mahon Local Area Plan in Cork. We're trying to give some advice on the usefulness of the approach they are taking, particularly how walking and cycling can be looked at, and we would like to get back with something by the end of the week.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY

Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Michael MacAree
Sent: 16 June 2011 17:06
To: David Clements
Subject: FW: Mahon LAP: Integration of land use and transport

Info from Cork

Mick

From: Ann Bogan [mailto:ann_bogan@corkcity.ie]
Sent: 15 June 2011 17:41
To: Michael MacAree
Subject: FW: Mahon LAP: Integration of land use and transport

Mick,

I attach Agenda, briefing note and some background documents for our meeting at 12.00 on Friday on the Mahon Local Area Plan transport issues. Tara Spain, Paul Moran and Richard Bowen from the NRA are attending, as well as myself, Jeremy Ward and Erin O'Brien from Planning Dept and Liz Kidney and John Gibson from the Roads and Transportation Dept.

Jeremy, Liz and myself will meet you around 11.00 to have a more general discussion on planning and related transport issues in Cork.

See you on Friday,

Regards,

Ann

*Senior Planner,
Planning Policy Section,
Planning and Development Directorate
Cork City Council,
City Hall,
Cork*

021 4924331

From: Jeremy Ward
Sent: 15 June 2011 16:50
To: Ann Bogan
Subject: Mahon LAP: Integration of land use and transport

Ann

Further to our meeting of 4pm please find the following documents to be issued to those attending Friday's meeting:

- Proposed Agenda;
- Briefing Note.

In addition, I also enclose the following MVA documents as background information:

- Modelling Proposal [seen in February by the NRA];
- KPI [Objectives] Note; and
- Study Methodology.

If you need anything else or require any changes please don't hesitate to ask.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

Owen Shinkwin

From: David Clements
Sent: 01 July 2011 16:49
To: jeremy_ward@corkcity.ie
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,

Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

69

Owen Shinkwin

From: Jeremy Ward <jeremy_ward@corkcity.ie>
Sent: 05 July 2011 09:15
To: David Clements
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

David

Thanks very much for your feedback. I will take a look and get back to you with any questions later on today or tomorrow. I hope that's OK with you.

One comment I would have on a superficial look is that they are comments of detail rather than the big picture. Michael talked about syncing the planning unit with the transport unit. Do you have any guidance on this matter?

Thanks again.

Jeremy

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [mailto:David.Clements@nationaltransport.ie]
Sent: 01 July 2011 16:49
To: Jeremy Ward
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

Owen Shinkwin

From: Jeremy Ward <jeremy_ward@corkcity.ie>
Sent: 13 July 2011 16:10
To: David Clements
Cc: Owen Shinkwin
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology
Attachments: 130711 Draft Minute JW v1.2.pdf

Hi David

I just tried calling but you weren't available. I wonder if you could spare a mo' to give me a call. I attach a draft minute of the meeting held on the 17th for your consideration and comment.

I was wondering if it might be possible for you to give us some guidance on employment / residential ratios in different contexts from your experience in Dublin [e.g. with / without the LUAS, adjacent to motorways, suburban, size of planning unit, etc]. I think that it was you who suggested that a 30/70 split was normal. We are aiming at a 50/50 split in terms of new development, which might be 30/70 overall [would have to do the number-crunching]. Is this in terms of what? Floorspace? People? Trips? Etc. Your insight would be very much appreciated.

Please give me a call to discuss if you have a mo'. My phone number is below.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [mailto:David.Clements@nationaltransport.ie]
Sent: 01 July 2011 16:49
To: Jeremy Ward
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

Draft Minute

Cork City Council
Comhairle Cathrach Chorchai
City Hall
Cork



Planning Policy Section
Planning + Development Directorate

Project: Mahon Local Area Plan 2011

Meeting purpose: Strategic Transport + Traffic Assessment

Author: Jeremy Ward

Date of Meeting: Friday 17 June 2011 @ 12pm

Meeting Venue: Room 1.1, City Hall, Cork

Note of meeting prepared: Wednesday 13 July 2011 by Jeremy Ward [v1.2 4.00pm]

Attendees

Cork City Council	NTA
<u>Planning + Development</u>	David Clements, Mick MacAree,
Ann Bogan, Erin O'Brien [part],	Owen Shinkwin
Jeremy Ward	NRA
<u>Roads + Transportation</u>	Paul Moran, Richard Bowen
Elizabeth Kidney + John Gibson	Tara Spain
Apologies	
Noel Tummon	

Item	Points	Actions
Introduction	<p>AB opened the meeting and stated that the purpose of the meeting was to give the NTA and the NRA an update on the Mahon Local Area Plan 2011.</p> <p>AB gave a brief overview of the Core Strategy for the city. The NRA outlined their investment strategy for Cork in relation to the Core Strategy.</p> <p>There was a lengthy discussion about the role of the national roads network and the need to strike a balance between strategic role and local distributor role within urban areas. The N25 has 11 junctions on a 14 kilometres stretch, which means that it has a very strong local distributor role.</p> <p>The NRA stated that their aim is to see "freeflow" traffic on the national road network to serve the strategic needs of the region. The NRA considers that freeflow [or near freeflow] is essential to serve the needs of the Ringaskiddy employment node. There was a discussion about the importance of Cork City in relation to the road network.</p>	
Mahon LAP	<p>The City Council gave a brief overview of the four Mahon development options and the related transport and traffic issues, and the approach being taken in the strategic assessment. The following points were discussed:</p> <ul style="list-style-type: none"> The NRA is particularly concerned that the Jack Lynch tunnel is "at capacity". This is defined by daily volume of cars using the N25. There was a discussion about whether confined periods of congestion constitute a real problem within an urban area; 	

Item	Points	Actions
Mahon LAP [contd.]	<ul style="list-style-type: none"> The NRA expressed concern at the volume of traffic using the N25 to get to Mahon Point [from Glanmire / Riverstown / Carrigtwohill]. The NTA indicated that from their experience in Dublin they could provide guidance on the appropriate balance between employment / residential uses from a variety of examples with different characteristics [e.g. a one-third employment : two-thirds residential]. The size of the planning unit and location in relation to the transportation system will therefore make a difference to how many jobs are appropriate; The NTA strongly recommend that the City Council employ area-based parking strategies, rather than site-specific parking strategies. 	NTA to provide ratio guidance
Mahon Point Shopping Centre / demand management	<p>There was a lengthy discussion about the traffic and transportation issues pertaining to Mahon Point Shopping Centre, and the challenges that it poses to the National and Local Road Network and wider accessibility.</p> <p>Issues discussed included:</p> <ul style="list-style-type: none"> Volume of traffic using N25 to get to Mahon Point [this is the main problem at Mahon]; The need for a range of measures to assist access to Mahon and MPSC; Demand Management Tools employed at Liffey Valley Shopping Centre via condition at South Dublin CoCo; Demand management tools employed at Blanchardstown Shopping Centre via condition at Fingal County Council; Demand Management relating to Mahon Point, such as: <ul style="list-style-type: none"> N25 road pricing, including negative impacts on Cork City Centre and local road network; and Regulations to allow local authorities to impose car parking charges on private car parks; Bus-based park and ride from north side of tunnel [e.g. from Dunkettle]; <p>The NTA suggested that we also look at the transportation and traffic strategy for Cherrywood [Carrickmines] in Dublin.</p> <p>The NTA also suggested that we should consider examples of relevant places to develop reasonable assumptions for modal split / trip generation, trip distributions to develop a clear understanding of the issues involved.</p> <p>There was a brief discussion about funding of infrastructure.</p>	

Conclusions	<ul style="list-style-type: none"> NTA agreed to provide a guidance note to Cork City Council on what they consider to be an appropriate approach to the Mahon Strategic Modelling [Transport and Traffic]; All parties look forward to working together on this and other strategic projects of significance. <p>AB thanked the NTA and NRA for coming to Cork to discuss Mahon and for their helpfulness and willingness to engage on the future of Mahon.</p>	NTA to provide
AOB	None.	
DONM	None defined.	

Jeremy Ward, SEP / 13 July 2011

Owen Shinkwin

From: David Clements
Sent: 13 July 2011 17:26
To: Jeremy Ward
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology
Attachments: Dublin_Examples_Mahon.jpg

Hi Jeremy,

I tried to give you a call just there to discuss your email. I can't really recall the details of the conversation we had but I've attached some quick analysis below of the District Centres around the M50 in Dublin which could be comparable in spatial characteristics to Mahon. Generally, in local planning, such ratios would refer to floorspace but in the NTA, because we are only really concerned with the generation of trips, we tend to look at numbers of people and numbers of jobs.

Note the attached map which shows the areas to which the figures apply. These areas were defined as District Centres for the purposes of the GDA transport strategy using a GIS tool and some of the resultant shapes may seem off – but they can be explained. I hope this gives some indication of the type of ratios evident in these areas in 2006. They do not tend to change much over time either – over a wider suburban type area as population grows, employment grows too. If you want some tighter analysis of some EDs we can provide that and possibly quite quickly.

I hope this data is of use to you and please give me a call when you get a chance and we can discuss this.

District Centre	Pop2006	Emp2006	Ratio
Blanchardstown	28,266	6,717	0.24
Blanchardstown_SC	55,625	17,603	0.32
Bray	33,731	11,848	0.35
Dundrum	30,160	14,313	0.47
Liffey Valley	13,779	7,447	0.54
Swords	45,514	15,920	0.35
Tallaght	73,999	28,981	0.39

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,

Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 13 July 2011 16:10
To: David Clements
Cc: Owen Shinkwin
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I just tried calling but you weren't available. I wonder if you could spare a mo' to give me a call.
I attach a draft minute of the meeting held on the 17th for your consideration and comment.

I was wondering if it might be possible for you to give us some guidance on employment / residential ratios in different contexts from your experience in Dublin [e.g. with / without the LUAS, adjacent to motorways, suburban, size of planning unit, etc]. I think that it was you who suggested that a 30/70 split was normal. We are aiming at a 50/50 split in terms of new development, which might be 30/70 overall [would have to do the number-crunching]. Is this in terms of what? Floorspace? People? Trips? Etc. Your insight would be very much appreciated.

Please give me a call to discuss if you have a mo'. My phone number is below.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning & Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [<mailto:David.Clements@nationaltransport.ie>]
Sent: 01 July 2011 16:49
To: Jeremy Ward
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

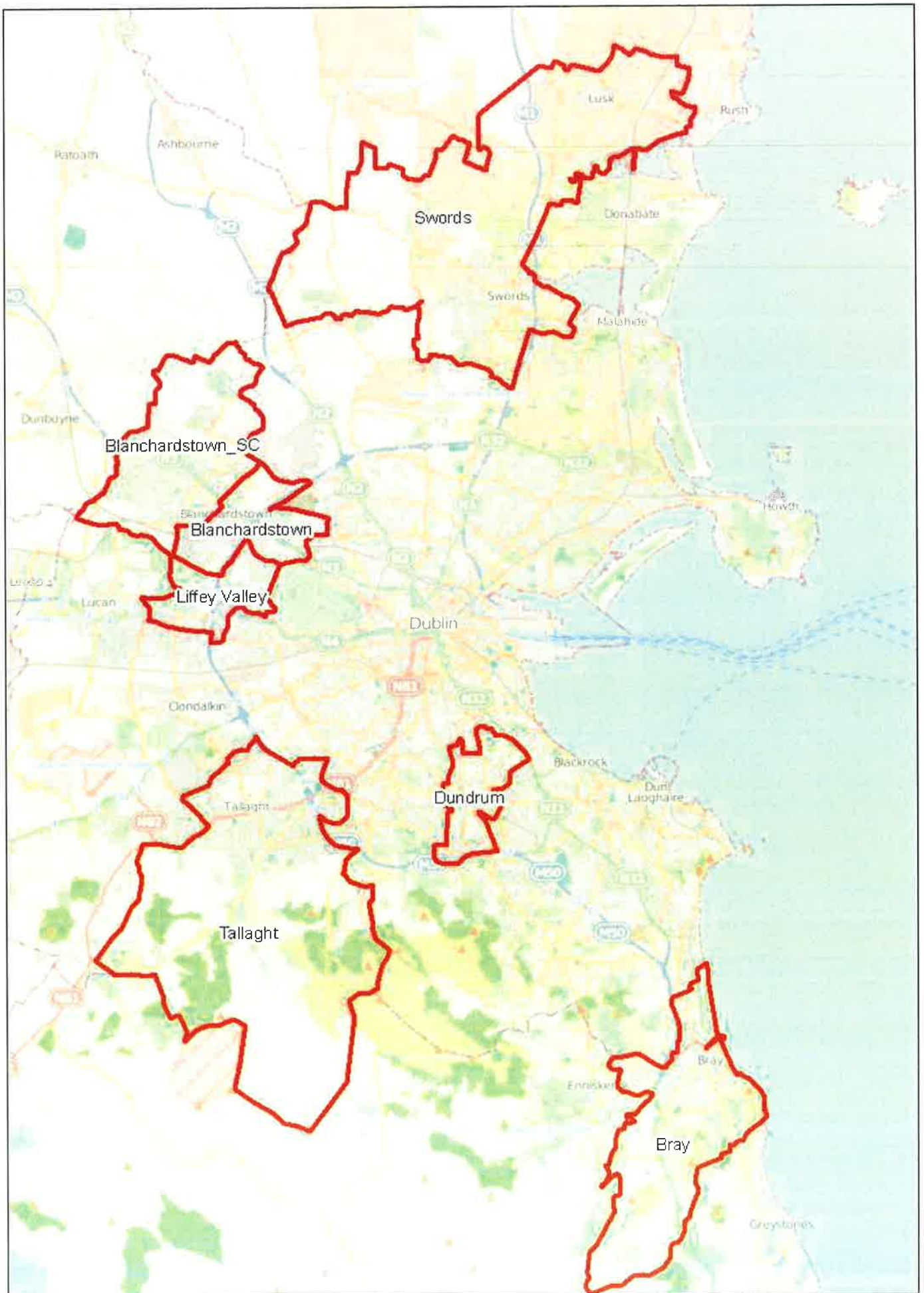
David Clements
Land Use & Transport Planner

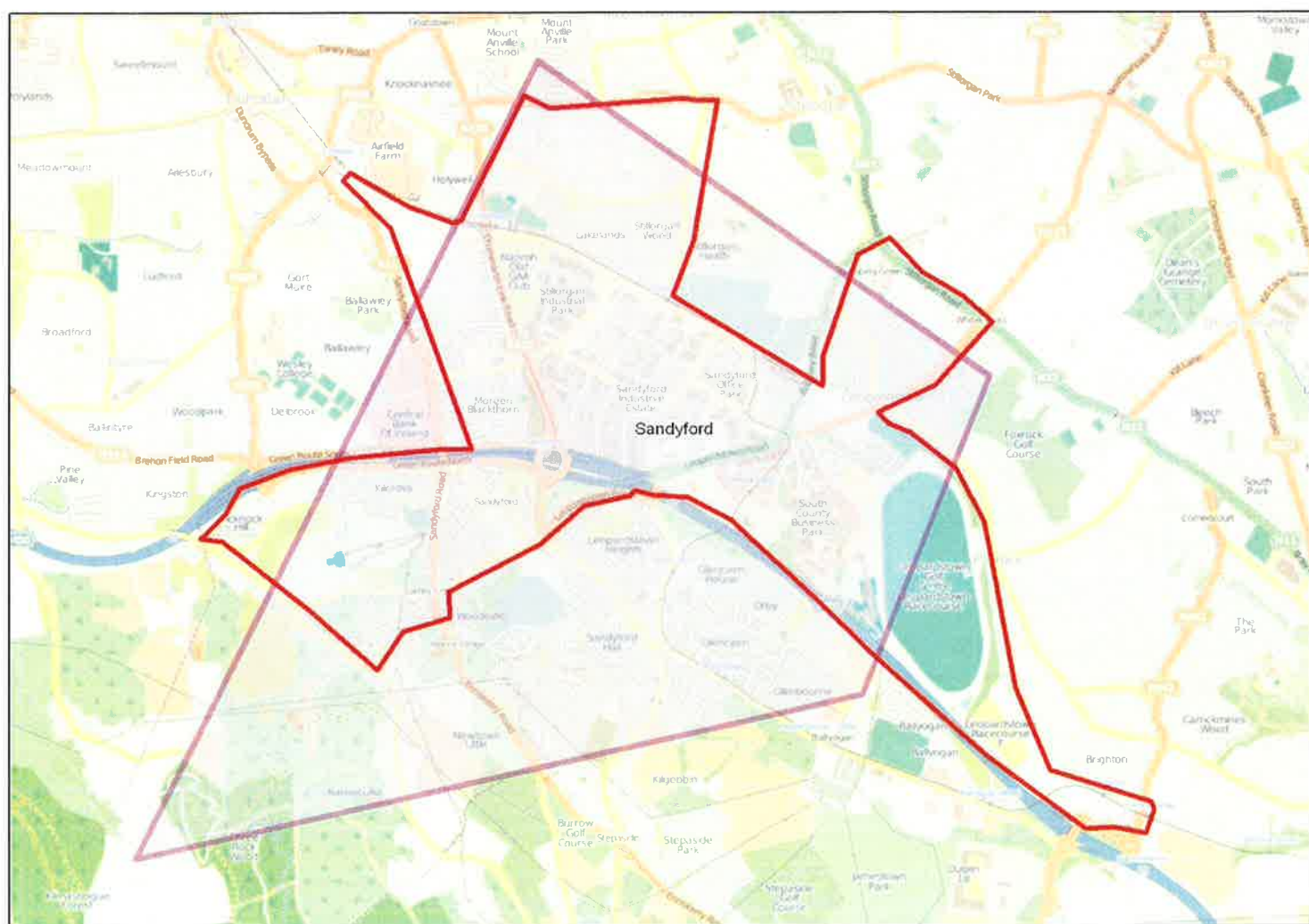


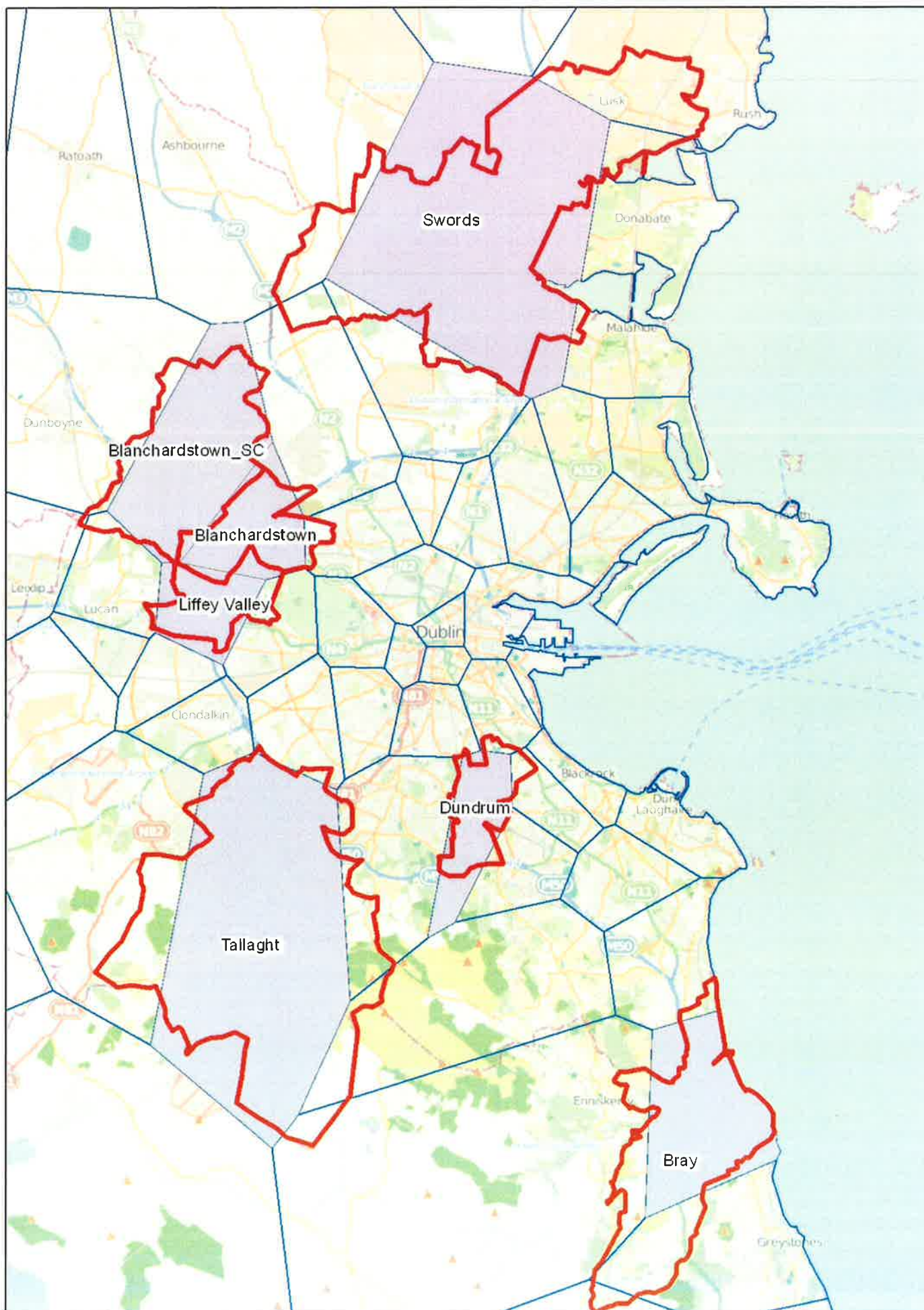
NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>







Owen Shinkwin

From: David Clements
Sent: 14 July 2011 13:19
To: Jeremy Ward
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology
Attachments: Dublin_Examples_Mahon_Sandyford.jpg; Dublin_Examples_Mahon_AllDCs.jpg

Hi Jeremy,

I've attached 2 jpegs, one showing all the straight-line boundaries that the GIS process created for District Centre catchments, and another showing Sandyford. The data for Sandyford is below:

District Centre	Pop2006	Emp2006	Ratio
Sandyford	12,582	18,208	1.45

If there is anything else you wish to discuss for Mahon, please do not hesitate to contact me,

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305
david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 13 July 2011 16:10
To: David Clements
Cc: Owen Shinkwin
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I just tried calling but you weren't available. I wonder if you could spare a mo' to give me a call.

I attach a draft minute of the meeting held on the 17th for your consideration and comment.

I was wondering if it might be possible for you to give us some guidance on employment / residential ratios in different contexts from your experience in Dublin [e.g. with / without the LUAS, adjacent to motorways, suburban, size of planning unit, etc]. I think that it was you who suggested that a 30/70 split was normal. We are aiming at a 50/50 split in terms of new development, which might be 30/70 overall [would have to do the number-crunching]. Is this in terms of what? Floorspace? People? Trips? Etc. Your insight would be very much appreciated.

Please give me a call to discuss if you have a mo'. My phone number is below.

Regards

Jeremy Ward
Senior Executive Planner
D. Jeremy Ward - RPS

From: David Clements [mailto:David.Clements@nationaltransport.ie]

Sent: 01 July 2011 16:49

To: Jeremy Ward

Cc: Michael MacAree; Frank McCabe

Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments. In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,

David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305
david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

Owen Shinkwin

From: Jeremy Ward <jeremy_ward@corkcity.ie>
Sent: 19 July 2011 15:01
To: David Clements
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I hope you are well. I am just writing to request a small favour regarding the ratio view of the world – if you have a little time to respond.

I have a couple of questions that I might put to you regarding the below data and their context / story – that you could respond to when you get a mo' following a conversation that I just had with Ian Byrne [I hear that you are meeting him later on for a drink].

1. What are the transportation / traffic issues relating to points on the ratio scale [e.g. going above the 0.5 ratio]?
2. Do you have pre-LUAS ratios for Dundrum and Tallaght [i.e. what difference did RT make to the overall picture]
3. Do you have examples of similar analyses for any UK cities [as a matter of interest]. Any the size of Cork [i.e. a small city as opposed to a middle-sized city like Dublin].

Any clarification / amplification you could offer would be very much appreciated.

Cheers

Jeremy

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [mailto:David.Clements@nationaltransport.ie]
Sent: 13 July 2011 17:26
To: Jeremy Ward
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hí Jeremy,

I tried to give you a call just there to discuss your email. I can't really recall the details of the conversation we had but I've attached some quick analysis below of the District Centres around the M50 in Dublin which could be comparable in spatial characteristics to Mahon. Generally, in local planning, such ratios would refer to floorspace but in the NTA,

because we are only really concerned with the generation of trips, we tend to look at numbers of people and numbers of jobs.

Note the attached map which shows the areas to which the figures apply. These areas were defined as District Centres for the purposes of the GDA transport strategy using a GIS tool and some of the resultant shapes may seem off – but they can be explained. I hope this gives some indication of the type of ratios evident in these areas in 2006. They do not tend to change much over time either – over a wider suburban type area as population grows, employment grows too. If you want some tighter analysis of some EDs we can provide that and possibly quite quickly.

I hope this data is of use to you and please give me a call when you get a chance and we can discuss this.

District Centre	Pop2006	Emp2006	Ratio
Blanchardstown	28,266	6,717	0.24
Blanchardstown_SC	55,625	17,803	0.32
Bray	33,731	11,848	0.35
Dundrum	30,160	14,316	0.47
Liffey Valley	13,779	7,447	0.54
Swords	45,614	15,920	0.35
Tallaght	73,999	28,981	0.39

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 13 July 2011 16:10
To: David Clements
Cc: Owen Shinkwin
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I just tried calling but you weren't available. I wonder if you could spare a mo' to give me a call.
I attach a draft minute of the meeting held on the 17th for your consideration and comment.

I was wondering if it might be possible for you to give us some guidance on employment / residential ratios in different contexts from your experience in Dublin [e.g. with / without the LUAS, adjacent to motorways, suburban, size of planning unit, etc]. I think that it was you who suggested that a 30/70 split was normal. We are aiming at a 50/50 split in terms of new development, which might be 30/70 overall [would have to do the number-crunching]. Is this in terms of what? Floorspace? People? Trips? Etc. Your insight would be very much appreciated.

Please give me a call to discuss if you have a mo'. My phone number is below.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [mailto:David.Clements@nationaltransport.ie]
Sent: 01 July 2011 16:49
To: Jeremy Ward
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in

other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: David Clements
Sent: 20 July 2011 15:25
To: Jeremy Ward
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

I'll try to give some more information here and I hope it's of some help

1. Traffic and transportation issues are mainly related to scale of development, although the ratios have a bearing. Basically the more employment in an area, the more trips are attracted in in the AM Peak and generated out in the PM Peak. This could mean, in a mixed use area for example, that public transport services are required in both directions at both peak times. So a 50:50 split of 5,000 residents and 5,000 people would have a very different impact on the network and would have very different needs than a split of 9,000 residents and 1,000 jobs. The consequences of the ratio chosen can be assessed strategically using the transport model.
2. We don't have the full POWCAR data set for 2002 before Luas was introduced so we haven't done that specific analysis. Perhaps South Dublin or Dún Laoghaire Rathdown County Council have done surveys on the land use impact of developing public transport. Our contact in SDCC is Paul Hogan and Mary Henchy in DLRCC.
3. We also don't have any data on other cities. Our main focus to date was on the Transport Strategy for the GDA so that's the only area we have analysed in this way.

I'd just like to reiterate that the ratios in the sample data set given are in no way indicative of good or bad planning. In order to fully understand the merits or otherwise of these areas, a much wider analysis of travel behaviour and non-planning data would be needed which may be beyond the scope of the Mahon LAP.

If you wish to have a chat about this, please give me a call on the number below.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Direct Dial: +353 (0)1 879 8305

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 19 July 2011 15:01
To: David Clements
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I hope you are well. I am just writing to request a small favour regarding the ratio view of the world – if you have a little time to respond.

I have a couple of questions that I might put to you regarding the below data and their context / story – that you could respond to when you get a mo' following a conversation that I just had with Ian Byrne [I hear that you are meeting him later on for a drink].

1. What are the transportation / traffic issues relating to points on the ratio scale [e.g. going above the 0.5 ratio]?
2. Do you have pre-LUAS ratios for Dundrum and Tallaght [i.e. what difference did RT make to the overall picture]
3. Do you have examples of similar analyses for any UK cities [as a matter of interest]. Any the size of Cork [i.e. a small city as opposed to a middle-sized city like Dublin].

Any clarification / amplification you could offer would be very much appreciated.

Cheers

Jeremy

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [mailto:David.Clements@nationaltransport.ie]
Sent: 13 July 2011 17:26
To: Jeremy Ward
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

I tried to give you a call just there to discuss your email. I can't really recall the details of the conversation we had but I've attached some quick analysis below of the District Centres around the M50 in Dublin which could be comparable in spatial characteristics to Mahon. Generally, in local planning, such ratios would refer to floorspace but in the NTA, because we are only really concerned with the generation of trips, we tend to look at numbers of people and numbers of jobs.

Note the attached map which shows the areas to which the figures apply. These areas were defined as District Centres for the purposes of the GDA transport strategy using a GIS tool and some of the resultant shapes may seem off – but they can be explained. I hope this gives some indication of the type of ratios evident in these areas in 2006. They do not tend to change much over time either – over a wider suburban type area as population grows, employment grows too. If you want some tighter analysis of some EDs we can provide that and possibly quite quickly.

I hope this data is of use to you and please give me a call when you get a chance and we can discuss this.

District Centre	Pop2006	Emp2006	Ratio
Blanchardstown	28,266	6,717	0.24
Blanchardstown_SC	55,625	17,603	0.32
Bray	33,731	11,848	0.35
Dundrum	30,160	14,316	0.47
Liffey Valley	13,779	7,447	0.54
Swords	45,514	15,920	0.35
Tallaght	73,999	28,981	0.39

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>

From: Jeremy Ward [mailto:jeremy_ward@corkcity.ie]
Sent: 13 July 2011 16:10
To: David Clements
Cc: Owen Shinkwin
Subject: RE: NTA Feedback - Mahon LAP Modelling Methodology

Hi David

I just tried calling but you weren't available. I wonder if you could spare a mo' to give me a call.
I attach a draft minute of the meeting held on the 17th for your consideration and comment.

I was wondering if it might be possible for you to give us some guidance on employment / residential ratios in different contexts from your experience in Dublin [e.g. with / without the LUAS, adjacent to motorways, suburban, size of

planning unit, etc]. I think that it was you who suggested that a 30/70 split was normal. We are aiming at a 50/50 split in terms of new development, which might be 30/70 overall [would have to do the number-crunching]. Is this in terms of what? Floorspace? People? Trips? Etc. Your insight would be very much appreciated.

Please give me a call to discuss if you have a mo'. My phone number is below.

Regards

Jeremy Ward
Senior Executive Planner

Planning Policy Section
Planning + Development Directorate,
Cork City Council, City Hall, Cork

Tel: 021-492-4450
E: jeremy_ward@corkcity.ie

From: David Clements [<mailto:David.Clements@nationaltransport.ie>]
Sent: 01 July 2011 16:49
To: Jeremy Ward
Cc: Michael MacAree; Frank McCabe
Subject: NTA Feedback - Mahon LAP Modelling Methodology

Hi Jeremy,

We have reviewed the documentation on the methodology proposed and would make the following comments.

In deriving model input data, it is important to be cognisant of all-day travel demand, particularly for retail, and the requirements and nature of local trips. Neither of these elements can be fully accounted for using a traditional highway model which assesses the impact of trips, focussed on mechanised modes, on the road network. While the methodology seems reasonable, based along traditional lines, we feel that it needs to be supported by more evidence based analysis

Trip rates

Trip rates would be more accurately derived from existing developments using empirical data sources, rather than basing it solely on floorspace. The latter should be used as a check rather than a determinant. These trip rates can be calculated on the basis of the different land uses proposed as follows:

Employment:

Using POWCAR data from 2006 for a similar type of development elsewhere in Cork, in combination with observed travel patterns from any existing surveys, the numbers of employees and the trip rate can be derived for the office and employment elements of the proposed development and can be applied throughout the day.

Residential:

Data from the NTA Household Survey will give an estimate of trips generated across the day from their origins. Even though this survey dates from 2006 and relates to the GDA only, it has been found that the trips generated by households does not vary by time or location.

Retail:

The NTA Household Survey, in combination with local data sources, should give a more robust basis for the derivation of trip rates to retail. Again, this will give an all-day figure for 7-days of the week which can be used to examine peak retail times at weekends. POWCAR data can be used to estimate a trip rate for retail employees.

Education:

The NTA Education survey for the GDA, also from 2006, will give detailed empirical evidence for any school trips that may be generated in the Mahon area. Again this should be examined in combination with local data.

Mode Splits

The mode split for walking and cycling could be derived from an analysis of POWCAR and by making assumptions based on potential for these modes. A target could be derived from developments in Cork, or elsewhere, which have a high walking and cycling mode share.

An analysis of trip lengths from the POWCAR database would then show potential for these modes – i.e. any trips to work or education below 2km are potential walking trips and trips below 5km for cycling. A similar approach could be used for Retail based on the empirical evidence provided by the NTA Household Survey. This stage would be part of Phase 2 as set out in the methodology paper, in advance of the application of Smarter Travel.

Analysis of Local Trips

The highway model does not examine trips within model zones – internal trips. For the purposes of planning, it is these trips that can be most important. While the model will give a ratio of internal trips as a percentage of trips generated by, or attracted to, each zone, it is not intended as a tool to consider local network measures – particularly any measures related to quality. The Transport Assessment should be cognisant of these factors and in a full analysis, examine the needs of local or internal trips, particularly as it relates to walking and cycling measures in the LAP.

In summary:

(a) The modelling methodology seems reasonable, but along very traditional lines and needs to be supported by more evidence based analysis – as per b and c below.

(b) Trip attraction rates should be derived from the POWCAR data using similar (industry type) developments - it should not rely on floor area, but should just take number of jobs and appropriate trip rates from POWCAR. There is also data from the NTA Household survey and the Education survey which may be of assistance in deriving the trip rates.

(c) Rather than just setting targets for walking and cycling based on distance between home and work, the targets should be based if possible on evidence from the POWCAR dataset. E.g. take an existing mixed use development in Cork where walking and cycling percentages are high – examine the patterns of travel & trip length distribution etc and set this example as the target. If no such good example exists in Cork – take a good example from elsewhere (e.g. a town centre with good walking and cycling percentages). In setting targets make sure there are no natural physical barriers to walking & cycling – e.g. steep hills etc. In the absence of such physical barriers, targets achieved in other areas can be achieved for the Mahon development through network, Demand Management and parking measures as suggested in the MVA report.

If you have any queries regarding the above, please do not hesitate to contact me.

Thanks,
David

David Clements
Land Use & Transport Planner



NATIONAL TRANSPORT AUTHORITY
Dún Scéine,
Iveagh Court,
Harcourt Lane,
Dublin 2

Tel: + 353 (0)1 879 8300
Ddi: + 353 (0) 1 879 8305

david.clements@nationaltransport.ie
Web: <http://www.nationaltransport.ie>