



Successful Travel Awareness Campaigns
& Mobility Management Strategies



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Guidelines for the integration of Mobility Management with Land Use Planning



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FOREWORD – MAXLUPO AS PART OF THE MAX PROJECT

Mobility Management (MM) is a powerful way of influencing how people travel and so reducing the negative impacts of excessive car use. The land use planning process presents key opportunities for MM: it can help to produce a built environment that is less car-dependent. The plan-making and building permission process are key points at which MM can be introduced, to influence how people travel to and from a new development, from the day it opens. MaxLupo uses real-life examples to show how and when MM can be integrated with the land use planning process. It is useful for any planning professional, developer or politician who wants to more actively use the planning process as a way to influence travel behaviour to reduce congestion and improve the accessibility and quality of life of our towns and cities, and new developments within them.

MaxLupo was developed in the project MAX - Successful Travel Awareness Campaigns and Mobility Management Strategies as a part of Work Package (WP) D – Integrating Mobility Management and Land Use Planning. MaxLupo explains and provides examples of policies to better integrate sustainable transport with the land use planning process; and how to better integrate MM with land use planning.

MAX ran from 2006 to 2009 and was the largest research project on Mobility Management within the EU's sixth framework programme. The MAX consortium, of 28 partners, served to extend, standardise and improve Mobility Management – it did so in the fields of quality management, campaigns, evaluation, modelling and land use planning. Much of the work was directly endorsed by the European Platform on Mobility Management (EPOMM) and continues to be supported by it. The work has resulted in several products and services that can be downloaded via www.epomm.org. For more information, please visit www.epomm.org or www.max-success.eu.

MaxLupo was developed by synergo (Switzerland), ILS (Germany), Edinburgh Napier University (Scotland) and University of Maribor (Slovenia); with input from the other partners in MAX WP D: Cracow University of Technology (Poland), Vilnius Gediminas Technical University (Lithuania), ETT (Spain), Trivector Traffic (Sweden). MaxLupo is based on the findings in the above shown WP D member countries, Ireland and The Netherlands, and are also informed by US experience in this field. A full list of WP D reports is provided at the end of MaxLupo.

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Summary

Mobility Management (MM) is a way of promoting the use of sustainable transport by influencing travellers' attitudes and behaviour. MM often focuses on a specific site – an office, hospital, university, shopping centre or stadium, for example. Early in the planning process, when land use plans are made, local authorities can ensure that new developments will be sited in locations where a choice of modes is available. Then, when a new site is being planned or an existing one expanded or changed, this usually requires some form of building permission, involving negotiations between the site developer(s) and public authorities. This can be used to secure MM measures at the site before it opens: parking management; infrastructure for cycling, walking and public transport; new bus services; or advertising and promotion to encourage site users to take alternative modes. Both approaches ensure that site users have a choice of ways to reach the site from the first day that it opens, when they are most open to considering alternatives. Together, these actions within plan-making, and in the site-related building permission process, are what is termed in this report **the integration of MM and land use planning**.

This integration is a good idea because it reduces congestion and pollution caused by car traffic at new developments; provides access to developments for all, regardless of whether or not they have a car; and because it works: new hospitals in Cambridge and Edinburgh, in the UK, were subject to MM as part of the building permission process and now only 40-50% of their staff drive on their own to work. Without MM, this figure would be closer to 90%. This means less traffic, less congestion, healthier staff and fewer CO₂ emissions. Using the UK average of 6,200 km for car commute per year and values of noise, carbon, congestion, local air pollution, infrastructure and accidents (see www.webtag.org.uk) of 0.18 € per km, each member of staff who changes from driving to work on their own to another mode will reduce the cost to society of their environmental impacts by 1,100 € per year. In addition the organisation could save on average 350 € per year on maintaining each parking space that they no longer have to provide.

Aimed at planners, planning consultants, local authorities, developers and university planning schools, MaxLupo gives practical advice on and real life examples of how to better integrate sustainable transport with land use planning and thus how to make MM a core part of the building permission process for new developments. There is also an appendix with 75 case studies of integration of sustainable transport and land use, and of Mobility Management in the building permission process. The full set of outputs which includes these MaxLupo guidelines is shown in Figure 1, below.

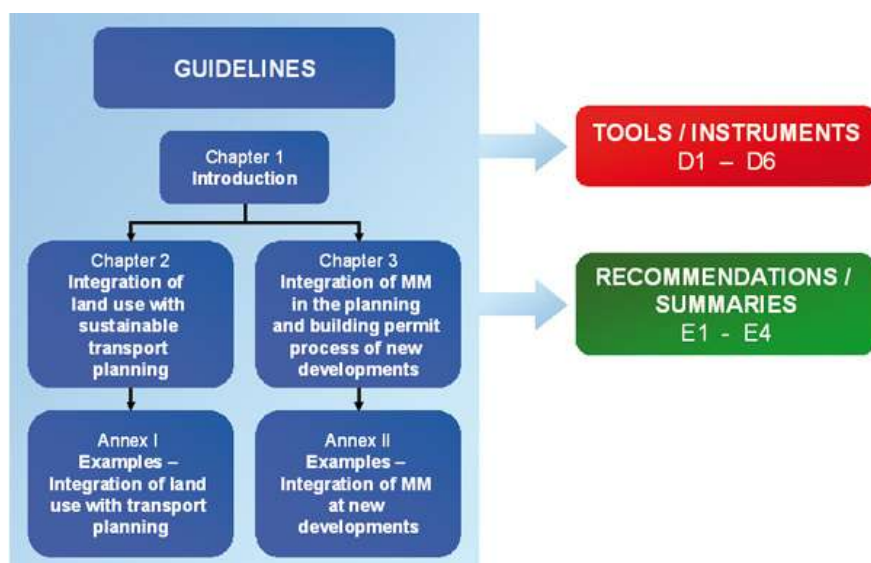


Figure 1: WP D project outputs on integrating MM and planning

Integrating sustainable transport with land use planning means: achieving a policy-centric urban structure where local needs can be accessed locally; medium and higher densities with a mix of uses; concentrating development at public transport nodes and/or at stops along corridors; re-using brownfield sites in urban areas; and assessing transport impacts as part of the planning process. Ways in which such policies can be pursued are shown below:

Policy guidelines

Planning policy guidelines are developed by regional or national government in many countries to influence local government land use plans and building permission decisions. Guidelines can be written to encourage the integration of land use and sustainable transport; and to encourage local government to seek Mobility Management measures in new developments.

Policies deriving from environmental laws

In some countries there are environmental laws that have a strong influence on the content of local plans and/or building permission decisions. For example, EU law requires that cities meet certain air quality thresholds; MM measures for a new development could contribute to this.

Plan-making and plans

Local plans set out the locations for new developments in different land use categories, as well as sometimes for new transport infra-structure. Plans can be drawn up in such a way so as to promote / encourage the use of sustainable transport. For example, the location of different land uses like housing or retail and the design of the area (footpaths, a limited number of on-street parking spaces, etc.) will influence how people choose to travel. Thus, these plans have the potential to better integrate land use and transport.

Functional / organisational integration

For land use planning to influence how people travel, it is important that land use planners understand how this can happen, and are generally made aware of transport issues. One way to do this is to ensure that transport and land use planners actually work together and are able to comment on and influence each other's work.

Integrating MM with the building permission process can occur when individual developments are given building permission, or when local plans are drawn up like detailed site development plans (DSDPs), which exist in several countries. The integration can be brought about in several different ways, as shown below:

Mobility Management advice during the planning or building permission process

Before the documents for request of permission of a Detailed Site Development Plan or a new building are delivered to the public authority for examination, there will be contact between the authorities and the applicant. During this period of contact, verbal or written information on Mobility Management from the local authorities to the applicant would be a simple strategy to raise the developer's awareness.

Securing Mobility Management through negotiation

The inclusion of Mobility Management as a topic of negotiation would increase the chance that developers would adopt this strategy in organising the traffic generated by the new development. For example, the local authority could show willingness to compromise with regard to the desired amount of car parking spaces if the developer is willing to charge parking fees and to build a large number of bike parking facilities.

Securing Mobility Management through inclusion in the parking regulation

The integration of a new article in local parking regulations defining that at new developments of a certain size the developer has to provide a Mobility Plan (including binding targets, measures and controlling/and monitoring mechanisms) would enhance directly the implementation of Mobility Management.

Securing Mobility Management through inclusion in planning conditions and obligations

A requirement to adhere to certain planning conditions and obligations is a normal process with which an applicant for building permission is confronted in many member states. Mobility Management could also be integrated into such conditions. To ensure that all municipalities require Mobility Management, its inclusion in planning conditions developed at a supra-local level is recommended wherever possible.

Promotion of car-free housing

To give municipalities the possibility to promote car-free housing, the relevant laws and norms (parking regulations, planning and building laws) should include special regulations for car-free or car-reduced residential areas. There, the number of parking spaces provided can be much less than the one normally required, as long as certain conditions are fulfilled. Local plans are important pre-requisites for allowing such a reduction within the building permission, as they define potential location and design of such areas (e.g. near PT stops, with good cycling network).

Access Contingent Models for regulating car traffic at multifunctional developments

The Access Contingent Model is a promising strategy to reduce car-traffic on big sites like shopping centres or sports stadiums, which normally generate large numbers of car trips. The idea is to limit the maximum number of car-trips permitted to and from the development by defining a contingent that may not be exceeded during a certain time period. The sanctions to be applied in the situation that this number of trips is exceeded must be fixed in a contract between the developer and the local authority. The contract forms part of the building permission.

Encouraging the adoption of Mobility Management through environmental legislation

In certain countries the Environmental Law requires that at development of a certain size or with a certain requested number of car parking spaces the applicant has to provide an Environmental Impact Assessment study with the request for building permission or with the request for an approval of a Detailed Site Development Plan; this can be used to secure MM measures to mitigate the impact.

Maximum parking standards

Parking standards are usually defined in planning authorities' parking regulations and normally define the *minimum* rate of car parking spaces per type of use within a development. They are the reference for a developer in calculating the amount of car parking spaces that must be provided at the new development. To invert the minimum into maximum rates can significantly reduce the amount of car-trips, especially at developments which are planned in dense urban areas with good alternatives to the car and no alternative parking spaces.

Parking pay-off

Parking pay-off is a procedure which is applied if a developer cannot build the required parking spaces at the development itself or in the general area. In this case he has to pay an amount of money to the local authority. This money is normally used to build parking spaces, but in some European states, it is also used for public transport or bicycle infrastructure. Another promising option would be to use the money for "soft" MM measures for the new development.

Will integrating MM and land use planning work in your country? MaxLupo and other MAX outputs help to spread awareness of the potential of integration. Examples from Slovenia and Spain show that even in countries with no previous experience of integrating MM and planning, it can work. So MaxLupo is relevant to you.

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1 Introduction

1.1 Integration of Mobility Management with Land Use Planning: What is it about?

Mobility Management is a concept to promote sustainable transport and manage the demand for car use by changing travellers' attitudes and behaviour. At the core of MM are "soft" measures like information and communication, organising services and coordinating activities of different partners. "Soft" measures can work on their own but can also enhance the effectiveness of "hard" measures within urban transport (e.g. new tram lines, new roads and new bike lanes). MM measures (in comparison to "hard" measures) do not necessarily require large financial investments and may have a high benefit-cost ratio.

In many countries, MM is predominantly a site-based activity connected to a traffic generating sites such as companies, schools, concert halls, sports arenas, hospitals, entire administrations based in number of locations, recreational sites and residential areas. In these cases MM seeks to manage the way which people travel to and from the site in question. The main objective is that the trips generated to and from a site are made as much as possible by modes other than single occupant private car.

In site-based MM the owners or the tenants of a development are the main actor. They should promote and implement MM so that site users can take advantage of the measures. The public authority, mostly the local municipality, therefore plays a key role in encouraging or requiring the actors at the site to consider MM. Two situations regarding the time of intervention of the public authority have to be distinguished:

- **When a development is already in use:** In this case, mobility behaviour patterns are in the most cases settled and very difficult to change. The hurdle to encourage the owner(s) or the tenants of developments is rather high, especially when they do not perceive any problems related to the traffic generated by the activities of their developments. Why, for example, should an employer implement MM when enough parking spaces at the site are available? The public authority may be able to secure active involvement using strategies such as awareness raising, incentives or free consulting. It is very rare in any country for public authorities to be able to enforce a requirement for MM activity at a development that is already in use.
- **When a development is in a planning stage:** The interaction between the owner (or developer) of a development and the public authority occurs due to the fact that the whole planning phase ends only when building permission is granted and its conditions are satisfied once the development is built. Transport related issues connected to the development are one of the subjects of the planning phase. This includes requests derived from the law (e.g. parking regulations, environmental impacts) that have to be fulfilled in order to get building permission. In this whole procedure the inclusion of MM in the form of guidelines, hints but also conditions helps to involve the actors at the site in planning for MM. The planning stage is also a good point at which to offer site users incentives and disincentives to use different means to travel there, since their travel habits are not yet fixed and they will therefore be more open to influence.

MaxLupo focuses much more on the second stage, where the planning process offers a leverage point at which to secure MM from the very beginning: at the planning stage in order to support sustainable urban development with locations that are accessible by a variety of means. The integration of Mobility Management in the Land Use Planning (LUP) process focuses on the possibilities that public authorities have within the building permission process to ensure that such "soft" measures are considered by the site related actors before a development is in use.

For MM at the site level to be effectively integrated into this process, it is important that, as far as possible, sites are located in places where they can be accessed by a variety of modes. MM at the site is made easier, for example, if it is located close to major public transport routes. This is a task of the land use planning system and

is discussed at more length in Chapter 2 of MaxLupo. If this precondition is not satisfied, it does not mean that MM at the site level cannot work, but it becomes more difficult, and measures such as encouraging cycling and public transport use may be less relevant than, for example, car sharing or shuttle buses.

As Chapter 2 shows, the integration of MM and planning is easier in areas where there is a choice of transport modes; this implies urban areas. However, there are cases in which MM has been integrated into the building permission process for developments in rural areas, as well, so MaxLupo is relevant to all areas.

1.2 What does MaxLupo cover and what not?

With MaxLupo the MAX team provides practical input on:

- How the better integration of sustainable transport planning and land use planning can be achieved.
- How Mobility Management and the land use planning process can be better integrated.

The MAX team is convinced that the best way to achieve these objectives is not theoretical reflections but rather to provide clear examples of promising policies and their implementation that already exist in practice. This approach makes the guidelines more concrete. The readers start from practical examples where they can decide if the framework conditions in their “own case” will allow them to act in a similar way, or whether it is not possible at all because of framework conditions that are, for example, politically almost impossible to overcome.

In this sense the question of transferability of the illustrated policies can only be treated in a very broad view by MaxLupo because it would be “out of proportion” to consider the legal, planning or other framework condition of each country, region or municipality within Europe in order to find tailor-made policies. This process of judgement of the usefulness of MaxLupo has to be made by the readers themselves.

The structure of the document is shown in the following flowchart:

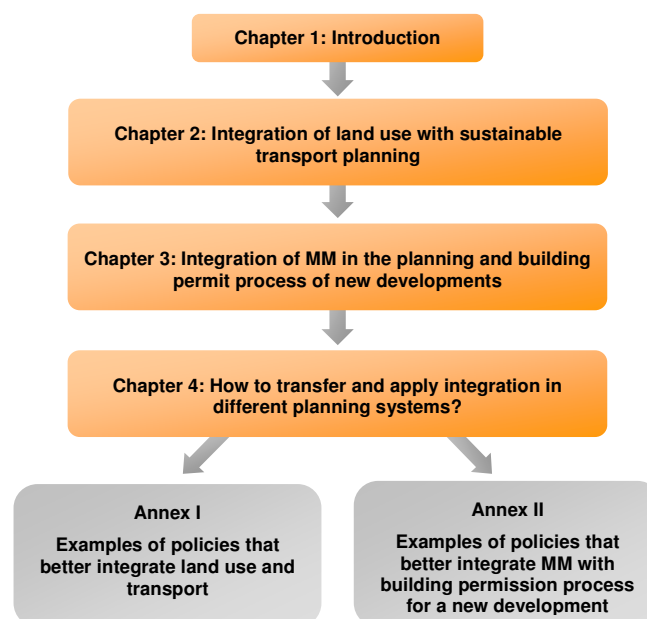


Figure 2: Structure of MaxLupo

The structure of the document is as follows:

- **Chapter 2: Integration of land use and transport planning**

This chapter presents the most important objectives which a successful integration of transport and land use planning should achieve, a range of promising and policies and existing examples of them.

- **Chapter 3: Integration of Mobility Management in the planning and building permission process of a new development**

This chapter informs how the process of elaborating a Detailed Site Development Plan and obtaining building permission works. A range of policies, illustrated with examples from practice, shows the different way to enhance the consideration of Mobility Management by developers of new developments at the planning stage.

- **Chapter 4: How to transfer and apply integration in different planning systems?**

The chapter gives an overview of the transferability of policies presented in the previous chapters and recommends how to adapt them.

- **Annex I: Examples of policies and implemented examples for the better integration of land use and transport planning**

Annex I presents a range of examples of policies existing in practice that support the integration between spatial and land use planning. Each example is described in detail in form of a sheet.

- **Annex II: Examples of policies and implemented examples for the integration of MM in the planning and building permission process of new developments**

Annex II presents a range of examples of practical policies that support the integration of Mobility Management in the planning and building permission process of new developments. Each example is described in detail in form of a sheet.

1.3 Who is MaxLupo for?

MaxLupo is for different target groups involved in urban planning and development:

- **Planners** working in land use, transport or environmental planning departments in national, regional or local administrations.

The policies illustrated serve as a base for the further development existing policies, or launch of new ones, for the better integration of land use with transport planning; and also for the amendment of existing laws, planning instruments, etc. which already promote Mobility Management at new developments.

- **Personnel of departments** in local and regional administrations involved at a day-to-day level in the planning and building permit process of developments.

MaxLupo can help these people to understand where the processes with which they work can be modified, often with little administrative effort, to better integrate transport, and MM, with land use planning – and so reduce the transport problems that often arise when new developments are built.

- **Urban and transport planning consultants as Mobility Management experts** working for public administrations or for developers / owners of developments.

In the framework of developing new or revising existing land use plans, parking regulations, Mobility Management strategies or other types of policies public administrations often rely on the expertise of private consultants. Urban and transport planners as MM experts help developers or owners of developments to prepare requests for building permission or Detailed Site Development Plans. For planners as well as for MM experts, MaxLupo serves as source for further improvement of their work for their clients.

- **Universities, Schools of Planning** or other educational institutions.

For faculties within Universities dealing with land use planning, transport planning or Mobility Management MaxLupo is a source for the development of tailor made study courses or seminars. Sample teaching material based on MAX WP D is also available on www.epomm.org

2 Integration of land use with sustainable transport planning

2.1 Why integrate land use and transport?

If land use and transport planning are integrated this will bring about a pattern of land use that makes it easier to integrate Mobility Management with the land use planning system. Earlier EU research shows that a development located close to high quality public transport is likely to be able to implement MM more easily than one that is on the edge of town accessed only by road; a denser development is more likely to have more trips made by bike and on foot than a low density one. The purpose of this chapter is to present examples of policies that encourage this integration of land use with transport planning. Ultimately these policies are aiming to bring about one or more of the following objectives:

- **A poly-centric urban structure** where basic needs can be accessed in local centres, with easy access by public transport and cycling to other higher-order centres.
- **Medium and high land use densities with a mix of different uses** rather than rigidly separating these uses since, if they are separate, people must travel further to access them.
- **Developments**, especially the kind of development that generates lots of trips (e.g. offices, shops – but also housing), should be **concentrated at nodes and along the corridors of the public transport network** or at the very least in places that have the potential to become public transport nodes. These areas (nodes and corridors) should be identified in strategic and local plans, possibly by the use of accessibility measurement. Thresholds of (public transport) accessibility could then be set, such that certain types of development are discouraged or not permitted in areas where accessibility levels are below the threshold.
- **Re-use of brownfield sites** (those that were previously industrial or commercial but now need redevelopment) rather than permitting new development on green-field sites, as the former option adds less to urban sprawl.
- When a **new development is planned**, its **transport impacts should be assessed** and its location should take into account its transport needs. If the transport impacts of the development are predicted to be too large in the chosen location then a different location may need to be selected. Regardless, the site development process should account for pedestrian and bicycle connectivity to nearby destinations, access to public transit stops and termini, and accommodation of shared ride vehicle access and parking in the most convenient locations.
- **Limiting the amount of off-street parking** required to be provided with new developments in order to constrain new parking aiming to restrain car use to and from new developments, and also on-street car parking in the entire development area.

In many parts of many countries, however, such objectives are not always shared by developers and do *not* form part of normal planning policy and so the outcome is a land use pattern that is tending towards sprawl, which is less conducive to Mobility Management.

In addition, institutionally and organisationally, if planning and transport are to be better integrated, it may be necessary to make **organisational changes** to ensure that **transport planners and land use planners** at public administrations **work together more closely**, and to ensure that land use planners know what transport planners are trying to achieve. This can be the case even if they already work for the same organisation, as they are still likely to be working in different sections/departments with different points of view and with different backgrounds and training. The chapter therefore presents some (limited) examples of such “functional integration”, although it is an area deserving of further study.

All the types of policy presented in this chapter (Section 2.2) will help to achieve these objectives; the policies will have the greatest effect where implemented together, but one type of policy implemented alone will have a positive impact.

The MAX project studied 10 European countries' planning systems and found that a key instrument in all of them is the local plan, as it sets the development framework at the local level (it is often supplemented by a more detailed plan for a specific area – this is the case in Germany, Spain, Lithuania and Switzerland, for example.) Since the local plan shows which land should be zoned for particular uses, where transport infrastructure should be located, and (often also) required land use densities, it is an ideal instrument to secure a land use pattern that supports travel by public transport, on foot and by bike. However, whether the local plan actually does this depends on two main factors:

- Whether plan makers are aware of the possibility of using the plan in this way; and
- The local political situation and how this influences the shape of the local plan. For example, lobbies will try to have their own land released for development in the local plan; or the personal views of the Mayor will influence the relationship between transport and land use in the plan.

As the following sections of this chapter also show, a lead from regional or national government can also influence the uptake of such objectives in local plans.

2.2 Policies with the potential to better integrate sustainable transport with land use planning

This section first provides a summary of all policies and then further sub-sections describe each policy in detail and illustrate them with a number of actual case studies.

2.2.1 Summary

Policy guidelines

Planning policy guidelines are developed by regional or national government to influence local government land use plans and building permission decisions. They can cover a variety of topics, not just MM. However, such guidelines exist in some countries to encourage integration of land use and sustainable transport; and to encourage local government to seek Mobility Management measures in new developments, through the building permission process.

Policies deriving from environmental laws

In some countries there are environmental laws that have a strong influence on the content of local plans and/or building permission decisions. For example, EU law requires that cities meet certain air quality thresholds; MM measures for a new development could contribute to this.

Plan-making and plans

Local plans set out the locations for new developments in different land use categories, as well as sometimes for new transport infra-structure. Plans can be drawn up in such a way so as to promote / encourage the use of sustainable transport. For example, the location of different land uses like housing or retail and the design of the area (footpaths, a limited number of on-street parking spaces, etc.) will influence how people choose to travel. Thus, these plans have the potential to better integrate land use and transport.

Functional / organisational integration

If land use planning is to be used as a way of influencing how people travel, it is important that land use planners understand how this can happen, and are generally made aware of transport issues. One way that this can be achieved is to ensure that transport and land use planners in a municipality or in an area actually work together and are able to comment on and influence each other's work.

Limiting parking at new developments is a further type of planning policy that has an indirect effect on the overall location of development but, because this is also very important at the site level, it is dealt with in Chapter 3.

2.2.2 Policy guidelines

Background and objectives

Policy guidelines give guidance on the objectives, policies and (where appropriate) land use zoning that a plan should contain, so they are produced by one level of government for use by the lower level(s) of government when they are writing plans. Not all countries have policy guidelines; some that do are the Netherlands, Germany, Sweden, Slovenia, Switzerland, Ireland and the UK, where local authorities are encouraged to shape their local plans to increase development densities (especially at transport nodes) and to focus development along transport axes. Poland also has policy guidelines on re-using brownfield (previously developed) sites, which can aid sustainable transport insofar as such sites are often located in old urban areas closer to public transport.

Situation if guidelines do not exist

Where such policies do not exist or are not implemented then the alternative is the development of land parcels, often on the edge of town in a “sprawling” pattern, without considering their location in relation to transport, other than how to provide a single in-out connection to the nearest main road. This makes developments difficult to serve by public transport (because for buses and trams through-running is much more efficient) and increases distances, making walking and cycling less viable. The cumulative effect of these changes at site level is a gradual change in the wider area, such that transport there becomes more car-dependent.

How guidelines can be developed

Any country or region can develop such guidance where the political interest in so doing exists; this may not be driven by politicians but by civil servants in some cases. An awareness of such policies and their potential is a clear pre-requisite for them to be adopted in a country or region. In the UK, such policies were developed for two reasons: firstly, certain municipalities faced political pressure to reduce traffic problems perceived to be caused by new development; and, secondly, because a national-level minister in the then Conservative government (in 1994) saw that the planning system had the potential to influence travel behaviour and had a personal concern with reducing traffic congestion and greenhouse gases (GHG) emissions. Whilst these reasons may seem very UK-specific, they are explained here in order to show how and why such policies may be adopted at national level.

Two examples of such policy guidelines are explained in the following boxes.

PPG13 is guidance issued by English national government to regional and local government. It deals with the location, mix and density of development; and with supporting transport measures for new development. It recommends that, when drawing up development plans, local authorities should include policies and zoning that tries to:

- Increase the density of development and mix of uses
- Ensure that higher density development is located in areas that are well served by public transport
- Concentrate development in areas where there is already a significant population, to avoid urban sprawl and to support services (shops, pubs, doctors, schools) locally, so that people do not have to travel for them

PPG13, although a planning document, also encourages local authorities to implement sustainable transport measures to support sustainable access to their developments.

With regard to decisions on building permission, PPG13 encourages local authorities to secure travel plans (site based MM plans) from developers through this process, and to use Section 106 planning obligations to secure financial contributions to off-site transport improvements (see Chapter 3).

Main objectives and reasons for implementation

PPG13 helps local authorities to protect the environment in their planning activities – a legal duty. In addition, PPG13 can help to reduce congestion, increase social inclusion and cut transport's environmental impacts. It can also reduce pressure on green-field land on the edge of towns, by focusing development more on brownfield sites in existing built-up areas.

Consistency of application of the policy

The British planning system is not as codified as some others. Planning guidance such as PPG13 must by law be taken into account by planning authorities when they are drawing up plans and making planning decisions. However, if there are other good reasons not to take PPG13 into account, and a good case can be made for this, then other considerations may take precedence. In addition, PPG13 is written in a way that allows a great deal of interpretation of its policies – for example, a location that is judged to be “well-served by public transport” in one local authority area might not be in another.

The need for integration and coordination of land-use and transport planning is a requirement of PPG13 and should feature in every development plan and major planning decision. But how strongly this is applied and leads for example to development focused on public transport axes differs from area to area.

However, and importantly, national English government has the power (and does sometimes use it) to make local authorities change development plans and building permission decisions if national guidance such as PPG13 cannot be shown to have been taken into account adequately.

Effectiveness

No publicly available monitoring has been carried out of the effectiveness of PPG13.

The Greater Dublin Regional Planning Guidelines provide the overall strategic context for the Development Plans for the local authorities in the region, and a framework for future infrastructure. The Greater Dublin Area (GDA) planning authorities should take into account the policies in the GDRPG when drawing up their own plans. Since these go through a period of scrutiny by public and central government before they are adopted, it is possible for national government in particular to require changes to a plan to better reflect both national and regional guidance. Although guidance, the GDRPG has legal status, but it is not a law that must be followed to the letter; it is rather guidance that can be interpreted.

Main objectives and reasons for implementation

The Guidelines propose that plans should:

- Consolidate development and increase overall densities for a more compact urban form; and
- Facilitate the provision and use of a considerably enhanced public transport system.

The reason for this is to combat major congestion problems in Dublin, and also to create a more sustainable city to contribute to Ireland's CO₂ reduction targets within the EU as a whole.

Effectiveness

No systematic review of the effectiveness of the GDRPG has been carried out. The regional planning guidelines can be applied very differently by different authorities and as long as they are able to justify how they have applied them to their development plan, this inconsistency in application is entirely lawful.

Further information to check in the Annex

- [B1: Planning Policy Guidance \(PPG13\)](#)
- [B2: Greater Dublin Regional Planning Guidelines](#)

2.2.3 Policies deriving from environmental laws

Background and objectives

Sometimes environmental laws can lead to the creation of transport policies in keeping with those laws, and these should then have implications for transport. This can occur where the environmental law seeks to mitigate the environmental impacts of transport from new developments; there is a clear link here with the planning system. Under EU law many new developments require an environmental impact assessment (EIA), but often this is part of the building permission process and special attention is not paid to the environmental impacts of transport generated by the construction and operation of the new building. However, it is within the remit of the competent authorities who inspect the EIA to require/advise, that transport should be dealt as a key impact within the EIA and the planning process – this does not require a change in primary legislation. Clearly, if transport were more often included within EIA, then developers would be forced to show how they proposed to reduce and mitigate the transport impacts of the development.

European legislation requires the strategic environmental assessment (SEA) of policies and plans. However, the interpretation of this legislation varies widely across member states and the legislation is not specific enough to require an assessment of the transport impacts of, for example, a new land use plan. Thus whether or not the legislation is used in this way depends on its interpretation, often at the level of the individual plan, in different member states. This varied interpretation is due to a lack of consistent criteria (at the European level) against which environmental impacts can be assessed.

How the policy can be developed

Making this change requires a change in awareness amongst competent authorities that transport impacts are indeed a type of environmental impact; and that there are ways to manage these impacts, by integrating MM into the planning process. In addition, it requires a change in attitude amongst developers and planning authorities that it is reasonable to undertake such an assessment. Some resistance might be encountered from developers, but such assessments are normal practice in the UK, Ireland, Switzerland, USA, Canada, Australia and New Zealand, without placing burdens on the development industry in these countries to such a degree that development/economic activity has been deterred.

An example of a policy derived from environmental law is set out in the following box.

REGIONAL STRUCTURE PLAN FOR LOCATION OF HEAVILY FREQUENTED SITES (HFS) OF THE AGGLOMERATION OF BIEL – SWITZERLAND

This policy applies in the Agglomeration of Biel, Switzerland, and was produced by its spatial planning organisation. In force since 2004, it applies at regional and local levels to highly frequented sites (HFS) – those that generate more than 2000 car trips per day, such as large offices and shopping centres. The policy applies to new or expanded sites.

Content

In order to fulfil the objective of the cantonal Clean Air Action Plan, the structure plan of the Canton of Berne defines among others a maximum quota of 575,000 car-km per day which are allowed to be generated between 2002 and 2015 from HFS located in the whole Canton and supposed to be built within the same time period. For each of the 3 agglomerations Berne, Thun and Biel the structure plan assigns a "credit of car-km". The cantonal structure plan states furthermore that the defined "credits of car-km" have to be assigned to suitable locations for HFS, such as close to densely populated areas and areas where there is a concentration of employment. Good accessibility by car and public transport is a further precondition to be taken into consideration.

On the basis of these preconditions, the municipalities that make up the agglomeration of Biel elaborated a so-called regional structure plan for the localisation of HFS. This consisted of the following steps:

- Pre-selection of appropriate locations for HFS within the agglomeration on the basis of spatial planning criteria.
- A coordination agreement (2002) between the municipalities and cantonal departments involved, regarding the following: –the precise location of the HFS and assignment of car-km credits to each of these; monitoring procedures; legal definition of the HFSs in the regional structure plan within 2 years; and the adjustment of the structure plan of the city of Biel as it relates to parking.
- Development of a regional structure plan for the localisation of HFS in the agglomeration, which is legally binding for the municipalities of the whole agglomeration, following the requirements of the building law of the Canton of Berne.

Main objectives and reasons for implementation

The Clean Air Action Plan of the Canton of Berne seeks to limit traffic growth between 2000 and 2015 to 8 % or 1.3 million car-km per day. Some 4.5 % (725,000 car-km per day) of this is allocated to general development in the municipalities, and the remainder is dedicated to the development of HFS within the whole Canton. The policy is mandatory and is targeted at planning authorities (regional and/or local) and developers (public or private).

Effectiveness

Since the policy was put into force, in total 5 new HFS have received building permission. The total amount of car-km credits assigned to the agglomeration is now almost completely used up. That means that no additional HFS will receive building permission before 2015.

Further information to check in the Annex

- [B3: Regional structure plan for the localisation of Heavily Frequented Sites \(HFS\) of the agglomeration of Biel](#)
- [B4: Determination of the localisation of Heavily Frequented Sites \(HFS\) in the Cantonal Structure Plans](#)

2.2.4 Plan-making and plans

Background and objectives

It is possible for plans to be drawn up in such a way as to promote/encourage the use of sustainable transport. This could result from the authors of plans taking into account national or regional guidance (such as those detailed in Section 0, above); or simply because they have decided that an objective of their plan is to reduce the need to travel. Either way, integration is supported by ensuring that the land-use intentions set out in plans work towards some or all of the objectives listed in the introduction to this chapter. This is different from, although related to, a policy because plans refer to land-use in specific areas, whilst policies are more general in scope.

Alternative situation

This is a departure from the more “normal” or usual situation in many regions and countries, in which areas for new land uses are planned and then the transport consequences of these land use decisions are dealt with at a later stage; and where there is no consideration of the possibility of planning land use to reduce transport impacts.

How plans can be developed

Policies like this can be put into effect in any municipality, whether or not national or regional guidance exists or is enforced. Cities that have and use such policies without a strong lead from national government include Munich and Stockholm. They did so because of local political decisions over many years, and also strong local economies that gave them negotiating power with developers. The likelihood that such policies are adopted in plan-making increases, however, if national or regional guidance advocates their use; and increases further if higher levels of government are able to influence the actual content of land-use plans, as in the UK and Switzerland, for example. The box below provides details of one regional land use plan, from the UK, one of whose objectives is to better integrate transport and land use.

An example of such a plan is set out in the following box.

EDINBURGH AND LOTHIANS STRUCTURE PLAN (ELSP) – SCOTLAND, UK

This plan applies in Lothian region (around Edinburgh), Scotland, UK. It was produced by a committee of planning authorities - local municipalities – but final approval, in 2004, was by the Scottish Government (each national government gives final approval to all plans made by lower levels of government in the UK). It applies at the regional and local level. The plan is for the use of planning authorities when drawing up local plans and making building permission decisions, and also for developers (public or private) when they make applications for building permission.

Content

The ELSP contains a number of policies which guide, on the one hand, the development of local land use plans in the four municipalities that make up the ELSP area, and, on the other, also guide decisions on building permission for individual large developments. The ELSP contains a large number of strategic objectives and policies that support framework conditions for MM.

For example, one of the ELSP strategic aims is to integrate land use and transport, through objectives such as:

- Locating new development so as to reduce the need to travel, particularly by private car;
- Reducing commuting to Edinburgh from the surrounding Council areas;
- Maximising accessibility for all in the community by foot, cycle and public transport;
- Ensuring that, where possible, brownfield land is developed in preference to green-field land;
- Increasing access to employment opportunities through a more balanced distribution of employment land, giving preference to locations for new development with easy access by foot, cycle and public transport;
- Increasing access to housing by enabling local plans, where appropriate, to require the provision of affordable housing;
- Increasing access to shopping and leisure facilities by giving preference to locations for such new development with easy access by foot, cycle and public transport;
- Identify strategic employment locations which are, or can be made, highly accessible by foot, cycle and public transport.

Main objectives and reasons for implementation

Objectives are listed above. Reasons for implementation are to reduce use of private car for congestion reduction and environmental reasons; and to ensure that people can access new development regardless of whether they have a car or not. There is also a desire to reduce urban sprawl and to protect Green Belts.

Effectiveness

There is no formal monitoring of the plan. However there is little doubt that it has led to a concentration of high trip generating development and housing in areas that might have been left un-developed under other structure plan scenarios - for example, the old Docklands to the north of Edinburgh city centre.

Additional comments

As with all UK planning policies, the plan is not absolutely binding - if a case can be made for ignoring or selectively applying policies within the plan, then this is permissible. So it lies somewhere between mandatory and voluntary.

Further information to check in the Annex

- [B5: Edinburgh and Lothians Structure Plan \(ELSP\)](#)
- [B6: South Dublin Development Plan](#)
- [B7: Regional Land Use Plan](#)
- [B8: Land Use Development Plan](#)
- [B9: Cantonal Structure Plan](#)

2.2.5 Functional/organisational integration

Background and objectives

Achieving the integration of transport and land use planning is not only a technical issue; it is also organisational. Often, the two elements are planned separately and there is little communication between departments responsible for transport and those responsible for land use planning. Sometimes the two may exist in entirely separate organisations. An important aspect of integration is to increase communication and inter-working between departments so that each side understands the other better and is more prepared to cooperate with the other; ultimately, this can lead to improved outcomes. The highest level of functional integration is when transport and land use planners work together on, and to, common strategies (for example, a combined land use and transport plan instead of separate transport and land use plans).

An example of organisational integration is described in the box below.

COOPERATION BETWEEN SPATIAL AND TRANSPORT PLANNING OFFICES WITHIN THE ADMINISTRATION OF THE CANTON OF AARGOVIA, SWITZERLAND

The Canton's Department for Construction, Transport and Environment is made up of 9 offices, including the two offices for transport planning and spatial planning. Since 1997 the co-operation between the offices has been standardised through a model called *Verwaltungsinterne Koordination (VIK)*, which means *coordination within the administration*. For every issue in which different offices are involved the VIK procedure becomes relevant (like the approval of communal land use plans, the approval of amendments of the cantonal structure plan or also the making of plans and projects in transport and land use planning of cantonal importance).

In the case of the approval of the communal land use plans, the spatial planning office has the leading role. The office checks first the land use plan under the aspect of the requirements of spatial planning defined in the cantonal structure plan and the Law on Planning and Construction of the Canton. Then it submits the land use plan to the transport office. The transport office checks the plan from the point of view of transport requirements, as defined by the structure plan and the Cantonal transport plan. Sometimes other offices, like the office for environment, have to be involved as well. All the different statements and requirements for amendments are included by the leading office in a document written for the municipality in question. The check made by the different offices has to be completed within one month. Then as a final step the representatives of the different offices have a meeting, to solve any outstanding issues.

To further ensure that the coordination of the different requirements of land use, transport and environmental planning is taking place, in 2006 the Canton created a new post within the administration. This person must coordinate all relevant aspects of integration of transport and land use planning in projects in which the Canton has to play a role. The work profile defines that coordination between the two offices has to be ensured at an early stage.

Further information to check in the Annex

- [B10: Cooperation between spatial planning and transport planning offices within the administration of the Canton of Aargovia](#)
- [B11: Cooperation between regional transport and regional planning in Southeast Scotland](#)

3 Integration of Mobility Management in the planning and building permit process of new developments

3.1 Introduction

Site based Mobility Management can have a major impact on making traffic generated by a development more sustainable. Each development has its own particular framework conditions and the range of appropriate and effective measures can vary from one development to another. A site-related Mobility Plan is commonly-used to reduce the transport impacts of new developments. A Mobility Plan is made up of a number of key steps, such as analysing the framework conditions, setting the targets to achieve in terms of mode-shift, defining the range of measures to implement, defining the responsibilities for the implementation and the operation of the measures, defining monitoring and evaluation procedures, implementing/running the measures and monitoring the effects. Mobility Management measures are at the core of each Mobility Plan; commonly used measures implemented by owners or tenants of developments are as follows (this list is not exhaustive):

- **On-site car parking management** by charging fees for parking and/or distributing parking allowances to employees, visitors or, sometimes, clients, according to defined rules;
- **Financial incentives** given by employers to staff to promote the use of sustainable modes for commuting such as Job-Tickets, or incentives such as combined public-transport and entrance tickets for major events (football games, fairs or concerts);
- **On-site infrastructure improvements** to encourage the use of bikes for visitors, employees and clients, such as secure and weather proof cycle parking close to building entrances, or good connections to the cycling network, as well as employee-only facilities such as changing rooms, lockers and showers;
- **Company car-sharing or car-pooling schemes** for employees;
- **Multi-modal information** about how to reach the site: internet-information, leaflets, maps or signposts for all site visitors, clients and employees;
- **Dedicated public transport improvements** such as extensions to existing bus services, or shuttle services financed completely or partially by the site occupier or developer;
- **Awareness raising activities** like mobility weeks or action days.

This is a long list of measures but practical experience shows that the most effective approach for achieving a change in behaviour is to adopt a well-balanced mix of disincentives to car-use and positive incentives to promote the use of alternatives to the car. Importantly, measures also have to be selected to suit the circumstances of a site and its users. Cycling measures are of little use in a very hilly area where there are no cycle facilities and employees travel a long way to get to the site, for example. Car-pooling measures may be very successful where people work regular hours and are on lower wages, so sharing the cost of commuting can appeal to them. Therefore, to choose measures to suit the site, the developer (and the authority) ideally needs to know something about the people who will use it – normally by means of surveys of similar nearby sites or of the existing user group if they are relocating from another building.

MM measures at a site are normally implemented by the site developer and, later, the occupier. For example, the developer will ensure that there is quality bicycle parking provided and the occupier will publicise that parking and encourage cycle use. At large sites (e.g. 300 or more staff if it is workplace) a part-time or full-time member of staff is often employed to implement and run MM measures at the site. For some measures, other organisations need to be involved; an example is bus services to the site, which obviously have to be run by a

bus operator, sometimes contracted to the site occupier. Full details of when and how to run a site-based MM plan can be found in other outputs from MAX WP D (www.max-success.eu), or in the UK's *Essential Guide to Travel Planning* at www.dft.gov.uk/pgr/sustainable/travelplans/work/essentialguide.pdf

The main benefits for site owners, developers and tenants of introducing MM include the following; these can be used as arguments by municipalities when dealing with developers during the building permission process:

- Cut costs (e.g. for parking and its maintenance, travel time/budgets, car fleet);
- Improved accessibility of the site by all modes for all type of site-users;
- Employees who are more motivated, satisfied and healthy;
- Use land currently under car parks in a more productive way;
- Enhance and deliver a Corporate Social Responsibility;
- Meeting planning and other conditions set by public authorities (e.g. parking requirements linked to the building permission, environmental permits).

In some planning systems it may be possible to allow developers to develop a site at a higher density if they introduce MM, thus increasing land value; it may also be possible to let developers know that if they implement MM at one site, this may help their applications for building permission at other sites in the future.

For ensuring that Mobility Management is implemented it is critical that actors at the site itself starts at a very early stage. It is a challenge for the public authority to ensure this; but when and how?

The best time to engage with developers about the possibility of MM at the development is when they are in the process of obtaining building permission. At this time, municipalities can use one or more of the following strategies:

- **Setting the implementation of Mobility Management as a recommendation and advice, as a task of negotiation or as a condition**

A general approach to securing MM in new developments is to appeal to the free-will or corporate responsibility of a developer: the local administration provides only recommendations and advice, hoping that developers act themselves. Another way is to apply MM as a task of negotiation. For instance, the requirement to build a certain amount of parking spaces can be combined with the implementation of a range of Mobility Management measures that promote the use of alternative modes to get to development. Finally, in some systems, local administrations have the option of influencing the developer in a direct way. An appropriate policy could be to ask, for instance, for the development and implementation of a Mobility Plan as a direct condition within the building permission process. This rather “drastic” approach means that Mobility Management is then a requirement in order to obtain building permission.

- **Influencing the number of car parking spaces at a new development**

The amount of available car parking spaces at a development is an important “lever” that has a very strong influence on how people travel to a site. Different policy instruments used during the planning phase or the building permission process often give the relevant administration some possibility to influence the amount of parking. With a restrictive policy, determining for instance maximum not minimum numbers of car parking spaces, or linking the number of parking spaces to public transport accessibility, MM is more likely to be considered. A smaller number of parking spaces than planned may encourage developers to think about other ways to manage the predicted traffic to/from the development; this is the point where they start to consider Mobility Management.

In the following two sections, two mechanisms by which MM can be integrated with planning are described: these are the Detailed Site Development plan in section 3.2, and the main steps in the process of obtaining building permission in section 3.3. Both are illustrated with reference to Zurich, Switzerland (the document Working Stage 1: Analysis from MAX WP D describes these processes in nine other European countries, but Switzerland is selected as the example here). Whilst these mechanisms are obviously facets of the building permission process, the functional integration described in Section 2.2.5 also helps greatly if MM and planning are to be integrated.

Section 3.4 gives an overview of actual policies existing in practice, also showing by whom they should be adapted and their possible level of influence over the implementation of Mobility Management at the site level.

3.2 The Detailed Site Development Plan

The Detailed Site Development Plan (DSDP) is an important communal planning instrument, although often with a slightly different scope in different countries (for example: *Plan Parcial* in Spain; *Bebauungsplan* in Germany; *detaljplan* in Sweden; *Gestaltungsplan* in Switzerland; *Obcinski Podrobni Prostorski Nacrt* in Slovenia). The DSDP is often quite detailed and specifies the local land use plan (or zoning plan). It is dedicated to a certain area and/or a special and complex development, e.g. where several new buildings are planned. Normally large development areas like shopping centres, sports stadiums, major leisure facilities or entire new districts need a DSDP. This plan sets the framework conditions with regard to, for example, street and infrastructure design or environmental issues. In some countries it facilitates or even predefines as well the whole process of obtaining building permission for each of the single buildings planned in DSDP area.

A DSDP is made, therefore, before developers apply for building permission. Where bigger developments are planned, many issues concerning the whole complex are defined within the DSDP, such as the accessibility of the area (by different types of transport modes) or parking provision in its entirety. These aspects are therefore not part of the later building permission application for a single building, unlike in the “normal situation” as described above.

The DSDP may be prepared by the developer themselves, or in close cooperation with the city’s planning department. It is composed of a map of the development area and additional explanations and regulations. Where the developer is involved in the whole planning process, the DSDP offers more flexibility than a more static approach (when the plan is made before knowing the future user). Requirements may be adapted more easily: for example, the number of car parking spaces normally required can be changed in the whole development area if circumstances require a higher or a lower amount of parking spaces than dictated by the communal parking regulation. Thus, conditions on each individual building can be avoided. A cooperative process between the different stakeholders (like developer, local municipality, neighbours) is a method often used to come to a commonly agreed solution.

In some countries (like Lithuania or Poland) the DSDP sets quite strict rules and regulations for the planned development, thus the examination of building permission is limited to checking the building’s conformity with the DSDP and there is much less discretion than in other countries (e.g. Switzerland). If requirements for MM are to be integrated into the planning process in such countries, this must occur at the level of the DSDP rather than the building permission decision for an individual building.

In Switzerland, the DSDP is set up in a special procedure with regard to the public participation process. It must be approved by the canton and is finally enacted by the municipality (or the canton). In the case of the city of Zurich, the department for town planning is the coordinating body, and intensive interaction between the applicant, the city and the canton ensures that local and regional requirements are met. Once the DSDP is enacted, the building permission process for each building can start.

A DSDP can also include a special regulation with regards to Mobility Management, although this is more theory at present than regular practice in many countries. The DSDP could for example state that the municipality and the developer should negotiate on integrating MM with the larger developments in the DSDP area. It could for example be possible that the applicant is allowed to build fewer parking spaces (than the law/guidance normally requires) if she or he implements Mobility Management measures for the future users of the site. The savings could be earmarked for investing in incentives for employees who travel by foot, bike or public transport or for promoting sustainable modes to visitors. Or, the applicant only receives permission for the number of parking spaces that they want if Mobility Management measures are implemented in the entire DSDP area.

3.3 The building permission process

The process to obtain building permission can be rather complicated and of course it can differ not only from country to country, but also from municipality to municipality. For that reason only the main steps of the process are described. The case of the city of Zurich in Switzerland is used in order to show what such a process can look like.

Step 1: Preparing and submitting the request

To obtain building permission the applicant (building owner/ developer) has not only to prepare technical information about the planned building(s), but also additional documents as part of the request. Depending on the type, size and location of the development, different requirements must be fulfilled. These are set in documents such as the local land use plan, the building code and the city's parking regulation. Normally it is the task of the architects who developed the construction plan for the building to prepare all necessary documents because the building owner or the developer is not a technical specialist.

One of these additional documents has to deal with *car parking spaces* for the new development. It shows the number of new parking spaces planned in relation to the types and sizes of uses like housing, shops or offices. In Zurich, bike-parking spaces are also requested for new developments. As part of the normal examination of the building permission application and, in accordance with the city's parking regulation, the department for civil engineering will check if the planned numbers of car and bike parking spaces are correct.

Other requirements derived from other national and regional laws may have to be considered as well within the process of obtaining building permission. The national environmental law needs to be taken into account for larger developments of certain types, such as one with 300 parking spaces or more. Then an additional *Environmental Impact Assessment (EIA)* Study is required within the building permission process to predict and mitigate environmental impacts.

Information about Mobility Management can easily be included in pre-application discussions between local authority and developer prior to the formal submission of an application for building permission. However, if the employees of an authority do not have this professional expertise, a list of experts and some written advice about Mobility Management could nonetheless be provided to applicants and their architects.

Step 2: Examination of the request for building permission

Once all plans and documents for the building permission application are ready they are submitted to the city's building permission agency. Depending on the type, size and location of the planned development the coordinator (in Zurich it is the "district architect") within this department decides which other departments should assist with the examination and whether the regional administration needs to be involved. With regard to transport issues the canton of Zurich has to be included whenever there is an Environmental Impact Assessment Study for the development.

Once all required documents have been submitted, all departments read them and then within a given timeframe have to deliver a statement to the coordinating agency. They have to judge whether the various requirements (e.g. related to transport, environment or construction details) are fulfilled; if they are not, the statement has to describe what more the developer must do in order to gain building permission. Where more parking spaces have been applied for than the parking regulation permits, then obviously they must be reduced; this can also happen where the initial EIA is judged not to mitigate negative environmental impacts sufficiently.

Step 3: Approval of building permission

Once all statements are delivered the coordinating agency develops a common statement which then goes to the head of the city planning department and then to the "board for buildings" (a political body composed of 3 members of the city council) for formal approval (with or without conditions). Depending on the type of development the "board for buildings" may give permission to the head of the city planning department to certify building permission.

Sometimes, the building permission is only given with additional requirements. Then the applicant has to produce additional documents, which demonstrate that the conditions will be fulfilled. If the applicants are not satisfied with the imposed conditions, they have also the possibility and the right to enter an objection against the decision. Then a rather large legal process starts which has one consequence for sure: the whole time-frame to obtain the final "construction permit" will be extended.

A transport or environment related *condition* might be the reduction of the planned number of parking spaces for a new development. The transport planning agency would then refer to the city's parking regulation and the environmental protection agency would refer to the environmental law. Instead of a reduction of car parking spaces a condition could also include a request for the developer to implement Mobility Management measures, e.g. in order to mitigate negative environmental impacts of the new development.

3.4 Promising policies supporting the integration of Mobility Management

3.4.1 Introduction

The following subchapters show promising policies which support the integration of MM in the framework of the examination process of a Detailed Site Development Plan or requests for building permission from applicants (developers/building owners). The policies presented show approaches which the public authorities can then adopt to encourage or enforce the applicants to consider Mobility Management as a strategy to manage the trips which will be generated by the new developments in an efficient, rational and environmentally friendly way.

The policies presented are referring to approaches that already exist in practice, detailed in specific cases in Annex II. It must be noted that these cases represent “better/good practice”, rather than typical day-to-day practice in most municipalities, regions and states. Furthermore the cases were selected mainly from those countries which are represented by the WP D members (Spain, Germany, United Kingdom, Poland, Slovenia, Lithuania and Switzerland). It surely will be the case that in other countries good examples can also be found.

- The policies presented follow two strategies to influence the developer to consider Mobility Management:
- On the one hand *policies* can influence the *consideration of Mobility Management* in a direct way if they require Mobility Management as a condition, if they establish the possibility to use Mobility Management as a subject of negotiation or if they provide simple information or advice to the applicant.
- On the other hand *policies* that primarily influence the *amount and the management of car parking spaces* at new developments, or the amount of generated car trips. The effect on Mobility Management is then indirect because the developer has to handle the “traffic situation” in the situation of a reduced supply of parking spaces. Mobility Management is therefore a valuable approach to find solutions.

3.4.2 Summary

The summary presents promising policies which will be described in detail in the sections 3.4.3 to 3.4.11

Mobility Management advice during the planning or building permission process

Before the documents for request of permission of a Detailed Site Development Plan or a new building are delivered to the public authority for examination, there will be contact between the authorities and the applicant. During this period of contact, verbal or written information on Mobility Management from the local authorities to the applicant would be a simple strategy to raise the developer’s awareness.

Securing Mobility Management through negotiation

The inclusion of Mobility Management as a topic of negotiation would increase the chance that developers would adopt this strategy in organising the traffic generated by the new development. For example, the local authority could show willingness to compromise with regard to the desired amount of car parking spaces if the developer is willing to charge parking fees and to build a large number of bike parking facilities.

Securing Mobility Management through inclusion in the parking regulation

The integration of a new article in local parking regulations defining that at new developments of a certain size the developer has to provide a Mobility Plan (including binding targets, measures and controlling/and monitoring mechanisms) would enhance directly the implementation of Mobility Management.

Securing Mobility Management through inclusion in planning conditions and obligations

A requirement to adhere to certain planning conditions and obligations is a normal process with which an applicant for building permission is confronted in many member states. Mobility Management could also be integrated into such conditions. To ensure that all municipalities require Mobility Management, its inclusion in planning conditions developed at a supra-local level is recommended wherever possible.

Promotion of car-free housing

To give municipalities the possibility to promote car-free housing, the relevant laws and norms (parking regulations, planning and building laws) should include special regulations for car-free or car-reduced residential areas. There, the number of parking spaces provided can be much less than the one normally required, as long as certain conditions are fulfilled. Local plans are important pre-requisites for allowing such a reduction within the building permission, as they define potential location and design of such areas (e.g. near PT stops, with good cycling network).

Access Contingent Models for regulating car traffic at multifunctional developments

The Access Contingent Model is a promising strategy to reduce car-traffic on big sites like shopping centres or sports stadiums which normally generate large numbers of car trips. The idea is to limit the maximum number of car-trips permitted to and from the development by defining a contingent that may not be exceeded during a certain time period. The sanctions to be applied in the situation that this number of trips is exceeded must be fixed in a contract between the developer and the local authority. The contract forms part of the building permission.

Encouraging the adoption of Mobility Management through environmental legislation

In certain countries the Environmental Law requires that at development of a certain size or with a certain requested number of car parking spaces the applicant has to provide an Environmental Impact Assessment study with the request for building permission or with the request for an approval of a Detailed Site Development Plan; this can be used to secure MM measures to mitigate the impact.

Maximum parking standards

Parking standards are usually defined in planning authorities' parking regulations and normally define the *minimum* rate of car parking spaces per type of use within a development. They are the reference for a developer in calculating the amount of car parking spaces that must be provided at the new development. To invert the minimum into maximum rates can significantly reduce the amount of car-trips, especially at developments which are planned in dense urban areas with good alternatives to the car and no alternative parking spaces.

Parking pay-off

Parking pay-off is a procedure which is applied if a developer cannot build the required parking spaces at the development itself or in the general area. In this case he has to pay an amount of money to the local authority. This money is normally used to build parking spaces, but in some European states, it is also used for public transport or bicycle infrastructure. Another promising option would be to use the money for "soft" MM measures for the new development.

3.4.3 Mobility Management advice during the planning or building permission process

Local authorities can give advice to developers on how to build Mobility Management into their developments, during the building permission process. This can be as simple as advising them to consult PT operators.

Normal situation

Before submitting the documents for the approval of a building permission or a DSDP request the applicant can receive all kinds of advice from the involved agency or departments of local or regional administrations. Giving advice at an early stage aims to ensure that all requirements from building codes, parking regulation etc. are fulfilled in order that the process of examination and the approval is as short and runs as smoothly as possible.

New policy and the benefits

Like advice on other issues related with a development it is conceivable that advice on site-based Mobility Management could be offered in a standardized way to the applicant. At the point of developing plans for entire areas or for single developments, advice about Mobility Management measures could be very useful for the applicant. The existence of such service has to be promoted to the applicant through guidance documents related to applying for building permission, or during the first personal contacts between the applicant and the public authority.

If the building permission application does not succeed with regard to transport related issues, the applicant should also have the possibility to receive advice and consulting services on Mobility Management at this stage.

Such services increase the possibility that Mobility Management will be considered right at the planning phase of a development. Of course, developers are not required to use such a service, and so a lot of effort may be needed to convince them that they should do so and will benefit from it.

The advice or consulting service on Mobility Management can be offered by specialists within the transport planning department of a region or municipality. If such staffs are not available then training or the services of external experts are required.

Framework conditions

There are no special framework conditions that have to be fulfilled in order to implement this advice or consulting service for Mobility Management issues. But it is important that relevant expertise is available internally at the administration, or that it can call on experts in Mobility Management for help.

Procedure for integration and stakeholders involved

To offer such an advice or consulting service does not mean that a new job has to be created within the administration. It is likely that the activities can be included in an existing job-profile and then enlarging it. The other possibility is to outsource the activity to already existing experts in this field. In either case the politician in charge of transport planning will likely need to be convinced about the benefits of such a service for applicants for building permission.

MOBILITY MANAGEMENT ADVICE IN THE ADMINISTRATION OF AARGOVIA, SWITZERLAND

The Department for Transport is very active in the field of Mobility Management. It forms part of the official transport strategy of the canton. Since 2008 the department has installed a Mobility Management platform called aargaumobil. The duties of aargaumobil include consulting activities in the field of Mobility Management aimed at municipalities and private companies. A special task for aargaumobil is also to make detailed recommendations on Mobility Management to developers who are planning to construct new buildings.

This fact has led to the consequence that all the requests for building permission that have to be checked by the Department for Transport and that request more than 60 parking spaces are also checked by aargaumobil. In those situations where it makes sense, recommendations (and sometimes) obligations to include Mobility Managements are included.

Further information to check in the Annex

- [C1: Integration of Mobility Management recommendations in the building permission process](#)

3.4.4 Securing Mobility Management through negotiation

In many countries, the building permission process involves negotiation and compromise between local authority and developer. MM can be a topic of negotiation, and developers may thus be persuaded to implement it.

Normal situation

The conditions regarding transport aspects which have to be fulfilled by the applicant of a building permission are normally fixed in the related laws, regulations or planning instruments which a municipality applies. Depending on the discretion allowed by these instruments, negotiations between the applicant and the local authority (and sometimes the regional authority) are possible. However, it is unusual that Mobility Management measures are a topic of such negotiations.

New policy and the benefits

The inclusion of Mobility Management as a topic of negotiation would increase the chance that MM measures would be implemented as part of the development, especially when existing planning instruments, laws and regulations do not include MM as a condition or when there is little political will to be “tough” with an applicant. Obviously for MM to be secured in this way both sides – applicant and authority – have to be prepared to compromise. For example, the authority may permit development at a higher density in exchange for the applicant and site occupiers implementing MM measures.

Framework conditions

An important condition is that existing laws, regulations and guidance permit negotiations to take place on the nature of a development; in addition such negotiations are more likely to succeed in areas where the economy is buoyant and car traffic impact like congestion are seen as a problem.

The topic of the negotiation should ideally be fixed by contract and it is important that the monitoring of the effects of the implemented Mobility Management measures is included.

Main stakeholders in implementation

The main stakeholders who have a role within the negotiation are those departments and agencies that have to deal with request for building permission on the one hand, and the developer on the other.

LLYOD DISTRICT PARTNERSHIP PLAN, PORTLAND, UNITED STATES

The Lloyd District is located just east of Portland's Central Business District in the heart of the city. The area comprises 275 acres and currently employs just over 21,000 employees (2005). Approximately 650 business and 1,000 residential units are located within the Lloyd District boundaries.

Up until 1990, the construction of parking wasn't subject to any regulation. Commercial real-estate development space was bountiful and parking was free of charge for car users within the district. In addition the area was not well served by public transport, which led to a modal split of less than 10 % in favour of public transport.

The forecasts on employment growth undertaken in the mid-1990 have predicted a doubling of growth in the coming years and, consequently, a severe increase in the levels of traffic congestion. This led to the conviction that the district's mobility patterns should have to be more effectively managed. In 1994 the Lloyd District Partnership Plan with the city of Portland, the landowners and the TriMet (regional public transport company) was established with the following main goals: Enhance the Lloyd District commuters' mode-split share of public transport users from 10 % (1994) to 42 % (2015). Reduce the Lloyd District commuters' mode-split share of drive-alone car users from 72 % (1994) to 33 % (2005).

The Lloyd District Partnership Plan is a programme with several measures. Among others the key points of the plan (committed by the 3 partners) where: Improved public transport service to the area, improved access and amenities for biking and walking, maximum parking ratios for new office and retail development, managing and limiting the supply of parking spaces on large surface parking lots, agreement by the private sector to support and implement employee public transport subsidy programs, establishment of a private sector funding program through formation of a Business Improvement District (BID), creation of the Lloyd Transport Management Association (LTMA) that acts as a forum and catalyst to implement the plan, sharing of parking meter revenues through the LTMA to support transportation and parking services within the Lloyd District, development of a plan for installing parking controls and parking meters in the district to eliminate free and off-street commuter parking spaces.

Infrastructure measures are financed with the State of Oregon in the framework of the Business Energy Tax Credits (BETC) (targeted to businesses investing in sustainable mobility solutions).

Further information to check in the Annex

- [C2: Lloyd District Partnership Plan](#)
- [C3: MAXIMA \(free bus service to shopping centre\)](#)
- [C4: Business Park Goudse Port](#)
- [C5: Technology Park "Phoenix-West"](#)
- [C6: Urban development of Aspern Seestadt](#)

3.4.5 Securing Mobility Management through inclusion in the parking regulation

The regulation or guidance that sets out how much parking is required to be built with a new development can be modified to include with it a requirement for Mobility Management measures to reduce the transport impact of the development.

Normal situation

With regard of new developments typical local parking regulations define how many car parking spaces can (or must) be built per type and size of use planned. Normally the indication is given as number of car parking spaces per square meter of use, e.g. 1 car parking space for 120 m² surface dedicated for housing.

New policy and the benefits

The inclusion of a clause in the parking regulation, requiring or advising the implementation of Mobility Management at a new or renewed development would secure its implementation. The benefit of this is that MM would be considered from the beginning of a planning process. The integration should be brought about in such a way that not only the implementation of Mobility Management measures is secured, but also targets to achieve in terms of the mode-share for sustainable modes for site users, for example.

Framework conditions

The inclusion of a clause in the parking regulation to oblige the introduction of Mobility Management is recommended particularly in areas where there is a good accessibility by non-car modes of transport. Furthermore the municipality must be able to give advice or other help to those applicants for building permissions or DSDP that are affected by this new clause.

Procedure for integration and involved stakeholders

The procedure for integration of a new clause in the parking regulation/guidance varies from country to country and also from municipality to municipality. Quite often it is a political matter and therefore one to which the parliament or the council of a municipality must approve amendments. For the administration, this can mean that much effort is required to convince politicians of the benefits of site based Mobility Management. The clause is formulated by the administration involved, normally the transport department. In some countries amendments of parking standards may also have to be approved by an upper level authority, such as the region.

PARKING REGULATION OF THE MUNICIPALITY OF CHAM, SWITZERLAND

In 2007 a new article regarding Mobility Management enlarged the parking regulation of the city of Cham, Switzerland. The new article states:

If in a business zone (according to the local land use plan) a new development anticipates the construction of 50 or more car parking spaces a Mobility Management concept has to be delivered by the developer together with the request for building permission. The concept has to show how the use of alternative modes to car will be promoted. It has to include binding objectives therefore, relevant measures to achieve the objectives and a monitoring instrument. The content of the concept is subject of a contract between the council and the developer and is part of the building permit.

Further information to check in the Annex

- [C7: Parking regulation of the municipality of Cham](#)

3.4.6 Securing Mobility Management through inclusion in planning conditions and obligations

In those states in which planning conditions and obligations can be imposed on a developer during the building permission process, these can be used to secure MM at the development. In certain countries, conditions have to be imposed through the DSDP, not the permission process for individual buildings.

Normal situation

To adhere to certain planning conditions and obligations is a situation with which an applicant for building permission is confronted with in many states. If the development will, for instance, be built in an historical protected zone often certain architectural conditions have to be met. Or a condition might require a developer to plant a certain number of trees within a development site before it is operational. A financial obligation could ensure that a developer of a new development zone contributes to the cost of providing a new school or community centre. With regard to transport issues there are countries where private developers have to contribute financially to development-related but off-site transport infrastructure in the surroundings of the planned development.

New policy and the benefits

The integration of Mobility Management could be secured through the inclusion of the requirement in existing planning conditions. Like others planning conditions site based Mobility Management would then be a normal requirement applied at developments of certain sizes, uses and location. Those would have to be defined exactly by the local authorities.

Framework conditions

The integration of the requirement of Mobility Management would a task for the local municipality. The condition has to be flexible and take into consideration the specific development location (in terms of accessibility by different modes of transport). To ensure high accessibility by different modes of transport, the developer could for instance be involved in co-financing new public transport services through a corresponding obligation (as exists already in countries such as the UK, and Switzerland). That the economy is buoyant and congestion is seen as a problem can also be an important framework condition for gaining acceptance of MM and the use of regulation to secure MM measures at the development.

Procedure for integration and involved stakeholders

The inclusion of Mobility Management in an obligation connected with the building permit process has to be applied at the local level. To ensure that the municipalities apply it in the same way, the power to apply such an obligation should be developed at a national level, with a strong guidance to the municipalities on when and how to apply it.

PLANNING POLICY GUIDANCE 13, SECTION 106 OBLIGATION AND PLANNING CONDITION, UK

PPG13 deals with the location, mix and density of development; and with supporting transport measures for new development. It recommends that local authorities should secure travel plans (site based MM plans) from developers when they apply for building permission, and that they should use legal conditions to get developers to pay for transport infrastructure and services for the new development, and to limit on-site parking.

Many authorities follow the advice in PPG13 to secure site based MM plans. However, the “strength” of the MM plans varies significantly from place to place because some will only place a simple condition that a plan should be prepared before the site opens, whilst others will use conditions and obligations (agreements) to specify the plan content, monitoring, penalties for non-achievement and to pay for necessary improvements off-site (e.g. new bus services). In less economically successful areas, developers may not be asked to prepare any plan, or the plan that they prepare will just be a formality.

ADDENBROOKES HOSPITAL, CAMBRIDGE, UK

Addenbrookes is a 27 hectare site, 3 km south of the city centre and on the very edge of the city, shared with the university and medical research council. Some 7,000 staff work there, and the site generates over 18,000 vehicle trips each day. There are now 365 on-site buildings and car parks. The site has been growing since 1993 (when there was only 4,000 staff) and has been subject to a number of legal obligations with the City Council to manage transport impacts.

These committed it to a cap of 3,900 parking spaces and another to reducing single occupant car commuters from 50 % of staff in 2000 to 45 % in 2005, using measures to be worked out between the various parties involved. The actual achievement was 38 % of staff driving alone in 2005. In 2004 a further obligation set a target for reducing patient/visitor trips by car from 90 % to 86 % by 2006.

The local authority imposed phased requirements to reduce car use to development by capping number of car parking spaces, managing car parking, charging for car parking, and improving alternative modes especially cycling, bus and links to park and ride. Measures included have been: revised bus networks, a new bus station, significant discounts on weekly bus tickets, links to the nearby park and ride site, parking charging and management (with ring-fencing of income to spend on MM measures), cycle parking and showers and much improved off-site cycle links from the city to the site.

Further information to check in the Annex

- [C8: Planning Policy Guidance 13 \(PPG13\), S106 planning obligations and planning conditions](#)
- [C9: Addenbrookes Hospital](#)

3.4.7 Promotion of car-free housing

In areas with excellent public transport, cycling and walking accessibility, housing that is built with little or no parking attached can be a viable market proposition. The lack of parking is a major stimulus to MM.

Normal situation

Housing projects normally require a minimum number of car parking spaces like any other type of development.

New policy and the benefits

Car-free housing or car-reduced housing means to allow housing projects which need to build less car parking spaces than the law requires; or none at all. The benefits are clear: people who live there use cars much less than in conventional developments. Mobility Management is not a legal requirement in car-free housing projects but, rather, a commodity. Measures such as information on alternatives to the car, good bike infrastructure facilities, access to car-sharing cars and so on, are all facilitating life without a car.

Framework conditions

Framework conditions for the promotion of car-free housing are first of all the location of such projects. It is recommended to promote them in rather urban environments, where the public transport network and also the bike network gives good opportunities to use alternatives to the car.

Procedure for integration and involved stakeholders

Car-free housing projects are bottom-up approaches, where specific owners of buildings are willing to live and promote a “life without or less car”. The municipal authority can promote this kind of housing projects by not hindering them. They can do so by making sure that parking regulations or building codes allow a reduced number of car parking spaces, or no spaces at all. Normally this can be regulated by including phrases like “in certain circumstances, the minimum number of car parking spaces can be less than...” or “under certain conditions, car parking space need not be built” – and then specifying these special conditions and circumstances. If these additions do not already exist in parking regulations and building codes, then specific amendments are needed, usually requiring a political level decision.

In addition, the building owner or developer normally has to ensure that no household with cars will be allowed to own or rent in the development. This may be regulated by contract between the owner / developer and the local administration; or by ensuring that residents of the development do not qualify for on-street parking permits, if the development is located in a “blue zone” or similar. The procedure in case of non-compliance must also be defined - for example, the owner has to build additional parking spaces or must pay additional parking pay-off if too many households disobey and own or use a private car. In order to assure that these rules continue in force even if the property changes owner, the conditions must be connected to the land parcel where the development stands, requiring a notification in the land register.

CAR-FREE HOUSING IN THE CITY OF HAMBURG, GERMANY

The State of Hamburg defines parking regulations for car and bicycle parking spaces in its building code. The administrative rule (*Globalrichtlinie*) defines this issue in further detail and gives numbers of car and bicycle parking spaces according to uses and sizes of buildings. Here, three different reasons for reducing the number of required car parking spaces are set: a reduced Public Transport ticket for employees of business developments; a combined entrance and PT ticket for events (sport, culture) and a car-reduced or car-free housing project.

In case of car-free housing, the development has to fulfil certain requirements such as good PT accessibility, more than 30 accommodation units, a concept for avoiding car-use and a declaration by each resident that they will not own a car. If these requirements are fulfilled, the normal standard of 1 parking space per accommodation unit can be reduced to 0.2 parking spaces per unit.

CAR-FREE HOUSING PROJECT "GARTENSTADT SIEDLUNG WEISSENBURG, MÜNSTER, GERMANY

The car-free project "Gartenstadt Siedlung Weissenburg" covers an area of 3.2 ha and is located in the inner city area called "Geistviertel", only 2.5 km south of Münster's city centre. Many supply facilities are close-by and a car-sharing station is located at the edge of the development. The main area is for residential use, and a total of 196 accommodation units for car-free households have been/will be built on this former military land. The units are of various sizes, from studios to 5 room family flats. The first two construction stages with 70 and 60 units were ready for occupation in 2001 and 2003. The third and last one should be finished by 2012. All accommodation is reserved for social housing.

The development is connected with the city centre by a net of cycle paths; it takes approx. 10 min. Three bus lines each with a frequency of 10 min are within walking distance. By bus it takes about 15 min to main station and 7 min to the city centre.

The municipality required 0.2 parking spaces per accommodation unit dedicated for car-sharing vehicles and visitors. The implementation of a car-sharing scheme was one of the requirements for the reduced number of parking spaces. This reduction is part of the content of the Detailed Site Development Plan and the housing company "Wohnungsgesellschaft Münsterland mbH" (WGM) had to sign an urban planning contract with the city in order to get the building permission. Tenants sign a private contract with the WGM, stating that they do not own and use a private car.

For more information about car-free housing and MM for residential areas and housing see also results from EU project [ADD HOME](#)

Further information to check in the Annex

- [C10: Car-free Housing](#)
- [C11: Gartenstadt Siedlung Weissenburg \(Car-free housing project\)](#)

3.4.8 Access Contingent Model for regulating car traffic at multifunctional developments

For large developments and in some regulatory contexts it may be possible, as a condition of planning permission, to cap the number of vehicle trips permitted to travel to and from a given development.

Normal situation

Mixed-use developments like shopping centres combined with restaurants, sports and other leisure facilities are normally quite large. Such developments generate high traffic volumes which often cause noise, additional traffic jams and so on, especially at peak-hours. Characteristics of such multifunctional developments are that they are located outside of cities, mostly well-connected to highways and with a large number of car parking spaces.

New policy and the benefits

In order to limit the negative impacts of the traffic generated by such mixed-use areas, different strategies have to be adopted. First of all, such developments, called Heavily Frequented Sites in Switzerland, should only be permitted to be built in zones with excellent public transport accessibility. Secondly the developments should not be built on green-field sites but more in brownfield areas at the edge of city centres.

In addition to a restrictive car parking standards, in such areas the implementation of so-called Access Contingent Models is a valuable method to keep car traffic volumes under control. Access Contingent Models mean that the volume of car traffic generated from a mixed-use development is not permitted to exceed a certain amount per day, month or year. The amount is related to the maximum traffic volume that the street network in the surroundings is able to absorb on the one hand, and to meet environmental thresholds for air or noise pollution, on the other. Although the mixed-use development integrates different type of uses (like shops, restaurants, housing, offices) and the number of parking spaces is linked to these types of uses (according to the car parking rates per type of use established in the parking standards) the Access Contingent Model also gives a great advantage to the building owner. S/he can decide how the car parking spaces can be used and need not follow the rules defined in the parking regulation. The key is that the maximum number of generated car trips is not exceeded. In case of non-compliance, sanctions are agreed on between the developer and city administration.

The Access Contingent Model has an indirect influence on the set-up of Mobility Management measures. The owner of the buildings does not wish to exceed permitted maximum generated car trips. In order to stay within this limit the developer/owner must promote the use of sustainable modes to get to the multifunctional development: that is, Mobility Management.

Framework conditions

The number of car trips allowed and the sanctions in case of non-compliance are fixed in a contract between the developer / building owner and the municipality and this forms a key part of the building permission process. The use of the Access Contingent Model is reasonable for developments where there are several uses which are generating a lot of trips in a short time frame. This means, for instance, shopping, restaurants, cinemas or sports events where the normal stay of a visitors does not exceed 2 or 3 hours. Furthermore, good alternatives for the use of other modes than the car must be provided. Finally, the number of trips to and from the car parking area has to be capable of being monitored e.g. by equipping the car parking entrances with gates.

Procedure for integration and involved stakeholders

The Access Contingent Model is a rather new planning instrument, which has to demonstrate its utility to decision makers. This means that awareness raising is very important. The adoption of such a model would be best defined at a regional level. Within a regional spatial plan the locations of such multifunctional areas could be defined and the adoption of Access Contingent Models posed as conditions.

ACCESS CONTINGENT MODEL OF THE CITY OF ZURICH, SWITZERLAND

The Access Contingent Model defines the maximum number of car trips that are allowed to be generated from a development respectively from the different types of land use on the site. The calculation of the car trips allowed starts from the number of parking spaces defined in the parking regulation of the City of Zurich. Unlike the parking regulation the Access Contingent Model does not regulate how the parking spaces are used. This allows certain flexibility for the management of the parking spaces within the prescribed limit of car trips per time period.

The maximum number of allowed car trips is calculated on the basis of the following factors: the maximum number of car parking spaces according to the parking regulation of the city (which includes the quality of accessibility of the area with public transport), the specific trip potential per type of land use (number of trips which a specific use generates per a certain time period), the capacity of the road network in the development area and the thresholds for air and noise emissions defined by the Environmental Law. The Access Contingent Model has to be ensured by means of a process implemented by the developer/landowner including the monitoring of the trips, parking management and reporting procedure.

The monitoring has to be done periodically by an independent institution that reports to the Transport Planning Department of the city of Zurich. In case that the maximum number of trips is exceeded sanctions can be applied. First, infrastructural or organisational measures have to be implemented, but if these additional measures not have the intended effect, the public authority has the duty to act according the rules defined in the parking regulation of the city. This can be to re-distribute the parking spaces to the different uses of the development or to reduce the overall amount of parking spaces allowed.

The main objectives and reasons for the implementation of the Access Contingent Model are:

- To allow development in dense urban areas, already saturated with traffic.
- To control the environmental effects of large buildings/real estate developments.
- To allow flexible multi-use of car parking spaces.
- To keep car traffic volume under control by defining the maximum number of car trips.

With the application of the Access Contingent Model a contingent of allowed car trips is already defined in the planning phase and for the overall development. The trip contingent can be claimed stepwise as a partial limit according to the progress of construction of the overall development. Consequently the developer does not have to request permission for more parking spaces every time a part of the development is getting in use. The model also allows the municipality to study the compatibility of large and traffic intensive developments with regard to the capacity of the existing road network on the one hand and on the environment on the other.

SIHLCITY, ZURICH, SWITZERLAND

Sihlcity is a multifunctional development in the City of Zurich composed of several buildings. On around 97,000 m² ground floor space different uses like retail, services, culture, cinema, hotels, fitness, wellness and few housing are located. Sihlcity has around 19,000 visitors per day and 2,300 people working there. The development is situated outside the city centre nearby an important highway that ends in the City of Zurich. The development is also well connected to the regional train system (the railway station is just located at one of the main entrances of the area) and to the local public transport system (one bus and two tramway stops are located nearby). The area has furthermore a recreational function for the neighbourhood, which is a mix of employment and residential uses. The overall number of parking spaces at Sihlcity is 850, which means 1 parking per 110 m² gross floor area.

Within the process of getting building permission different transport solutions were fixed legally by contract: the number of parking spaces was set at 850 and the parking had to be charged, 600 bike parking spaces and a home delivery service by bike had to be implemented by the landowners, and the landowner was required to finance the improvement of a tram and a bus route for the first two years of operation. Furthermore an Access Contingent Model was requested, allowing the generation of maximum 8,800 car trips per day (to achieve after 5 years).

Further information to check in the Annex

- [C12: Access Contingent Model](#)
- [C13: Sihlcity, multifunctional development](#)
- [C28: Irvine Spectrum, Orange County, USA – office development](#)

3.4.9 Encouraging the adoption of Mobility Management through environmental legislation

In certain countries the adoption and use of MM for individual developments (through the land use planning system) is required, or encouraged, through environmental legislation.

Normal situation

During the examination of an application for building permission environmental legislation can come into play – for example, when there is a requirement to estimate the negative environmental impacts which a building or an entire development area has during construction and operation.

New policy and the benefits

An important aspect seen from the environmental perspective is the amount of car-traffic a new development will generate according to its size, location and the number of car-parking spaces planned. To obligate an applicant to deliver an Environmental Impact Assessment Study with the request for building permission or the request for approval of DSDP is rather important. When the Environmental Impact Assessment Study includes traffic related aspects it may be the case that the number of parking spaces has to be reduced or that additional measures to promote the use of sustainable modes have to be implemented.

Environmentally related policies can also have an influence on already existing developments: if the activities of a company have a considerable impact on the environment; annual renewable environmental permits could be handed out if the required conditions are met. With regard to transport matters one condition could be the implementation of Mobility Management.

Framework conditions

Environmental legislation is normally set at a national level. Therefore the content differs from country to country. It must first be clarified whether the existing law allows the integration of new procedures like Environmental Impact Assessment Studies or the delivery of environmental permits. If not, the law should be changed accordingly, but this normally is a rather time-consuming procedure.

Procedure for integration and involved stakeholders

The application of new policies like Environmental Impact Assessment procedures or the delivery of environmental permits is normally carried out at a local level. As with other policies, it is important to keep in mind the aspect of competition between municipalities to attract new and retain existing companies. To minimise this concurrence as much as possible, the implementation of such policies should be organised on a national level with the condition targeted on municipalities to apply it seriously.

ENVIRONMENTAL MANAGEMENT ACT, THE NETHERLANDS

The Environmental Management Act (“Wet Milieubeheer” or EMA) of 1993 is meant to “protect the environment”. This broad interpretation includes:

- Improvement of the environment;
- Promoting the suitable removal of waste materials;
- Promoting efficient use of energy and raw materials,;
- Reducing the harmful effects on the environment of individual and goods transport within cities.

Under the terms of this act, approximately one quarter of Dutch companies must receive an environmental permit in order to operate. To receive the permit, they must fulfil the requirements of the EMA. The act states that (within the framework determined by the competent authorities) the companies themselves are responsible for the reduction of their environmental impact. Companies can take responsibility for the reduction of their environmental impact by, for example, measuring the impact of their operations and drawing up a plan to reduce it (much in the same way MM plans comprise both diagnostic and action phases). Such diagnoses and action plans may also focus on specific environmental aspects, such as: energy-saving and transport management.

The law is intended to put responsibility on companies for taking reasonable steps to reduce their environmental impacts. To expand, change location or simply to carry on operating, companies have to obtain a triennial permit from local authorities, based on an application that demonstrates how environmental impacts will be mitigated and minimised. This could be interpreted to include the impacts of transport to, from and at the site, although only the City of Amsterdam ever interpreted the law in this way. MM was not specifically mentioned in the law – its definition of environmental impacts was much broader, to permit the companies themselves some flexibility in selecting their most significant impacts.

DE TELEGRAAF NEWSPAPERS, CITY OF AMSTERDAM, THE NETHERLANDS

De Telegraaf is one of the largest newspapers in the Netherlands. It is part of the Telegraaf Media Group (TMG), based at a very accessible site (by both public transport and road) on a business park around 800 m from Sloterdijk station in the west of Amsterdam, en route to Schiphol airport. The office and plant employs 2100 people in editing, marketing, sales, administration and printing/dispatch. In 2001 TMG applied to the municipality for the periodic renewal of its environmental permit – it was one of those organisations in the Netherlands required under the 1993 Environmental Law to obtain an environmental permit from the local municipality to continue to operate. Thus this was not something that was part of the planning process – it applied to a continuing operation. That said, many new, relocating and expanding organisations were (until 1/1/08) also required to obtain such a permit. In the case of TMG, Mobility Management was a condition of the granting of the permit. However, this requirement did not extend to the specification by the municipality of specific Mobility Management measures.

Further information to check in the Annex

- [C14: Environmental Management Act](#)
- [C15: De Telegraaf newspapers](#)
- [C16: Environmental Impact Assessment Procedure](#)
- [C17: Traffic Impact Assessment Study \(Estudio de tráfico\)](#)
- [C18: Environmental Quality Standards in the Environmental Code](#)
- [C19: The “City entrance” project](#)

3.4.10 Maximum parking standards

If the number of parking spaces required to be built by a developer at a new development is limited, and there is little or no alternative parking off-site, this is a powerful stimulus to MM by developers and site-occupiers.

Normal situation

Parking standards means the rate (or the number) of car parking spaces which can or must be built per a certain amount of square meters of type of use planned in a new development. Normally this rate is defined as a minimum rate or the minimum number of spaces that the developer must build. This approach aims to avoid on-street parking (especially on public car parking spaces). It is understandable on the one hand but on the other, the use of minimum rates alone leads to construction of very large numbers of parking spaces which as a consequence attract more car traffic and are often under-used, which is a waste of land. Parking standards are often defined by the municipalities themselves and integrated into the local parking regulations. This can lead to the situations that the rates adopted in one municipality are rather different to those set by the municipality next door.

New policy and the benefits

The new policy inverts the normally applied policy of defining minimum rates of parking standards into maximum rates or a range of defined minimum and maximum. In addition, the accessibility of the site by non car/alternative modes can also be taken into account as a set of factors to further reduce the maxima. These “reduction factors” can be set for different zones of similar accessibility levels.

The Swiss Norm on Parking Standards (see Annex) suggests this type of approach, as follows:

- Subdivision in zones where the existing amount of the pedestrian and bike traffic is more than 50 %, 25 to 50 % or less than 25 % of the entire traffic volume;
- Subdivision in zones where the frequencies of public transport stops per hour are 5 and more, 1 to 4 stops per hour, or not served by public transport at all.

If a new development is planned in a zone where the bike and the pedestrian traffic is more than 50 % of the entire traffic volume and the frequencies of public transport per hour are 5 and more, then the rates of maximum car parking (or the rates of the share between minimum and maximum car parking) would be lower than the rates for developments placed in other zones.

The benefit of this inverted policy is clear: Fewer car parking spaces are allowed to be built, especially at new developments located in dense urban areas with a good public transport network and with a high bike and pedestrian traffic share. As a consequence developers would consider Mobility Management measures in order to manage the reduced supply of available car parking spaces.

Framework conditions

In order to make the policy of applying maximum parking standards as most effective as possible the following framework conditions should be met:

- In order to avoid competition between municipalities the new policy should be developed by the regional or, still better, by the national government in the form of guidelines or a norm (targeted at local authorities) and representing an established base that can be used as reference for the integration of the standards into local parking regulations;
- The parking policy of the municipality should not plan for the use of any public parking spaces for long term parking; and there should not be any other free long term parking spaces close to the development (within a 15 minute walk, for a workplace);
- The quality of the public transport network should be rather high and present a real alternative to car-use.

Main stakeholders in implementation

As mentioned in the previous section the guidelines or norm should be developed at the regional or national level. The stakeholders that have to take the initiative, therefore, are transport planning departments. The application of the guidelines takes place at the level of the individual municipality which should include them in their own local parking regulations. The amendment of the regulation is normally subject to political decision.

MAXIMUM PARKING STANDARDS, ENGLAND, UK

As their name suggests, England's maximum parking standards (MPS) set nationally-applicable maximum amounts of parking that are allowed to be built at new developments. The MPS are an Annex to PPG13, although they were only introduced in the last version of PPG13 in 2001. Earlier versions of PPG13 suggested that local authorities set their own maximum standards at local level, but many were reluctant to do so because of the fear that neighbouring authorities would set less restrictive standards in order to attract development.

The standards in PPG13 do not apply to residential developments; these are covered by a different PPG (PPG3) and set a maximum of 1.5 spaces per dwelling across an area – meaning that some can be built with more spaces, and some with fewer, as long as the average is 1.5 spaces. The standards and the minimum size of developments to which they are applying are shown in the following table:

Use	National Maximum Parking Standard 1 space per square metre (m ²) of gross floorspace unless otherwise stated	Threshold from and above which Standard applies (gross floorspace)
Food retail	1 space per 14m ²	1000m ²
Non food retail	1 space per 20m ²	1000m ²
Cinemas and conference facilities	1 space per 5 seats	1000m ²
D2 (other than cinemas, conference facilities and stadia)	1 space per 22m ²	1000m ²
B1 including offices	1 space per 30m ²	2500m ²
Higher and further education	1 space per 2 staff – 1 space per 15 students	2500m ²
Stadia	1 space per 15 seats	1500 seats

PPG13: planningpolicyguidance/ppg13

This means that many authorities can be – and are – in the situation of having maximum standards for large developments and minimum standards for smaller developments. The standards are not primary legislation, although as part of planning guidance, they have legal status. They can be ignored or adapted but if this occurs, there must be a very good rationale for so doing. If a local authority grants permission to a building with more than the national permitted maximum standards, national government could reverse the decision. In general, however, they are applied with reasonable consistency.

CORK CITY DEVELOPMENT PLAN (SECTION 49 POLICY T12), IRELAND

Local Development Plans (LDPs – the official title in Ireland) are the principal mechanism in the Irish planning system for guiding and regulating development. As a planning authority, Cork City Council must (under the requirements of the Planning and Development Act 2000) produce a Development Plan. Within the plan it is able to set out any number of policies that it believes are relevant to the regulation of development.

With regard to mitigating the environmental and transport impacts of development, the Cork City Development Plan includes a policy T12 which reads “[the Council will require] Mobility Management plans to be prepared and implemented for all significant new and expanded developments”. The supporting text to the policy provides some more detail, including explaining what a MM plan is, what it might contain, and how it should be implemented – including the requirement for a MM coordinator at the largest developments covered by the policy. It also highlights the need for targets, monitoring of these, and regular reporting to the City Council. The policy is supported by maximum parking standards for all new developments, with some developments permitted no additional parking.

Further information to check in the Annex

- [C20: Maximum parking standards](#)
- [C21: Cork City Development Plan \(Section 49 Policy T12\)](#)
- [C22: Swiss Normative on parking standards \(SN 640 281\)](#)
- [C23: Bicycle parking standards as a part of the Municipal Spatial Plan](#)
- [C24: Parking Regulation of the city of Krakow](#)

3.4.11 Parking pay-off

Sometimes developers are permitted, or encouraged, to build fewer parking spaces than would normally be required with a development of the size planned. The money raised can then sometimes be used for MM.

Normal situation

If developers are not able to construct the required number of car parking spaces within the parcel of the planned development or in one of neighbouring areas they have to pay to the municipality a certain amount of money. The amount is normally defined in the local parking regulation and it is used by the public authority for the construction of car parking spaces preferably in the vicinity of the development in order that they can be used by the future users of the development; alternatively, the money may be used to fund park and ride spaces, or in some situations alternative modes of transport altogether.

New policy and the benefits

A good policy would ensure that the money derived from parking pay-off is also used for the improvement of public transport and bike network of a municipality, especially in new development zones. This would lead to a better supply of alternatives to car use. A second approach is that the municipalities release at least a part of the pay-off sum to the developer with the conditions that a range of Mobility Management measures are implemented at the new development, to ensure a reduction in car use. This strategy could be a part of negotiations between the developer and the local authority.

Framework conditions

The main framework conditions to use the parking pay-off money for purposes other than building car parking spaces or to allow parking pay-off as a subject of negotiation is probably to amend the local parking regulation on the one hand and probably also the Law on Planning and Construction on a national, state or regional level (which is often the legal base to which local parking regulations have to refer).

Main stakeholders in implementation

The amendment of the parking pay-off procedure as normally applied is subject to political decision at the local and often also at the upper level government. Amendments to any laws that refer would guarantee that all municipalities within a country or region would adopt a respective amendment of their local regulations.

PARKING REGULATION AND PARKING PAY-OFF IN NORTH RHINE–WESTPHALIA (NRW), GERMANY

Generally, the legal framework for car parking is the national Federal Building Code (*Baugesetzbuch*). The State Building Code North Rhine-Westphalia (*Bauordnung NRW: BauO NW*) completes this framework. The legal basis for parking regulations and parking pay-off in NRW is § 51 BauO NW.

Main contents:

- Duty to construct car parking spaces within the building permission process (if car traffic is expected);
- Similar duty to construct bicycle parking spaces within building permission process (no quality standards);
- Possibility to restrict or limit the number of car parking spaces (for reasons of urban design, transport or safety) by municipal charter;
- Parking pay-off is possible by agreement with municipality (criteria: construction is impossible or unacceptable, even on parcels located nearby);
- Pay-off money is ear-marked for improving the accessibility of development; since amendment in 2000, investment measures for PT or bicycle transport are possible as well.

Municipalities can set up additional local parking charters for further refinement of parking as an area of the building permission process, or for setting up Detailed Site Development Plans.

Parking pay-off is possible if the urban design of the development and the neighbouring areas (esp. in city centres) or the nature of the transport system makes it impossible to construct all of the minimum required car parking spaces on-site. If this is not possible, parking spaces have to be built on another parcel in close vicinity instead. If this too is not possible, the developer pays a certain amount of money to the municipal authority. This amount is defined in a local parking charter and has to be used for car park facilities, PT, bicycle or other transport infrastructure in order to deal with the expected car traffic/parking demand or enhance car-alternative options in order to reduce the demand for car parking related to this development.

TECHNOLOGY PARK “PHÖNIX-WEST”, DORTMUND, GERMANY

The site is located within the city area of Dortmund, about 5 km to the south of the city centre, close to the district centre of Hörde. The whole area of Phoenix-West has about 110 ha, and it will be developed as a business park with some smaller service, shopping and leisure / cultural facilities. Some buildings are already in use, but the main area was planned to be developed by 2015.

Quite restrictive parking regulations within Detailed Site Development Plan exist, and only few on-street parking spaces are planned. On-site alternatives are underground or multi-storey parking, but these would be expensive solutions. The city's mobility concept offers alternatives: the developers can (partially) pay-off parking spaces that cannot be built (then the public authority will build public parking garages) and/or they can set up a mobility concept for their business and implement MM measures. In this case, the need for parking will be reduced and therefore the public authority will suspend the duty for all or some of the parking spaces that would otherwise needed. This is subject to negotiation and up until the time of writing (August 2009) no decisions had been reached on this.

Further information to check in the Annex

- [C25: Parking Regulations and Parking Pay-off in North Rhine - Westphalia](#)
- [C5: Technology Park “Phönix-West”](#)

3.5 Monitoring and enforcement of Mobility Management secured through the building permission process

Once MM is secured by means of the building permission process, it can result in one or both of the following:

- The implementation at the site by the developer / occupier of certain measures e.g. bike parking, a new bus service, or car-pooling. These are **outputs**.
- It can set targets for the mobility profile of the development: for example that, five years after opening, 50 % of trips should be made to and from the development by non-car modes. These are **outcomes**.

Outputs can be measured by observation and submission by the developer/occupier to the local authority of evidence that they have been put in place.

Outcomes usually need to be monitored by some form of count or survey. Guidance on how to design and conduct surveys is provided by the MAX tool MaxSumo (www.max-success.eu). Basically the survey should measure how people travel to and from the site, and be carried out annually or more regularly. To avoid bias or influences on the survey, those who carry it out should be independent.

Whether outputs or outcomes are required, the local authority also needs to keep in regular (e.g. three-monthly) contact with the site developer/occupier to understand qualitatively how the MM plan is going, and to help to resolve any problems.

If outputs or outcomes are not achieved, then some form of sanction has to be implemented, otherwise there is little reason for the developer/occupier to implement the MM plan in the first place. Sanctions might include (although this depends very much on the planning system of the member state in question):

- Introducing additional MM measures at the site;
- An obligation to reduce the number of parking spaces at the development;
- Not being refunded a bond (sum of money) paid over to the local authority during the building permission process. This bond is then retained by the local authority and used to fund transport measures to compensate for the lack of success of the MM plan.

It is essential that expected outputs and outcomes, monitoring arrangements and possible sanctions are made clear in a written agreement or contract that forms part of the building permission.

More information on monitoring and enforcement is available at

<http://www.dft.gov.uk/pgr/sustainable/travelplans/tpp/goodpracticeguidelines-main.pdf>

4 How to transfer and apply integration in different planning systems?

In this chapter some recommendations are made on how users of MaxLupo might proceed to apply it in their own country. These recommendations are based on observations of how MM has become integrated with the planning system in Switzerland and the UK; and of how the idea was received when it was discussed in planning simulation workshops in countries where it is very new, such as in Spain, Slovenia, Poland and Lithuania.

The view of MAX WP D is that integration of MM and planning can be transferred to new contexts on a site-by-site basis, depending on the presence as part of the planning process of people with an interest in and knowledge of integration.

More systematic and frequent integration of MM and planning takes longer to establish and requires a lead or support from national or regional government.

4.1 Transferability

Transferability is a key question in almost all EU research projects and MAX WP D is no exception: whether experience and practice from one country can be transferred and applied in another. The key tests of transferability in MAX WP D were a cross-national analysis of planning systems and the planning simulation workshops, in which the idea of integrating MM with the building permission process at specific sites in five partner countries was explored.

There is evidence from these two pieces of work that even in countries where MM itself is a very new idea, consideration is already being given to integrating it with the land use planning process: examples include Slovenia, Spain and Poland.

An important caveat on our findings on transferability is that it is impossible within the scope of MAX WP D to give detailed guidance on the legal feasibility of transferring practice from one planning system to another; this is a key issue, but one that we have to leave to the user of MaxLupo if they have a strong interest in applying practice from another country to their own.

From this research, we conclude that:

- There are many similarities in planning systems, particularly in the ways that Local Plans and Detailed Site Development Plans are made; and in the responsibilities of different levels of government in the planning system.
- This means that **there is “space” for the integration of MM in the planning process of many countries**, through negotiation at least; and this can be done on a municipality-by-municipality and case-by-case basis: the integration of MM with the planning process (through negotiation) is something that can be adopted easily and can be extended incrementally.

- Therefore, many of the means we have identified to include MM in the planning process **are transferable** but they may only be transferred **in the first instance to few developments** where one or two site-occupiers or local politicians have a particular interest in or knowledge of MM, or where management of transport impacts of new development is a particularly high local political priority.

For example, it is possible to negotiate a travel plan for a new development in Slovenia, if local interests supported the idea and where there are people involved who have some knowledge/awareness of the concept – but this may only be the case for a few developments, initially at least.

In contrast, in England, this is a more widespread practice because it is now supported by local and national policies as well as, now, by some years of practical experience of implementing these policies. Nonetheless, the basic concept can be seen to have been transferred from England to Slovenia. The challenge for Slovenia is then to make this practice one that is normal and consistently applied, rather than one that is ad-hoc and one-off.
- Therefore, **to begin transferring** experience and practice from one country to another, the key requirements are **a knowledge of that practice** (e.g. what is a travel plan and why it can realise benefits when integrated into a new development) and the **political will or interest** to make the transfer and try something new.

As noted earlier, the interest or will may sometimes be amongst civil servants rather than politicians: for example, the first steps in integrating MM with the planning process in Nottingham, UK, were taken because of the interest and knowledge of local authority staff, not politicians. How and how far the idea of integrating MM with LUP is well known and accepted is therefore crucial to its initial take-up.
- The **next stage in policy transfer** is for the policy to move from one that is adopted and implemented in an ad-hoc way to one that is **institutionalised within the land-use/transport planning system** of a country or region. To do this, changes in **regional and national policy and law** may be required. This therefore needs lobbying and awareness-raising at the national and regional level; and some political recognition that such policies are beneficial – as there has been in Ireland or Sweden, for example.

In the UK and Switzerland, the integration of MM and LUP occurs in practice both because policy exists, but also because planning law gives higher levels of government some control over municipalities in the areas of plan-making and the granting of building permission. It is possible that in countries where there is less control by higher levels of government, the implementation of any national/regional policy on integration – if it exists - will be more variable (the converse of this of course is where national government has some influence over local government and national government policy does *not* encourage integration of MM and planning).

How to adapt the policy or practice is a matter for local judgement, based on knowledge of how it is used in another country, and what the differences are in the new country. From the limited experience of the MAX planning simulation workshops, it seems that policies can be transferred without very much adaptation.
- Finally, and importantly, **in certain cases there are legislative barriers** to directly transferring policies: for example, Slovenian national construction by-law would have to be changed to allow the use of maximum parking standards for residential use. In this situation, creative thinking is called for; or the policy may simply not be transferable and this must be accepted.

In the case of policies explored in MAX WP D, we conclude that many are capable of being transferred and that they do not require being greatly adapted for transfer to work. For their use to become widespread in whole countries or regions to which the policy is transferred, regional or national policy guidance is required, together with requirements or incentives for municipalities to use it in their planning activities.

4.2 Recommended steps towards integration of MM and LUP

All the policies listed in MaxLupo and summarised in Sections 2.2.1 and Section 3.4.2 are recommended for adoption if an objective of transport policy is to maximise accessibility whilst minimising the environmental and congestion impacts of transport. Only if there is a legal barrier can their adoption not be considered in the short to medium term. Which type of policy is preferable to adopt depends on the legal situation, the existing planning instruments and the political willingness within a country, a region or a municipality.

These are recommended steps, to be taken by various levels of government, as appropriate:

- Start with the position of **advising on MM and raising awareness** of integrating MM and LUP. Advice can be given always, anywhere within the first steps of a building permission – when an applicant contacts the administration – he or she gets advice on how to integrate transport issues and MM. What she does with this information / advice doesn't need any condition or document;
- **Negotiate for MM and LUP integration in large developments**, arguing on basis of improved accessibility for all (and therefore market size); social inclusion (non-commercial developments) without setting any obligations or conditions;
- Check if you can **expand existing regulations** within the normal building permission process and use the already existing system of conditions/obligations or additional contracts with developers to integrate the duty of implement MM as well;
- Find **local authorities**, preferably those with highest development pressures, which are **willing to take a step ahead**: to check transferability of the policies to your legal system, to pilot negotiations, develop their own guidance on MM and (where law allows) set maximum parking standards or apply access contingent models. These act as “pathfinder” showcase/best practice authorities;
- In some countries, it may also help to bring in **external, national or international “experts” to sell idea of integration** – depends whether they will be taken more seriously than locals;
- **Lobby/raise awareness** at all levels of government pointing out **need/benefit for change in law and policy**.

Clearly this process will not always be easy; in particular, legislation in certain member states can make aspects of the integration of MM and planning very difficult. In other respects, the process of building up awareness and support for integration is one of communication over a quite lengthy period of time. The message will be better received in times of higher economic growth and in areas with greater development pressures and levels of traffic congestion; and when it is skilfully communicated by enthusiastic advocates who have a strong and clear message.

Background reports

For more information on the MAX research, on which MaxLupo is based, refer to the following reports:

- *State of the Art report - WPD, Integrating planning and Mobility Management* (2007)
- *Comprehensive State of the Art report – Annex D* (2007)
- *Working Stage Analysis 1: Comparison of integration of sustainable transport, Mobility Management and land use planning in WP D Partner countries* (2008)
- *WP D Working Stage Simulations: Common report on 'planning simulation workshops'* (2008)

These and other MAX– Successful Travel Awareness Campaigns and Mobility Management Strategies project reports can be downloaded via www.max-success.eu. Other helpful information and MAX-tools for enhancing the use and integration of Mobility Management in various ways can be downloaded via www.epomm.org or www.max-success.eu.

Further assistance and contact details

For further assistance in integrating MM and land use planning in your town, city or region please feel free to get in touch with one of the MAX WP D partners.

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Annex I: Integration of land use with transport planning

The following case studies provide examples of existing policies which encourage the integration of land use with transport planning to promote more sustainable transport patterns.

Nr.	Name	Applied in	Country
B1	Planning Policy Guidance 13 (PPG13)	England	UK
B2	Greater Dublin Regional Planning Guidelines	Greater Dublin	Ireland
B3	Regional structure plan for the localisation of Heavily Frequented Sites (HFS) of the Agglomeration of Biel	Agglomeration of Biel	Switzerland
B4	Determination of the localisation of Heavily Frequented Sites (HFS) in the Cantonal Structure Plans	Swiss Cantons	Switzerland
B5	Edinburgh and Lothians Structure Plan (ELSP)	Lothian region, Scotland	UK
B6	South Dublin Development Plan	South Dublin	Ireland
B7	Regional Land Use Plan	German regions	Germany
B8	Land Use Development Plan	all parts of Ireland	Ireland
B9	Cantonal Structure Plan	Swiss Cantons	Switzerland
B10	Cooperation between spatial planning and transport planning offices within the administration of the Canton of Aargovia	Canton of Aargovia	Switzerland
B11	Cooperation between regional transport and regional planning in Southeast Scotland	Southeast Scotland/Edinburgh region	UK

B1	Planning Policy Guidance 13 (PPG13)	
Applied in: England	Country: United Kingdom	Produced by: Department of Communities and Local Government
Type of policy: Guideline	In force since: 1994	Level of application: all levels
<p>Content:</p> <p>PPG13 deals with the location, mix and density of development; and with supporting transport measures for new development. It recommends that, when drawing up development plans, local authorities should:</p> <ul style="list-style-type: none"> • Increase the density of development, • Increase the mix of uses, • Ensure that higher density development is located in areas that are well served by public transport, or capable of being well served by public transport, • Concentrate development in areas where there is already a significant population, to avoid urban sprawl and increase the probability that the settlement is big enough to support services locally, so that people do not have to travel for them, • Take into account their own and other authorities' proposals for new public transport infrastructure and services, so that development can capitalise on these. <p>PPG13, although a planning document, also encourages local authorities to implement sustainable transport measures to support sustainable access to their developments.</p> <p>With regard to decisions on building permission, PPG13 encourages local authorities to secure travel plans (site based MM plans) from developers through this process, to use Section 106 planning obligations to secure financial contributions to off-site transport improvements/measures.</p>		
<p>Main objectives and reasons for implementation:</p> <p>PPG13 helps to achieve the objectives of the current law governing planning in England, the Planning and Compulsory Purchase Act 2004. In this, local authorities have a duty to protect the environment in their planning activities. In addition, PPG13 is designed to assist the achievement of transport policy objectives, such as reduced congestion, greater social inclusion and a better environmental performance for transport. It is also intended to reduce pressure on greenfield land on the edge of towns, by focusing development more on brownfield sites in existing built-up areas.</p>		
<p>Spread of the policy:</p> <p>It must be taken into account to at least to some extent in developing plans and making planning decisions.</p>		
<p>Consistency of application of the policy:</p> <p>The need for integration and coordination of land-use and transport planning is a requirement of PPG13 and should feature in every development plan and major planning decision. But how strongly this is applied and leads for example to development focused on public transport axes differs from area to area.</p>		
Targeted at: planning authorities	How binding is the policy? between mandatory and voluntary (explained in additional comments)	

Influenced by main policies:	
<ul style="list-style-type: none"> • Planning and Compulsory Purchase Act 2004 	
Effectiveness:	
<p>No publicly available monitoring has been carried out of the effectiveness of PPG13. Anecdotally it appears that more development has taken place in town and city centres since the publication of PPG13 than previously; and that it has led to the use of the planning system as a significant trigger to site mobility plans. However, there is no overall analysis of these progress reports that is publicly available.</p>	
Information sources:	
<ul style="list-style-type: none"> • Section 106 planning obligations (agreements) • PPG13 	
Additional comments:	
<p>The British planning system is not as codified as others. Planning guidance such as PPG13 should be taken into account by planning authorities when they are drawing up plans and making planning decisions. However, if there are other good reasons not to take PPG13 into account, and a good case can be made, then other considerations may take precedence. In addition, PPG13 is written in a way that allows a great deal of interpretation of its policies – for example, a location that is judged to be “well-served by public transport” in one local authority area might not be in another.</p>	
Information provided by:	Date:
Edinburgh Napier University, Edinburgh, United Kingdom	17.12.2008

B2	Greater Dublin Regional Planning Guidelines	
Applied in: Greater Dublin	Country: Ireland	Produced by: National Government with input from regional and local authorities
Type of policy: guideline	In force since: 2004	Level of application: regional level
Content: <p>The Greater Dublin Regional Planning Guidelines (GDRPG) are produced in accordance with the requirements of the Planning and Development Act 2002. The Guidelines provide the overall strategic context for the Development Plans for the local authorities in the region, and also provide a framework for future investment in infrastructure including transport. The Greater Dublin Area (GDA) consists of Dublin City and the counties of Dun Laoghaire-Rathdown, Wicklow, Kildare and Fingal ("the metropolitan area") and, in addition, the counties of Meath, Wicklow and Kildare ("the hinterland"). The intention is that the planning authorities take into account the policies in the GDRPG when drawing up their own plans; since the plans go through a period of scrutiny by public and central government before they are adopted, it is possible for national government in particular to require changes to a plan so that it better reflects both national and regional guidance. Although guidance, the GDRPG has legal status since it is required to be produced under the law. However, it is in itself not a law that must be followed <i>to the letter</i>; it is rather guidance that can be interpreted.</p>		
Main objectives and reasons for implementation: <p>The Guidelines propose that the strategy will follow a development path that will:</p> <ul style="list-style-type: none"> • Consolidate development and increase overall densities of development which will lead to a more compact urban form, relative to the size of the population; and • Facilitate the provision and use of a considerably enhanced public transport system. <p>The reason for this is to combat the major congestion problems that Dublin suffers, and also to create a more sustainable city to contribute to Ireland's CO2 reduction targets within the EU as a whole.</p>		
Targeted at: planning authorities	How binding is the policy? between mandatory and voluntary (explained in additional comments)	
Influenced by main policies: see additional comments		
Effectiveness: <p>A qualitative review of one Development Plan in the Greater Dublin area shows that there has been considerable interpretation of the GDRPG by the authors of the plan; its intent in terms of sustainable transport and the location of development is significantly watered down. No systematic review of the effectiveness of the GDRPG has been carried out.</p>		
Information sources: <ul style="list-style-type: none"> • South Dublin Development Plan • Regional Planning Guidelines – Greater Dublin Area 		

Additional comments:

The various documents that should have influenced the GDRPG are:

- [The National \[Infrastructure\] Development Plan](#) and [National Spatial Strategy](#),
- [Sustainable Development, a Strategy for Ireland](#)
- [National Anti Poverty Strategy](#)
- [Guidelines on Local Agenda 21](#)
- [National Climate Change Strategy](#)
- [The Dublin Transportation Office's regional transport strategy](#)

The regional planning guidelines can be applied very differently by different authorities and as long as they are able to justify how they have applied them to their development plan, this inconsistency in application is entirely lawful.

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

17.12.2008

B3	Regional structure plan for localisation of Heavily Frequented Sites (HFS) of the Agglomeration of Biel (<i>Regionaler Richtplan verkehrsentensive Vorhaben in der Agglomeration Biel</i>)	
Applied in: Agglomeration of Biel	Country: Switzerland	Produced by: Spatial Planning Association of the Region of Biel
Type of policy: plan	In force since: 2004	Level of application: regional and local level
<p>Content:</p> <p>In order to fulfil the objective of the cantonal Clean Air Action Plan, the structure plan of the Canton of Berne defines among others a maximum quota of 575,000 car-km per day which are allowed to be generated between 2002 and 2015 from HFS located in the whole Canton. For each of the 3 agglomerations Berne, Thun and Biel the structure plan assigns a "credit of car-km". For the agglomeration of Biel an amount of 45,000 car-km per day within the mentioned time frame is reserved. In the Canton of Berne HFS are defined as buildings, which are generating more than 2000 car-trips per day. Therefore it does not matter if it is a new or an enlargement of an existing building. The cantonal structure plan states furthermore that the defined "credits of car-km" has to be assigned to adequate locations for HFS. They should be placed nearby densely populated areas and areas with a concentrated amount of working places. A good accessibility with car and public transport is another precondition to take into consideration.</p> <p>On the base of the mentioned preconditions by the cantonal structure plan the municipalities enclosed in the agglomeration of Biel elaborated a so-called regional structure plan for the localisation of HFS. Thereby following working steps have been adopted:</p> <ul style="list-style-type: none"> • Pre-selection of adequate sites for HFS within the agglomeration on the base of spatial planning criteria, • Coordination agreement (2002) between the tackled municipalities and the cantonal departments involved with following stipulations: geographical assignment of HFS - localisations, assignment of the credits of car-km to the single localisations, controlling procedures, legal fixation in the regional structure plan within 2 years, adjustment of the structure plan on parking of the city of Biel. • Development of a regional structure plan for the localisation of HFS in the agglomeration, which is legally binding for the municipalities of the whole agglomeration, following the requirements of the building law of the Canton of Berne. 		
<p>Main objectives and reasons for implementation:</p> <p>The Clean Air Action Plan of the Canton of Berne states that the defined objectives for air and climate protection can (only) be achieved, if the traffic volumes within the canton derived from individual motorized transport between 2000 and 2015 are not augmenting more than 8 % or 1,3 Mio. of car-km per day. Fixed in the cantonal structure plan, 4,5 % (725,000 car-km per day) of the volume is allocated in general for the development of the municipalities. 3.5 % (575,000 car-km per day) are dedicated to the development of HFS within the whole Canton.</p>		
Targeted at: planning authorities (regional and/or local) and developers (public or private)	How binding is the policy? mandatory	
<p>Influenced by main policies:</p> <ul style="list-style-type: none"> - Structure plan of the Canton Berne (in German) - Clean Air Action Plan of the Canton Berne (in German) 		

Effectiveness:

The fixation of the localisation of HFS and the procedures in the regional structure plan of the agglomeration and within the coordination agreement was the base of a controlled development of HFS within the tackled area. Since the instrument is in act, totally 5 new HFS have received a building permission. Within the building permit procedure the municipalities have assigned a maximum quota of car-trips to each HFS with the respective controlling procedures to be adopted. The total amount of car-km credits assigned to the agglomeration is depleted nowadays. That means that no additional HFS will receive building permission till 2015.

Information sources:

- [Amt für Gemeinden und Raumordnung des Kantons Bern, Berner Fahrleistungsmodell, Grundlagen und Anwendung, Bern, 2005. \(in German\)](#)
- [Regionalplanungsverband BS Biel-Seeland, Richtplan Verkehrsintensive Vorhaben, VIV, Agglomeration Biel, Biel, 2004. \(in German\)](#)

Additional comments:

none

Information provided by:

synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:

28.11.2008

B4	Determination of the localisation of Heavily Frequented Sites (HFS) in the cantonal structure plans (<i>Empfehlung zur Behandlung von verkehrsintensiven Vorhaben in kantonalen Richtplänen</i>)	
Applied in: Swiss Cantons	Country: Switzerland	Produced by: Federal Office for the Environment; Federal Office for Spatial Development
Type of policy: recommendation	In force since: 2006	Level of application: regional level
<p>Content:</p> <p>The recommendations show that sites for big developments for buildings and installations need to be determined in the cantonal structure plans because they have considerable impacts on space and environment due to the traffic they generate. For the determination of suitable sites, the relevant criteria are the normative objectives and principles of spatial planning legislation and the principles of sustainable development. All objectives (economic, social and environmental) have to be taken into account in a balanced manner and carefully coordinated. Locations for traffic-intensive installations (heavily frequented sites) and their potential capacities have to be specified in the cantonal structure plan. The recommendations define as good locations for HFS:</p> <ul style="list-style-type: none"> • Locations, which correspond to the requirements of potential investors (good accessibility for clients and huge market potential in the surroundings), • Locations, which after the implementation of an HFS have still enough potential for development, • Locations, which are or can be connected in an excellent way with the existing road network, without creating not resolvable overloads of the street network capacity, • Locations, which are very well accessible by the existing public transport system or where the system can be enhanced in foreseeable time, • Locations, which are or can be made very good accessible with slow modes (by foot, by bike), • Locations, which are located in the surroundings of the potential clients (short distances to main densely populated areas), • Locations, which are situated nearby working areas, leisure sites, etc. and are already good accessible by public transport. <p>For the designation of the potential capacities of a HFS in order to maintain the mentioned objectives the recommendations indicate the parameters to be considered: amount of floor-space and mix of use, amount of car parking for client's employees, amount of car-trips generated by the HFS. The cantons can choose how they define the locations and framework conditions for the use within the cantonal structure plan but it is recommended to fix them geographically.</p>		
<p>Main objectives and reasons for implementation:</p> <p>In 1998 and 1999 the Swiss Federal Council was committed through two motions of representatives of the National Council to solve possible inconsistencies between the Law on Spatial Planning and the Environmental Protection Act with regard of the location of HFS. The established recommendations to the Cantons to designate the location of HFS within the cantonal structure plans were released with the aim to</p> <ul style="list-style-type: none"> • Improve the coordination within the application of spatial planning and environmental law, • Encourage the Cantons to apply the existent spatial planning instruments, • Consider in a consistent and harmonised way all the related public and private interests. <p>With the early determination of the spatial localisation and the potential capacities of HFS in the structure plans of the Cantons a comprehensive and coordinated planning of all the spatial interest shall be achieved. Furthermore the building permit processes and the zone planning activities of the municipalities shall be deliberated from questions of principle with regard the spatial localisation of HFS.</p>		

Spread of the policy:	
Almost all of the 26 Swiss Cantons have included the theme of HFS within their structure plans.	
Consistency of application of the policy:	
The consistency of the application varies between the different structure plans. Only a few of them defined the localisation of HFS geographically (e.g. Canton of Berne), others have only defined criteria which have to be fulfilled for the localisation (e.g. Canton of Zurich, Aargau, Solothurn). Furthermore the definition of HFS with regard of the amount of maximum car-trips that can be generated from HFS varies also between the cantonal structure plans.	
Targeted at:	How binding is the policy?
planning authorities	voluntary
Influenced by main policies:	
<ul style="list-style-type: none"> • Law on Spatial Planning, 1979 (in German) • Environmental Protection Act, 1985 (in German) 	
Effectiveness:	
A monitoring system to analyse the effectiveness of the policy with regard of the localisation of HFS will be implemented by the Federal Office for Spatial Development in the year 2009. At this stage it can't be stated if the inclusion of HFS in the structure plans has had an influence in such a way that HFS are more often localised in brown-field areas or not. For some cantons like Zurich and Berne this tendency is clearly noticed.	
Information sources:	
<ul style="list-style-type: none"> • Bundesamt für Umwelt, Bundesamt für Raumentwicklung, Verkehrsintensive Einrichtungen im kantonalen Richtplan - Empfehlungen zur Standortplanung, Bern 2006. (in German) 	
Additional comments:	
none	
Information provided by:	Date:
synergo, Mobility – Politics – Space, Zurich, Switzerland	28.11.2008

B5	Edinburgh and Lothians Structure Plan (ELSP)	
Applied in: Lothian region, Scotland	Country: United Kingdom	Produced by: Committee of planning authorities - local municipalities - approved by Scottish Government
Type of policy: plan	In force since: 2004	Level of application: regional and local level
Content: <p>The ELSP contains a number of policies which guide both the development of local land use plans in the four municipalities that make up the ELSP area, but which also guide decisions on building permission for individual large developments. The ELSP contains a large number of strategic objectives and policies that support framework conditions for MM. For example, one of its strategic aims is to integrate land use and transport, through objectives such as:</p> <ul style="list-style-type: none"> • Locating new development so as to reduce the need to travel, particularly by private car; • Reducing commuting to Edinburgh from the landward Council areas; • Maximising accessibility for all in the community by foot, cycle and public transport; • Ensuring that, where possible, brownfield land is developed in preference to greenfield land; • Increasing access to employment opportunities through a more balanced distribution of employment land, giving preference to locations for new development with easy access by foot, cycle and public transport; • Increasing access to housing by enabling local plans, where appropriate, to require the provision of affordable housing; • Increasing access to shopping and leisure facilities by giving preference to locations for new development with easy access by foot, cycle and public transport; • Identify strategic employment locations which are, or can be made, highly accessible by foot, cycle and public transport. 		
Main objectives and reasons for implementation: <p>Objectives are listed above. Reasons for implementation are to reduce use of private car for congestion reduction and environmental reasons; and to ensure that people can access new development regardless of whether they have a car or not. There is a desire to reduce urban sprawl and to protect Green Belts.</p>		
Targeted at: planning authorities (local and/or regional) and developers (public or private)	How binding is the policy? between mandatory and voluntary (explained in additional comments)	
Influenced by main policies: <ul style="list-style-type: none"> • SPP17, the Scottish version of PPG13 		
Effectiveness: <p>There is no formal monitoring of the plan. However there is little doubt that it has led to a concentration of high trip generating development and housing in areas that might have been left un-developed under other structure plan scenarios - for example, the old Docklands to the north of Edinburgh city centre.</p>		
Information sources: <ul style="list-style-type: none"> • Edinburgh and the Lothians Structure Plan (ELSP) 		

Additional comments:

As with all UK planning policy, the plan is not absolutely binding - if a case can be made for ignoring or selectively applying policies within the plan, then this is permissible. So it is between mandatory and voluntary.

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

29.01.09

B6	South Dublin Development Plan	
Applied in: South Dublin	Country: Ireland	Produced by: South Dublin County Council (SDCC)
Type of policy: plan	In force since: 2004	Level of application: local level
<p>Content:</p> <p>The South Dublin County Council Development Plan (SDCCDP) sets out a strategy for development in the County. It then sets out a large number of policies related to that strategy which, if interpreted correctly, will help it to achieve its objective of a better quality of life for its population through encouraging economic growth whilst minimising environmental degradation. These policies cover areas such as housing, employment, environment, urban design, infrastructure and transport. In addition the plan shows which types of development will or may be permitted in which areas of the County, and sets out standards for car parking provision in new developments. It is not stated whether these are set as maxima, minima or guidelines, but it is clearly stated that they could be reduced in areas of higher public transport accessibility and in town and district centres, although at times subject to a payment in lieu of on-site parking by the developer to the council for the provision of parking elsewhere. Development is largely focused on existing areas, so there is a presumption against additional urban sprawl.</p>		
<p>Main objectives and reasons for implementation:</p> <p>Development plans are a means of using the land use planning system to meet the general objective of sustainable development, as required in the Planning and Development Acts 2000 and 2002. They are the principal means of governing the (re-)development of land in Ireland. The key objectives of the SDCCDP appear to be economic development, coupled with environmental protection. However, there is an important chapter on urban design which emphasises the need to move away from Dublin's traditional low-density sprawling and car based suburbs, to development that is denser, has a greater mix of uses, encourages short trips on foot and so reduces the need to travel by car. In addition, it is one of the aims of the plan overall to "as far as practicable" reduce the need to travel by car, and there is a range of policies related to linking development to new/improved public transport, cycling and walking infrastructure. Policy H2, for example, seeks higher residential densities close to public transport nodes and town and district centres.</p>		
Targeted at: developers (public or private)	How binding is the policy? between mandatory and voluntary (explained in additional comments)	
<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Dublin Strategic Planning Guidelines 2000-2016 • Dublin Regional Planning Guidelines 2004-2016 • Dublin Transportation Office regional transport strategy 2000-2016 • National policies and guidelines as listed in the case on Irish development plans in general 		
<p>Effectiveness:</p> <p>The first monitoring report on the implementation of the plan and its effect in achieving its objectives was submitted in 2006. It showed that some progress had been made in accordance with policy H2 and urban design objectives in increasing urban densities, especially in town and district centres. It also showed that transport infrastructure such as park and rides and Quality Bus Corridors was being planned and delivered alongside new transport. However, the scale of this type of development was relatively small alongside more traditional lower density edge of town development. The progress report does not mention the density of employment development nor its location in relation to transport nodes and corridors.</p>		
<p>Information sources:</p> <ul style="list-style-type: none"> • South Dublin Development Plan 		

Additional comments:

The Irish planning system is permissive and so individual development applications can be assessed “on their merits” and if there are good local and/or specific reasons for over-riding or interpreting only very loosely any policies, then this is permitted and development can still go ahead.

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

17.12.2008

B7	Regional Land Use Plan (<i>Regionalplan</i>)	
Applied in: Germany	Country: Germany	Produced by: Regional planning communities
Type of policy: plan	In force since: not in force yet	Level of application: regional levels
<p>Content:</p> <p>The Regional Land Use Plan is a quite new instrument and was generally introduced or allowed on national level in 1998 within the Federal Spatial Planning act (<i>Raumordnungsgesetz: ROG</i>). It is handled as a subsection of regional spatial planning which is the responsibility of the 16 German federal states (§9 <i>ROG: Regionalpläne</i>).</p> <p>If there are several (highly) functional connected cities within a region and if they are organised in regional planning communities (<i>regionale Planungsgemeinschaften</i>) these organisations can take over parts of the responsibilities of regional planning from the state and incorporate the common local land use plans (<i>gemeinsamer Flächennutzungsplan</i>) into it. The common local land use plan is an instrument of the national building code (<i>Baugesetzbuch: BauGB</i>) (§204 <i>BauGB: gemeinsamer Flächennutzungsplan</i>).</p> <p>The regional land use plan is not a widely used planning instrument and today only two such plans are under development. One is developed for the central Ruhr Area and one for the region Frankfurt; both did not come into force yet (December 2008).</p> <p>In the central Ruhr Area (<i>Städteregion Ruhr 2030</i>) there are 6 municipalities which develop such a commonly agreed regional land use plan for their territories – they belong to 3 different administrative districts (<i>Regierungsbezirk</i>) which means that at present there are 3 different regional plans. They hope to join forces for a better guided land use planning and development in their area. The municipalities take over the regional planning duties for spatial planning and replace in the same step the 'normal' 6 local land use plans (<i>Flächennutzungsplan</i>), which are set up for the administrative area of each municipality. Altogether the regional land use plan will be binding for the administration of the municipalities and will include ~680 km² and 1.8 Mio inhabitants. The plan is supposed to come into force in 2009.</p> <p>For the Frankfurt region (<i>Ballungsraum Frankfurt / Rhein-Main</i>) the regional land use plan will be developed for all 75 municipalities within the region (~2,500 km², more than 2 Mio. inhabitants). Here the organisation works together with the 'Regierungspräsidium Darmstadt'. This plan is supposed come into force in 2009.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The aim is to develop a joint regional land use plan (<i>Regionaler Flächennutzungsplan</i>) which integrates contents from state and from municipal responsibility in one plan. Therefore it replaces the local land use plans. But there is a different in detail of the map scales (local land use plan 1:10,000 – regional land use plan 1:50,000). Those contents which are relevant for the regional planning level are taken over into the (upper level) regional plans.</p> <p>The regional land use plans are expected to coordinate the somehow missing regional context for the land use planning on municipal level. They will integrate some transport planning aspects as well – especially the bigger transport network plans (road / rail).</p> <p>Integration of land use and transport planning takes place but is not the main aim of this instrument. The main advantage is a common understanding and agreement about the future development of the region. This instrument should minimise the competition between the cities and allow a guided development for the whole region.</p>		
<p>Spread of the policy:</p> <p>This is not a very widely used instrument and currently there are two such plans which are not finally developed and not have come into force yet.</p>		
<p>Consistency of application of the policy:</p> <p>see above</p>		

Targeted at: planning authorities	How binding is the policy? between mandatory and voluntary (explained in additional comments)
Influenced by main policies: Strengthening regional planning in order to reflect existing regional interdependencies and functional connections between the municipalities.	
Effectiveness: Until now no such plan has come into force. Therefore it is not possible to give any statement on how effective regional land use plans may be.	
Information sources: <ul style="list-style-type: none"> • Städteregion Ruhr 2030 (in German) • Planungsverband Ballungsraum Frankfurt / Rhein-Main (in German) 	
Additional comments: Binding level of policy: Once set up, the regional land use plan is binding for the municipal authorities (like the existing “normal” local land use plans). Setting up such plan is voluntary, the municipalities decide, if they want to join forces and set up a regional land use plan within a regional planning community or if they keep the status quo and produce single “normal” local land use plan on their own.	
Information provided by: ILS, Dortmund, Germany	Date: 03.12.2008

B8	Land Use Development Plan	
Applied in: all parts of Ireland	Country: Ireland	Produced by: Planning authorities, Country Councils
Type of policy: plan	In force since: required since 2000, renewed every 5 year	Level of application: local level
<p>Content:</p> <p>Land use development plans set out the policies for new development in a given area and zoning plans to show where there will be a presumption in favour of certain types of development. Development plans must contain objectives related to the zoning of land; the provision of infrastructure, including transport infrastructure; the protection of the environment and the built heritage; the integration of planning with the needs and characteristics of the community; the protection of landscape and views; and the provision of leisure and other amenities. They have to take into account national policy and guidance when they are drawn up, which can include specific requirements with regard to transport.</p>		
<p>Main objectives and reasons for implementation:</p> <p>Development plans are a means of using the land use planning system to meet the general objective of sustainable development, as required in the Planning and Development Acts 2000 and 2002. They are the principal means of governing the (re-)development of land in Ireland.</p>		
<p>Spread of the policy:</p> <p>Every planning authority must have one.</p>		
<p>Consistency of application of the policy:</p> <p>Every planning authority has to have a development plan. Every development plan will not seek to integrate sustainable transport and/or MM with land use planning; however, some do, particularly those in large urban areas where there is regional planning guidance in place (e.g. Cork, Dublin).</p>		
Targeted at: planning authorities	How binding is the policy? voluntary	
<p>Influenced by main policies:</p> <p>- see additional comments</p>		
<p>Effectiveness:</p> <p>Every two years planning authorities must produce a report to their politicians on progress on implementing the plan. However, there is no overall analysis of these progress reports that is publicly available.</p>		
<p>Information sources:</p> <ul style="list-style-type: none"> • South Dublin Development Plan • South Dublin Development Plan Progress Report 2004-2006 		

Additional comments:

There is provision in the law for Development Plans to have sub-area local plans within them in areas of significant development scale or pressure. The various documents that should be taken into account when putting together a Development Plan include:

- [The National \(Infrastructure\) Development Plan](#) and [National Spatial Strategy](#).
- Regional Planning Guidance, where this exists (main urban areas only)
- [Sustainable Development, a Strategy for Ireland](#)
- [National Anti Poverty Strategy](#)
- [Guidelines on Local Agenda 21](#)
- [National Climate Change Strategy](#)

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

17.12.2008

B9	Cantonal Structure Plan (<i>Kantonaler Richtplan</i>)	
Applied in: all Swiss Cantons	Country: Switzerland	Produced by: Spatial Planning Department of the Cantons
Type of policy: plan	In force since: 1979	Level of application: regional level
<p>Content:</p> <p>According to the federal Law on Spatial Planning (<i>Bundesgesetz über die Raumplanung</i>), the cantons have to draw up a so-called structure plan, which is subject to approval by the Federal Council. As pre-requisite the Cantons define first how they envisage spatial development in their area. This in form of guidelines of the spatial development according to the federal objectives and spatial planning principles. The guidelines include among others the desired urban and transportation development in a time-frame of 10 years. The structure plan itself, which is composed by text and maps, is in a way the operational instrument, which defines how and with which measures the desired spatial development will be achieved. Normally the structure plan consists of several parts: the urban and landscape development plan and the transport plan are always part of it. With regard of transport the structure plan has to describe (by text and with maps) among others the street and railway network of overriding importance and the existing public transport offer within the area. Among others it has also to define the principles of accessibility with public transport (density of network and stops, frequencies) of urban areas in general and concrete developments in detail.</p> <p>The cantonal structure plan also contains instructions on how to proceed: for example, it may be specified how communes should proceed when designating a building zone in accordance with the requirements of federal law, where and when adjustments of the size of building zones are necessary. The cantonal structure plan is therefore not an outline of a “desirable final state” of the cantonal territory, but a process plan for co-ordinating and steering the next stages of spatial development already underway. The map therefore does not constitute the main instrument of the structure plan, but serves to clarify and define the content of the structure plan. The structure plan are constantly adjusted in line with developments (“updated”) and revised at least every 10 years.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The structure plan is the one of the planning instruments which helps to achieve the aim of spatial development stated in the Law on Spatial Planning, which is in force since 1979.</p> <p>Its <i>primary aim</i> is the <i>economical use of the limited land area</i>. The importance of this aim can be understood better if one considers that only 30 percent of the small country area (42,000 km²) is suitable for intensive use by people.</p> <p>The <i>second aim</i> of Swiss spatial planning is the <i>co-ordination of all activities with spatial impact</i> carried out by the federal, cantonal and communal authorities. All activities have spatial impact if they change land use or settlement of the country or are intended to maintain these. The “appropriate land use” and “ordered settlement” laid down in the Federal Constitution requires such co-ordination.</p> <p>The <i>third aim</i> demand that the activities of the authorities which have spatial impact be orientated towards a desired spatial development. The spatial planning concept which this requires is laid down at federal level in the “Swiss Planning Policy Guidelines” with the related implementation programme and at cantonal level in the corresponding “Spatial Development Guidelines” and structure plans. An important element of planning policy expressed there is the orientation “<i>towards decentralised concentration</i>”, i.e. a network of compact settlement areas of different sizes. At federal level this is described as an “interlinked system of towns and rural areas”.</p>		
<p>Spread of the policy:</p> <p>All 26 Cantons have structure plans, where the desired urban and transport development and the measures to achieve has to be stated.</p>		
<p>Consistency of application of the policy:</p> <p>The need of integration and coordination of land-use and transport planning is a condition and the way how it is done has to be showed in every structure plan. But how strong this is applied and leads for example to a development of new areas along the existing public transport areas differs from Canton to Canton.</p>		

Targeted at: planning authorities	How binding is the policy? mandatory
Influenced by main policies:	
<ul style="list-style-type: none"> • Law on Spatial Planning, 1979 (in German) 	
Effectiveness:	
<p>So far no monitoring system exists on national level which could tell, how far the stated integration between urban and transport development within the structure plans of the cantons is effective in terms of sustainable urban development. In general Cantons with high concentrations of inhabitants and working places (like Berne, Basel, Geneva or Zurich) apply the integration much stronger than other Cantons. A very advanced canton is Berne, which has defined within the structure plan so-called "concentrated development areas of cantonal importance" along the axes of regional S-Bahn - system. The structure plan of the Canton of Zurich defines "that central areas of urban development as well as important sites for leisure have to be provided with attractive connections into the public transport network." With regard to the regional S-Bahn – system the structure plan states that "the accessibility of development areas that lie further than 400m from an S-Bahn stop must be guaranteed by additional bus and tram services". Furthermore it is written that "public transport stops have to be reachable in a good way by foot or by bike."</p>	
Information sources:	
<ul style="list-style-type: none"> • Law on Spatial Planning, 1979 (in German) • Structure plan of the Canton Berne (in German) • Structure plan of the Canton of Zurich (in German) 	
Additional comments:	
none	
Information provided by: synergo, Mobility – Politics – Space, Zurich, Switzerland	Date: 28.11.2008

B10	Cooperation between spatial planning and transport planning offices within the administration of the Canton of Aargovia	
Applied in: Administration of Aargovia	Country: Switzerland	Carried out by: Department for construction, transport and environment of the Canton of Aargovia
<p>Content:</p> <p>9 offices compose the Department for construction, transport and environment of the Canton of Aargovia. Thereby the offices for transport planning and spatial planning are included. Since 1997 the co-operation between the offices is standardised through a model called "<i>Verwaltungsinterne Koordination (VIK)</i>", which means "coordination within the administration". For every issue which tackles different offices, like for example the approval of local land use plans, the approval of amendments of the cantonal structure plan or also the elaboration of plans and projects in transport and land use planning of cantonal importance the VIK procedure comes to act. Taken the example of the approval of the communal land use plans the spatial planning office has the leading role. The office checks first the land use plan under the aspect of the requirements of spatial planning defined in the cantonal structure plan and the Law on Planning and Construction of the Canton. Then it submits the land use plan to the transport office. The transport office checks the plan under the point of view of the transport requirements defined also by the structure plan and the Cantonal transport plan. Sometimes other offices have to be involved like the office for environment. All the statements and requirements for amendments are included by the leading office in a document destined to the tackled municipality. The check made by involved offices has to be done within one month. Then as a final step the representatives of tackled offices have a meeting. If there are existing diversities in the comments of the single offices they have to be solved during the meeting.</p> <p>To further assure that the coordination of the different requirements of land use, transport and environmental planning is taking place, the Canton has defined since 2006 a new working position. The assigned expert has to coordinate all relevant aspects of integration of transport and land use planning projects where the Canton has to play a role. The work profile defines that the coordination between the two offices has to be assured in an early stage.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The VIK procedure and also the new work place was installed to assure that all requirements of transport and land use planning are considered in a early stage within the fields of work of the administration.</p>		
<p>Breadth/depth of integration:</p> <p>The installed standardised procedure of co-ordination between the land use planning and transport planning office tackles all projects within the Department where an integration of land use and transport planning is needed.</p>		
<p>Consistency of functional integration:</p> <p>The procedure is strongly applied as described in the section "content".</p>		
<p>Other policies from other levels of government that influenced setting up of functional integration (if any):</p> <p>none</p>		
<p>Effectiveness:</p> <p>see information in the former sections</p>		
<p>Information sources:</p> <p>Personal information from employees of the Department</p>		
<p>Additional comments:</p> <p>none</p>		
<p>Information provided by:</p> <p>synergo, Mobility – Politics – Space, Zurich, Switzerland</p>		<p>Date:</p> <p>28.11.2008</p>

B11	Cooperation between regional transport and regional planning in Southeast Scotland	
Applied in: Southeast Scotland/Edinburgh region	Country: United Kingdom	Carried out by: local authorities
Content: The Edinburgh and Lothians Structure Plan (ELSP), the current regional plan for the Edinburgh region, was put together by planners and transport planners working together, and a land-use transport interaction model (LUTI) was used to model the effects of various land use scenarios on transport, and vice versa. This led to decisions about the location of new development in order to reduce its impacts on the road network and to support the use of public transport for trips to work and shopping, and from new housing. The new City Region (structure) plan (currently under development to replace the ELSP) is being developed by a team located in the same office as the regional transport body, SESTRAN. The purpose of this is to increase the transport input to the City Region plan - although the areas covered by it and by SESTRAN are different!		
Main objectives and reasons for implementation: The structure plan procedure and the co-location of the organisations was an attempt to ensure that all requirements of transport and land use planning at the regional level are considered together, rather than land-use decisions being made and transport having to adapt to those.		
Breadth/depth of integration: This affected the structure (regional) plan and can be seen in the way it concentrates main employment centres in areas that are capable of being (relatively) well-served by public transport; its effect on the new regional (City Region) plan is unknown as the collocation of the two organisations is a new thing.		
Consistency of functional integration: unknown		
Other policies from other levels of government that influenced setting up of functional integration (if any): <ul style="list-style-type: none"> • SPP17, the Scottish version of PPG13 		
Effectiveness: The co-working has had some influence on the shape of the Edinburgh and Lothian Structure plan - in particular, how major development areas are identified in relation to transport infrastructure.		
Information sources: <ul style="list-style-type: none"> • Edinburgh and Lothians Structure Plan 		
Additional comments: none		
Information provided by: Edinburgh Napier University, Edinburgh, United Kingdom		Date: 29.01.2009

Annex II: Integration of Mobility Management at new developments

The following case studies provide examples of existing policies which encourage the integration of Mobility Management at new developments during the planning and/or building permission process.

Nr.	Name	Applied in	Country
C1	Integration of Mobility Management recommendations in the building permission process	Canton of Aargovia	Switzerland
C2	Lloyd District Partnership Plan	Portland	USA
C3	MAXIMA (free bus service to shopping centre)	Vilnius	Lithuania
C4	Business Park Goudse Port	Gouda	Netherlands
C5	Technology Park “Phönix West”	Dortmund	Germany
C6	Urban Development of Aspern Seestadt	Vienna	Austria
C7	Parking regulation of the municipality of Cham	Cham	Switzerland
C8	Planning Policy Guidance 13 (PPG13), S106 planning obligations and planning conditions	England	UK
C9	Addenbrookes Hospital	Cambridge	UK
C10	Car Free Housing	Hamburg	Germany
C11	Gartenstadt Siedlung Weißenburg (Car-free housing project)	Münster	Germany
C12	Access Contingent Model	Zürich	Switzerland
C13	Sihlcity, multifunctional development	Zürich	Switzerland
C14	Environmental Management Act	Netherlands	Netherlands
C15	De Telegraaf newspapers	Amsterdam	Netherlands
C16	Environmental Impact Assessment Procedure	Switzerland	Switzerland
C17	Traffic Impact Assessment Study	Spain	Spain
C18	Environmental Quality Standards in the Environmental Code	Sweden	Sweden
C19	The “City entrance” project	Malmö	Sweden
C20	Maximum parking standards	England	UK
C21	Cork City Development Plan Section 49 Policy T12	Cork City	Ireland
C22	Swiss Normative on Parking Standards	Switzerland	Switzerland
C23	Bicycle parking standards as a part of the Municipal Spatial Plan	Maribor	Slovenia
C24	Parking regulation of the City of Krakow	Krakow	Poland
C25	Parking Regulations and Parking Pay-Off in North Rhine - Westphalia	North Rhine - Westphalia	Germany
C26	Gelre Hospitals	Apeldoorn, Zutphen	Netherlands
C27	Spatial Development Plan (SDP) and Local Spatial Development Plan (LSDP)	Krakow	Poland
C28	Irvine Spectrum Business Park Development Trip Reduction Program	Irvine	USA

C1	Integration of Mobility Management recommendations in the building permission process	
Applied in: Administration of the Canton of Aargovia	Country: Switzerland	Produced by: Department for Transport of the Canton of Aargovia
Type of policy: procedure	In force since: 2008	Level of application: Regional level
<p>Content:</p> <p>The Department for Transport of the Canton of Aargovia is involved in the building permit procedures of requests which have to pass the evaluation also on the Cantonal level. Therefore the related body within the cantonal administration includes the Department for Transport in order to check if a request of a building permission fulfils transport related issues defined by the cantonal structure plan and the law of planning and construction of the canton of Aargovia.</p> <p>The Department for Transport is very active in the field of Mobility Management. It forms part of the official transport strategy of the canton. Since 2008 the Department has installed a Mobility Management platform called <i>aargaumobil</i>, which is carried on the base of a mandate by two Mobility Management experts on the one hand and by persons from the cantonal administration on the other. The duties of <i>aargaumobil</i> include consulting activities in the field of Mobility Management towards municipalities and private companies. A special issue of <i>aargaumobil</i> is also to include as much as possible recommendations on MM to developers which are planning to construct new buildings.</p> <p>This fact has lead to the consequence that all the requests for building permission which have to be controlled by the Department for Transport and have a request of more than 60 parking spaces, will also be checked by <i>aargaumobil</i>. In those situations where it makes sense, recommendations (and sometimes) obligations to include Mobility Management are given.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The reason for the implementation of this procedure was to assure from the early beginning the inclusion of Mobility Management in the building permit process, sometimes in terms of advices and sometimes in terms of request.</p>		
<p>Spread of the policy:</p> <p>The procedure is applied only in the Department of Transport of the Canton.</p>		
<p>Consistency of application of the policy:</p> <p>Every request for building permission of a development with more than 60 parking spaces is judged also under the perspective of site bases Mobility Management.</p>		
<p>Targeted at:</p> <p>Planning authorities (local and/or regional) and developers (public or private)</p>	<p>How binding is the policy?</p> <p>voluntary</p>	
<p>Designated to which kind of development?</p> <p>Every kind of development of which the request of building permission has to be checked by the Department for Transport of the Canton of Aargovia.</p>		
<p>Applied or applicable in which kind of process?</p> <p>building permission process</p>	<p>Influenced by main policies:</p> <p>Transport Strategy of the Canton of Aargovia, 2006 (in German)</p>	
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>Since the implementation of the procedure (early 2008) recommendations on Mobility Management have been included in 10 requests for building permission which had to be checked by the Department.</p>		
<p>Information sources:</p> <ul style="list-style-type: none"> • Mobility Management Platform <i>aargaumobil</i> (in German) 		

Additional comments:

none

Information provided by:

synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:

19.12.2008

C2	Lloyd District Partnership Plan	
Applied in: city of Portland	Country: United States	Name of the developer: Association of landowners within the Lloyd District
Status of the development: development in use	Type of developer: private	(Expected Date) where development gets in use: since 1994
<p>Description of the development:</p> <p>The Lloyd District is located just east of Portland's Central Business District in the heart of the city. The area comprises 275 acres and currently employs just over 21,000 employees (2005). Approximately 650 business and 1,000 residential units are located within the Lloyd District boundaries. Up until 1990, the construction of parking wasn't subject to any regulation. Commercial real-estate development space was bountiful and parking was free of charge for car users within the district. In addition the area was not well served by public transport which led to a mode-split of less than 10 % in favour of public transport. The forecasts on employment growth undertaken in the mid-1990's predicted a doubling of growth in the coming years and, consequently, a severe increase in the levels of traffic congestion. This led to the conviction that the district's mobility patterns should have to be more effectively managed. In 1994 the <i>Lloyd District Partnership Plan</i> with the city of Portland, the landowners and the TriMet (regional public transport company) was established with the following main goals: Enhance the Lloyd District commuters' mode-split share of public transport users from 10 % (1994) to 42 % (2015). Reduce the Lloyd District commuters' mode-split share of drive-alone car users from 72% (1994) to 33% (2005).</p> <div data-bbox="1002 629 1385 1106" data-label="Image"> </div> <p data-bbox="1002 1111 1174 1133">Source: Lloyd TMA</p>		
<p>Type of applied process:</p> <ul style="list-style-type: none"> • 	<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • City of Portland • TriMet (regional public transport company) 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <p>ECO (employee commute option) Rule of the State of Oregon (since 1995): Requires that all employers in the Portland metropolitan region with 50 or more employees to implement programs to reduce employee drive alone trips. The program requires that each business in the region develop a trip reduction plan, receive State approval of the plan and measure and report progress toward achievement of that plan.</p>		
<p>Content of the negotiation and influence on establishing Mobility Management measures:</p> <p>The Lloyd District Partnership Plan is a programme with several measures. Among others the key points of the plan (committed by the 3 partners) where: Improved public transport service to the area, improved access and amenities for biking and walking, maximum parking ratios for new office and retail development, managing and limiting the supply of parking spaces on large surface parking lots, agreement by the private sector to support and implement employee public transport subsidy programs, establishment of a private sector funding program through formation of a Business Improvement District (BID), creation of the Lloyd Transport Management Association (LTMA) that acts as a forum and catalyst to implement the plan, sharing of parking meter revenues through the LTMA to support transportation and parking services within the Lloyd District, development of a plan for installing parking controls and parking meters in the district to eliminate free and off-street commuter parking spaces. Infrastructure measures are financed by the State of Oregon in the framework of the Business Energy Tax Credits (BETC) (targeted to businesses investing in sustainable mobility solutions).</p>		

Knowledge of the end-user:

New businesses which are settling down in the Lloyd District Area can become member of the LTMA without paying any membership fee. In 2007 the LTMA has 71 member businesses representing approximately 9'000 employees.

Main Mobility Management measures

<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
Public Transport Store	employees, clients, visitors	in act	TriMet, LTMA	LTMA
PASSport (discounted annual public transport pass)	employees in Lloyd District	in act	TriMet	LTMA
bicycle racks and storage lockers	employees in Lloyd District	in act	BETC (State of Oregon)	LTMA
reserved on-street parking for carpooling	employees in Lloyd District	in act	city of Portland	LTMA
emergency ride-home service	employees in Lloyd District	in act	TriMet	TriMet
awareness rising activities	employees in Lloyd District	in act	LTMA	LTMA
marketing activities	in- and outside Lloyd District	in act	LTMA	LTMA

Organisation of the Mobility Management activities at the development:

The LTMA maintains a program staff of 3 persons. There are 5 standing committees (with representatives of the companies located in the district) at work on projects and programs. All serve under the oversight of the Board of Directors. The annual budget for covering the costs of operation (not infrastructure investments) is around \$ 250,000. The funding is received from BID (tax rate on the value of every commercial building), parking meter revenues (51 % of the whole district amount), commissions (3 % on the sale of transport tickets in the transportation store located in the district) and grants from the regional government.

(Envisaged) effects:

- Transport: drive alone trips: 60 % (1997) to 42 % (2007); public transport trips: 21 % (1997) to 38 % (2007)
- 1,902 t of CO₂ saved (in 2006)
- 210,000 gallons of gasoline saved (in 2006), resulting in annual savings of approx. \$ 627,000

Information sources:

- [Website Lloyd TMA](#)

Additional comments:


none

Information provided by:

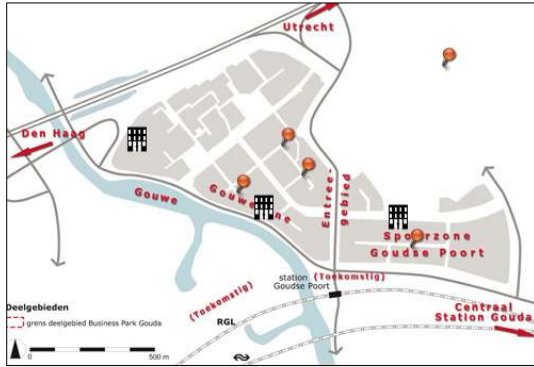
synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:


16.10.2008

C3	MAXIMA (free bus service to shopping centre)	
Applied in: Cities of Vilnius	Country: Lithuania	Name of the developer: UAB MAXIMA LT
Status of the development: development in use	Type of developer: private	(Expected Date) where development gets in use: since 2000
<p>Description of the development:</p> <p>MAXIMA is a shopping centre, situated in the suburbs of Vilnius. It is still in the boundaries of Vilnius City Municipality, but the distance from MAXIMA to the nearest resident area is around 5 km, to city centre around 10 km. MAXIMA is one of the biggest supermarkets in Lithuania, selling all kinds of manufactured goods, there are some restaurants, bank offices and drugstores located in the same building too.</p> <p>MAXIMA can be reached only by private car using the motorway A1 Vilnius – Kaunas. That’s why the owners decided to have free bus from Vilnius to the shopping centre. Parking spaces had to be designed according to the Building Technical Regulation (BTR), which defines that one parking space has to be built for each 20 m² of the shopping centre hall area. There is no information if more parking spaces than required were built. According to BTR, 90 % of parking spaces were dedicated for visitors.</p>		 <p>Source: Maxima</p>
<p>Type of applied process:</p> <ul style="list-style-type: none"> • Detailed Site Development Plan • building permission process • technical project 		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • city of Vilnius • Urban Development Department of the city of Vilnius
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <p>The developer took the decision to implement one of the Mobility Management measures in his initiative.</p>		
<p>Requirements from the public authorities:</p> <p>Building of new site was object for negotiations, but more information about agreement between developer and municipality isn’t available. Planning conditions were prepared according to BTR valid at that time, which means that minimum of parking spaces, connection to motorway, basic requirements for engineering infrastructure and environment protection were set in this document. As far as it is known, there were no special requirements related to MM from the public authorities.</p>		
<p>Additional agreements between authorities and developer:</p> <p>No information available</p>		
<p>Influences in establishing the implementation of Mobility Management measures:</p> <p>No information available</p>		

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
free bus service	employees and clients	in act	UAB MAXIMA LT	UAB MAXIMA LT
bus information in the Website (time schedules, routes)	clients	in act	UAB MAXIMA LT	UAB MAXIMA LT
Organisation of the Mobility Management activities at the development:				
No information available				
(Envisaged) effects:				
Social: Owners decided to run the bus first of all for the better comfort of the employees; positive feedback from the employees				
Information sources:				
<ul style="list-style-type: none"> • MAXIMA Website (in Lithuanian) • MAXIMA's representative for press • Municipal enterprise „Vilniaus planas“ 				
Additional comments:				
•				
Information provided by:			Date:	
Vilnius Gediminas Technical University, Lithuania			01.12.2008	

C4		Business Park Goudse Poort	
Applied in: city of Gouda	Country: Netherlands	Name of the developer: Municipality of Gouda	
Status of the development: building permission obtained	Type of developer: private	(Expected Date) where development gets in use: 2008 – 2016	
<p>Description of the development:</p> <p>Goudse Poort is located at the edge of the town of Gouda, close to the A12 and A20 motorways and within one hour travel distance from Rotterdam, Eindhoven or Arnhem. It is a long, narrow piece of land, about 2.5-3 km away from the railway station, which is served by 4 intercity and two local trains per hour. The business park is currently a mixture of manufacturing/warehousing and office functions, with 6,000 people working there. The aspiration of the municipality is to turn it into a modern business park, with only office functions, by 2015, and to double the number of staff. This strategy obviously depends on the existing non-office functions gradually moving away from Goudse Poort.</p>		 <p>Source: www.goudsepoort.nl</p>	
<p>The restructuring of the 160 acres area will result in ca. 120,000 m² of new office spaces; ca. 50,000 m² of retail businesses and an increase of employees: from 6,000 workers now to 12,000 workers in the future.</p>			
<p>Type of applied process:</p> <ul style="list-style-type: none"> • building permission process • “park management” 		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • City of Gouda • Province of South Holland 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <p>There are no particular policies at work here but a general desire to capitalise on Goudse Poort's excellent accessibility and to increase the number of jobs on the site. The local plan for the area was changed to limit parking for new businesses to 1 space per 50 m² and to include this as a condition of building permission. The Province of South Holland is also keen to promote sustainable transport for congestion reduction reasons.</p>			
<p>Content of the negotiation and influence in establishing Mobility Management measures:</p> <p>The majority of the developers and owners of the buildings and land at Goudse Poort negotiated an agreement about the pattern of its future development. This included agreement on the concept of central parking (a smaller number of spaces, centrally located rather than dedicated spaces for each building), and the inclusion of transport within “park management”, the service fee that landowners and occupiers pay for centrally-provided services at Goudse Poort. Normally park management covers only items such as the maintenance of common areas, but in the case of Goudse Poort, it includes transport. Further to this, employers pay for their employees to use the Goudse Shuttle, a regular bus service that links the business park to the main intercity station in central Gouda.</p>			
<p>Knowledge of the end-user:</p> <p>The Detailed Site Development Plan (<i>bestemmingsplan for Goudse Poort</i>), including commitments on parking standards, was developed in collaboration with major landowners at Goudse Poort and secured through a negotiated agreement. Knowledge by the municipality of the end-users' requirements is therefore high.</p>			

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
Goudse Poort Express – shuttle bus links business park to main railway station	employees and visitors	in act	until 2007 by OPTIMUM2 project; thereafter by province and some employer contribution	park management association with province of South Holland
Mobility Card – various mobility services available on one card	employees	in act (for Goudse Poort Express only) until 1.1.2009	until 2007 by OPTIMUM2 project; thereafter by province and some employer contribution	as above, with consultancy support. Plan to put more mobility services on one card will not now go ahead.
cycle facilities to link site to rest of town	employees	in planning	Municipality	Municipality
public transport bicycle	employees	in act	Province, rail operator	Park manager for publicity; rail operator for bikes
Organisation of the Mobility Management activities at the development:				
This is now carried out largely by the park manager's office although prior to 2007 the Province of South Holland played a bigger role due to the subsidy and consultancy support available through the OPTIMUM2 project.				
(Envisaged) effects:				
no information available				
Information sources:				
<ul style="list-style-type: none"> • Goudse Poort website (in Dutch) • OPTIMUM2 cookbook 				
Additional comments:				
The Goudse Poort website states (Jan 2009) that due to the economic downturn the agreement between site owners/developers and the municipality and province regarding the future development of Goudse Poort has been abandoned.				
Information provided by:			Date:	
Edinburgh Napier University, Edinburgh, United Kingdom			01.01.2009	

C5		Technology Park “Phönix-West”	
Applied in: city of Dortmund	Country: Germany	Name of the developer: general: state owned development agency LEG in cooperation with city of Dortmund, single projects: different developers	
Status of the development: development in construction	Type of developer: private and public	(Expected Date) where development gets in use: some buildings are already in use, main area is planned to be developed until 2015	
<p>Description of the development:</p> <p>The site is located within the city area of Dortmund, about 5km to the south of the city centre. It is a brown field area with 150 years of steel production history, the first blast furnace came into use in 1852. The former industrial site is divided into two re-development areas (Phoenix-West closed down in 1998; and Phoenix-East closed down in 2001). They are located in close vicinity to the district centre of Hörde. The whole area of Phoenix-West has about 110ha. Thereof, 40 ha are reserved for commercial uses. The detailed site development plan (<i>Bebauungsplan</i>) identifies most of it as an area of the special use (<i>Sondergebiet</i>) ‘technology park’. It will be developed as a business park. Therefore no housing is permitted (mainly due to potential limit exceeding noise exposure). On this special use area the land use is mainly restricted to ‘future’ technology industries, laboratories, offices and start-ups. The area is designed for attracting branches like micro system and nano technologies, production engineering, software development and other IT-industries and corresponding services. Furthermore there will be some smaller service, shopping and leisure / cultural facilities. Some former industrial buildings are listed (heritage-protected) and will be redecorated.</p>			
			
		<p>Source: PhoenixDortmund</p>	
Type of applied process: building permission process	Main public authorities involved in the process:		
	<ul style="list-style-type: none"> • City of Dortmund, Department for business development • City of Dortmund, Department for town planning and architectural control • City of Dortmund, Department for Transport 		
Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:			
<ul style="list-style-type: none"> • Local Parking Charter (in German) • Detailed site development plan: <i>Bebauungsplan Hö-253</i> (not yet published or online available; draft version locally available) • Bauordnung NRW (in German) • Mobility concept & guidance for developers for Phoenix-West (<i>Mobilitätshandbuch Zukunftsstandort PHOENIX West</i>, editor: LEG Stadtentwicklung GmbH & Co.KG /Stadt Dortmund, Stadtplanungsamt; 1. edition, Dortmund, June 2008) 			
Content of the negotiation and influence on establishing Mobility Management measures:			
<p>Quite restrictive parking regulations within detailed site development plan, only a low number of on-street parking is planned. An indirect restriction of surface parking exists: due to regulations like building density or building lines only few ground level parking spaces can be build on the parcel itself. Alternatives are underground or multi-storey parking, but these would be expensive solutions. Offered alternatives within the city's mobility concept: the developers can (partially) pay-off parking spaces that cannot be built (then the public authority will built public parking garages) and/or they can set up a mobility concept for their business and implement MM measures. In this case, the need for parking will be reduced and</p>			

therefore the public authority will suspend the duty.

Knowledge of the end-user:

The detailed site development plan and the mobility guidebook were produced without knowing the developers of the single parcels and buildings. The developer may not even be the user of the building. In consequence, the activities are seen sceptical by the developers yet known and the department of business development of the City of Dortmund.

Main Mobility Management measures

<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
new bus lines	employees, clients,	planned	public transport company, city of Dortmund	public transport company
suspend duty to construct parking spaces in case of MM concept	developers	option for developers in negotiation process	City of Dortmund (consulting)	City of Dortmund
pre-defined measure: high quality bicycle parking to reduce number of car parking spaces	employees, clients,	option for developers in negotiation process	developers / tenants	Developers
pre-defined measure: shower & changing facilities – save one parking space	employees	option for developers in negotiation process	developers / tenants	developers / tenants

Organisation of the Mobility Management activities at the development:

Handling the building permission process lies within the responsibility of the city's department for town planning and architectural control. Negotiations about the minimum number of requested parking spaces and the implementation of MM will be done with administrative assistance of the transport development department, and will be organised by the existing staff.

(Envisaged) effects: no information available

Information sources:

- [Dortmund Project \(in German\)](#)
- [City of Dortmund \(in German\)](#)
- Draft of the detailed site development plan (internal document: Stadt Dortmund 2007: Entwurf des Bebauungsplanes Hö-253 - Phoenix-West)
- results from ILS planning simulation within MAX

Additional comments:


Ref to "Status of Development": Despite of the fact that the corresponding detailed site development plan (Bebauungsplan Hörde 253 – Phoenix-West) is about to come into force in early 2009 (depending on the extend of public approval or disapproval of the existing plan), parts of the site are already developed (e.g. main road 'Konrad-Adenauer-Allee' and MST-factory). By end of 2008, beginning of 2009 it is planned to finish all basic (road) infrastructure as well as the decontaminating and restructuring of surfaces for those areas, which are designated for construction.

Information provided by:

ILS, Dortmund, Germany

Date:

03.12.2008

C6		Urban development of Aspern Seestadt	
Applied in: City of Vienna	Country: Austria	Name of the developer: Wien 3420 Aspern Development AG	
Status of the development: Development in construction	Type of developer: Public and private	(Expected Date) where development gets in use: The first phase for 7000 inhabitants is to be developed until 2015, estimated completion year: 2025	
<p>Description of the development:</p> <p>Vienna is developing a new city district – Aspern Seestadt – construction of which is planned to start in 2009, the first inhabitants will come in 2012. In 2025 the new district is to have 20.000 inhabitants and 20.000 jobs. The distance from the city centre is over 10 km, however, it will be connected to the city centre by underground from 2014 on.</p> <p>A Masterplan of the city was made in a concourse. The Masterplan was accepted in 2006 by the Vienna city government. It contains the aim to have a modal share of only 30% motorised traffic. However, there are no provisions for Mobility Management contained in the Masterplan. To close this gap, the consultant in charge was commissioned to develop a mobility guidebook in an interactive process with many stakeholders, including city planners, traffic planners, chambers of commerce and of labour, politicians and public transport companies.</p> <p>The developed mobility guidebook provides detailed guidance for the Aspern Seestadt development company on how to proceed during the coming years to achieve the high level goal of less than 30% motorised traffic. The process of developing the mobility guidebook through a series of workshops has resulted in broad support by all major stakeholders for very innovative Mobility Management and general sustainable transport measures. The workshops were conducted according to the methodology used within the MAX research project. This resulted in a joint development of for Vienna totally new measures. The process and the measures are exemplary for planning processes in Austria and beyond.</p>		 <p>Source: Aspern Development AG</p>	
Type of applied process: pre-development planning		Main public authorities involved in the process:	
		<ul style="list-style-type: none"> • Wien 3420 Aspern Development AG • Several municipalities of the city of Vienna 	
Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:			
<ul style="list-style-type: none"> • RVS 3.931 - <i>Stadtstrassen, Querschnitte, Querschnittsgestaltung von Innerortsstrassen</i> (Guidelines and regulations for road construction, Vienna, January 2001) • Garage law, City of Vienna (in German) • Master plan Traffic Vienna 2003 (in German) 			
Content of the negotiation and influence on establishing Mobility Management measures:			
The process to make a mobility guidebook was carried out in a series of 5 full-day workshops, which had between 10 and 30 participants.			
Knowledge of the end-user:			
Detailed information on how to organise transport will be available for potential new inhabitants. At time of move-in, inhabitants will receive a Mobility Guidebook with all information on walking, cycling and Public Transport. With money of a “Mobility Fund”, all inhabitants will receive a PT-ticket for a period of at least one year to generate sustainable transport behaviour from the first moment. A Mobility Centre located directly in the middle of the housing area will be the main venue for all questions concerning Mobility for both, daily purposes and leisure needs.			

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
Reduction of parking spaces by 50 %	developers	Negotiation process	Wien 3420 Aspern Development AG	Wien 3420 Aspern Development AG
Integrated communication, marketing and Mobility Management concept	For developers, future inhabitants, future employers, future employees and schools	Planned	Mobility fund	Wien 3420 Aspern Development AG
Mobility Centre	future inhabitants, future employers, future employees and schools	Planned	Mobility fund	Wien 3420 Aspern Development AG
Organisation of the Mobility Management activities at the development:				
<p>The Mobility Management activities are managed by the Wien 3420 Aspern Development AG. Co-operations with the public transport provider of Vienna (Wiener Linien), CarSharing.at guarantee a customer orientated outcome of all measures. In addition, the development AG negotiates with developers as well as with companies, developing a new business location, to reduce the parking spaces by half. With a big part of the savings of this “not-construction”, a “Mobility fund” will be fed with whom the first MM activities can be paid.</p>				
(Envisaged) effects:				
<p>Achieving ambitious modal split of overall generated traffic in a peripheral new city district:</p> <ul style="list-style-type: none"> • 40% Public Transport • 30% Cycling, Walking • 30% MIT (Motorised Individual Transport, mainly car) 				
Information sources:				
<ul style="list-style-type: none"> • Wien 3420 Aspern Development AG (in German) • Aspern Seestadt (in German) • Masterplan of the detailed site development plan (in German) • Mobility guidebook for Aspern (MOBILITÄTSLEITFADEN für Aspern, die Seestadt Wien, Februar 2009) (German, available at Wien Aspern Development AG and FGM-AMOR) 				
Additional comments:				
<p>This sort of strategy – putting mobility issues central – could even have been implemented in an earlier stage in the project – in that case the master plan might have looked quite different, the goals could have been even more ambitious.</p> <p>The methodology and the developed measures can be applied anywhere in Europe where there is the will to bring stakeholders and experts of varying disciplines to work together to achieve sustainable mobility.</p>				
Information provided by:			Date:	
FGM-AMOR, Graz, Austria			9.04.2009	

C7		Parking regulation of the municipality of Cham	
Applied in: municipality of Cham	Country: Switzerland	Produced by: Municipality of Cham	
Type of policy: law	In force since: 2007	Level of application: Local level	
<p>Content:</p> <p>The new parking regulation of the municipality of Cham includes an interesting article in favour of Mobility Management:</p> <p><i>If in a business zone (according to the communal land use plan) a new development foresees the construction of 50 or more car parking spaces a Mobility Management concept has to be delivered together with the request for building permit by the developer. The concept has to show how the use of alternative modes to car will be promoted. It has to include binding objectives therefore, relevant measures to achieve the objectives and a controlling instrument. The content of the concept is subject of a contract between the council and the developer and is part of the building permit (Article 9).</i></p> <p>The regulation also refers to car-free and car-reduced housing areas and to the application of access contingent models:</p> <p><i>The council is allowed to reduce the normal requirement of the amount of parking spaces (defined in the parking regulation) in case of "special circumstances". A reduction at planned car free or car reduced housing areas is possible as long the rules to be adopted are assured by contract and inserted in the cadastral register of the municipality... At developments used for business purposes the council is authorised in accordance with the cantonal authorities to fix a maximum of allowed car trips instead of the number of parking (Article 10).</i></p>			
<p>Main objectives and reasons for implementation:</p> <p>In the last years the municipality was exposed to a increased development in terms of buildings. In order to keep negative impact in terms of traffic development under control the parking regulation was adapted. The inclusion of a new article referring on Mobility Management and car free / car reduced housing is an expression of political willingness to promote sustainable transport.</p>			
<p>Spread of the policy:</p> <p>Since the new parking regulation came into force only in 2007 no request for building permission, where article 9 or 10 had to come into force, was submitted at the municipality.</p>			
<p>Consistency of application of the policy:</p> <p>see above</p>			
Targeted at: Developers (public or private)	How binding is the policy? Mandatory		
<p>Designated to which kind of development?</p> <ul style="list-style-type: none"> • Article 9: business developments with a request of more than 50 parking spaces. • Article 10: requests of "housing developers" where the amount of parking spaces is below the normal rate; business developments where the application of an access contingent model makes sense 			
Applied or applicable in which kind of process? <ul style="list-style-type: none"> • building permit process 	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Building Law of the municipality of Cham, 2006 (in German) • Planning and Building Law of the Canton of Zug, 1998 (in German) 		

Kind of influence in the set-up of Mobility Management at the site level:

Both articles have a direct influence on the set-up of Mobility Management at the site level. Article 9 defines directly the need of a Mobility Management concept with defined objectives, measures to achieve the objectives and controlling instruments.

Article 10 is directly related to the number of parking spaces. Indirectly the construction of a car free / reduced housing area or the application of a access contingent model at business sites leads to the implementation of Mobility Management in order to manage the generated traffic in a sustainable way with a reduced number of parking spaces available.

Information sources:

- [Einwohnergemeinde Cham, Parkplatzreglement, 2007 \(in German\)](#)

Additional comments:

None

Information provided by:


synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:

19.12.2008

C8	Planning Policy Guidance 13 (PPG13), S106 planning obligations and planning conditions	
Applied in: England	Country: United Kingdom	Produced by: National Government (Ministry responsible for spatial planning)
Type of policy: guideline	In force since: 1994 (but modified since)	Level of application: Regional and local level
Content: PPG13 deals with the location, mix and density of development; and with supporting transport measures for new development. It recommends that local authorities should secure travel plans (site based MM plans) from developers through the process of applying for building permission, and that they should use planning conditions and Section 106 planning obligations to secure financial contributions to off-site transport infrastructure and services, and to limit on-site parking at new developments. Under planning legislation since at least the 1970s, local authorities have had the legal power to impose conditions on the granting of planning permission and to enter into legal agreements (S106 obligations) with developers to secure more complex contributions. For example, a condition might require a developer to plant a certain number of trees within the development site before it becomes operational; an obligation could secure a financial contribution from the developer to the costs of providing a new school or community centre. Thus conditions and obligations are not necessarily transport-related and were not designed with transport in mind. However, they are used by some local authorities to secure MM. A condition, for example, could regulate the opening hours of a car park at a new development; an obligation could secure money to pay for a new bus service (for a number of years) or for a new junction to access the development, or for a site MM plan (travel plan) with specified targets and financial penalties for not achieving those. However, the legalities of using obligations in this way are not completely certain and some local authorities are reluctant to do so, but others use the law in this way.		
Main objectives and reasons for implementation: PPG13 helps to achieve the objectives of the current law governing planning in England, the Planning and Compulsory Purchase Act 2004. In this, local authorities have a duty to protect the environment in their planning activities. In addition, PPG13 is designed to assist the achievement of transport policy objectives, such as reduced congestion, greater social inclusion and a better environmental performance for transport. It is also intended to reduce pressure on greenfield land on the edge of towns, by focusing development more on brownfield sites in existing built-up areas.		
Spread of the policy: It must be taken into account to at least some extent in developing plans and making planning decisions.		
Consistency of application of the policy: Many authorities follow the advice in PPG13 to secure site based MM plans. However, the “strength” of the MM plans that they secure varies significantly from place to place because some will simply place a condition that a plan should be prepared before the site opens, whilst others will use conditions and obligations to specify the plan content, monitoring, penalties for non-achievement and to pay for necessary improvements off-site (e.g. new bus services). In less economically successful areas, developers may not be asked to prepare any plan, or the plan that they prepare will just be a formality.		
Targeted at: Local and regional planning authorities	How binding is the policy? Between mandatory and voluntary (explained in the additional comments)	
Designated to which kind of development? Policy is targeted at all types of developments but consistency/severity of application perhaps at its highest in commercial and retail development, although location of housing also influenced by PPG13.		
Applied or applicable in which kind of process? Applied at building permission stage, backed up with policy in local plans that larger developments should have site MM plans.	Influenced by main policies: Planning and Compulsory Purchase Act 2004	
Kind of influence in the set-up of Mobility Management at the site level: Strong influence – principal reason why MM at site level has been encouraged through the planning process since 1999 in England and Wales (and by similar guidance in Scotland).		

Information sources:	
<ul style="list-style-type: none"> • PPG13 • Section 106 planning obligations 	
Additional comments:	
Existence of policy recognised in law; it is a secondary law, but as it is not codified it is applicable only as guidance. This means that its application is interpreted in relation to local circumstances, and if there is a good reason not to apply it, that is allowable. Hence although it has legal status it can be applied in various ways, or not at all, depending on the situation.	
Information provided by:	Date:
Edinburgh Napier University, Edinburgh, United Kingdom	04.12.2008

C9		Addenbrookes Hospital	
Applied in: city of Cambridge	Country: United Kingdom	Name of the developer: Cambridge University Hospitals NHS Foundation Trust	
Status of the development: development in use	Type of developer: public	(Expected Date) where development gets in use: -	
<p>Description of the development:</p> <p>Addenbrookes is a 27 hectare site, 3 km south of the city centre and on the very edge of the city, shared with the university and medical research council. Some 7,000 staff work there and the site generates over 18,000 vehicle trips each day. There are now 365 on-site buildings and car parks. The site has been growing since 1993 (when there were only 4,000 staff) and has been subject to a number of S106 agreements with the City Council (advised by the County Council, which is the transport authority) to manage transport impacts. The Hospital Trust's S106 obligations with the planning authorities committed it to a cap of 3,900 parking spaces and to reducing single occupant car commuters from 50 % of staff in 2000 to 45 % in 2005, using measures to be worked out between the various parties involved.</p>		 <p>Source: presentation by travel coordinator (see below)</p>	
<p>The actual achievement was 38 % of staff driving alone in 2005. In 2004 a further S106 set a target for reducing patient/visitor trips by car from 90 % to 86 % by 2006.</p>			
<p>Type of applied process:</p> <ul style="list-style-type: none"> • building permission process • S106 agreement • planning condition 		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • City of Cambridge • Cambridgeshire City Council 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <ul style="list-style-type: none"> • East of England Regional Spatial Strategy • Cambridgeshire Structure Plan • S106 planning obligations • PPG13 • Cambridge City Local Development Framework 			
<p>Requirements from the public authorities:</p> <p>Phased requirements to reduce car use to development by capping number of car parking spaces, managing car parking, charging for car parking, and improving alternative modes especially cycling, bus and links to park and ride. Measures have included revised bus networks, a new bus station, significant discounts on weekly bus tickets, links to the nearby park and ride site, parking charging and management (with ringfencing of income to spend on MM measures), cycle parking and showers and much improved off-site cycle links from the city to the site.</p>			
<p>Additional agreements between authorities and developer:</p> <p>None</p>			

Influences in establishing the implementation of Mobility Management measures:

Lack of car parking; cost of developing new car parking; poor accessibility for staff and patients; road network was at capacity. If car use had continued as it was in 1993, additional development could not have been accommodated without massive investment in new roads and car parks which were politically and financially not acceptable. There was clearly a regulatory element to the MM measures at the site – the local authority had a policy and enforced it through the planning system – but the hospital itself also recognised that trying to run the hospital with most people getting there by car was just not going to work.

Main Mobility Management measures

<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
bus station	patients, employees, visitors	in act	Hospital / bus company	Hospital / bus company
improved bus links	patients, employees, visitors	in act	Hospital / bus company	Hospital / bus company
bike parking and showers	mainly employees	in act	Hospital	Hospital
bike paths	mainly employees	in act	County council	County council
parking management / charging	patients, employees, visitors	in act	Hospital	Hospital
park and ride	patients, employees, visitors	in act	County council	County council

Organisation of the Mobility Management activities at the development:

Employees travel coordinator runs the Mobility Management plan at the development; part of estates department, which also manages car parking. Significant senior management support.

(Envisaged) effects:

- share of employees driving alone to work: 74% (in 1993), 35% (in 2004)
- costs: self financing from parking charges (€ 1.10 per day in 2004)

Information sources:

- [Presentation by travel coordinator](#)
- [Minutes of Cambridgeshire County Council planning committee](#)
- [WHO case study](#)

Additional comments:

County Council investment in park and ride and cycling infrastructure off-site, and readiness of bus operator (Stagecoach, formerly Cambridge Bus) to work with Addenbrooke's have been important in achieving results. Gradual implementation of parking management important in gaining employee acceptance of policy.

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

01.12.2008

C10	Car-free Housing	
Applied in: City of Hamburg	Country: Germany	Produced by: State Government of Hamburg; Government Agency for Building and Transport
Type of policy: law	In force since: 2002	Level of application: Regional and local level
<p>Content:</p> <p>The State Building Codes (<i>Bauordnungen der Länder</i>) of the 16 German Federal States set the legal framework for the car-free housing projects. Most important for these kind of projects are regulations regarding the minimum number of required parking spaces, which are defined in the State Building Codes (exception: Berlin) and in the respective administrative rules (<i>Verwaltungsvorschriften</i>). In most states, the municipalities can or must set up local charters for detailed parking space regulations, which have to be fulfilled in order to get a building permission. Often, the opportunity exists to reduce the minimum number of parking spaces in case of good PT accessibility. Some States allow a further reduction if special requirements are met.</p> <p>The State of Hamburg defines parking regulations for car and bicycle parking spaces in its building code. The administrative rule (so called '<i>Globalrichtlinie</i>') defines this issue in further detail and gives numbers of car and bicycle parking spaces according to uses and sizes of buildings. Here, three different reasons for reducing the number of required car parking spaces are set: a reduced PT ticket for employees of business developments; a combined entrance and PT ticket for events (sport, culture) and a car-reduced or car-free housing project. In case of car-free housing, the development has to fulfil certain requirements like good PT accessibility, more than 30 accommodation units, a concept for avoiding car-use and a declaration of the residents, not to own a car. If these requirements are fulfilled, the regular amount of 1 parking space per accommodation unit can be reduced to 0.2 parking spaces per accommodation unit.</p> <p>Most state Building Codes basically allow car-free housing by not hindering them. It is important to point out, that car-free housing projects do not exist because of these regulations (there are no real pro car-free housing policies or regulations). Some of the actual regulations have been changed in the past years as a reaction to 'bottom-up' approaches for successful car-free projects. For a car-free or car-reduced area, there is often an organisation or association which closes an urban planning contract (<i>Städtebaulicher Vertrag</i>) with the city and guarantees that a minimal number parking spaces (e.g. for visitors) is sufficient. In most cases this organisation closes additional private contracts with either owners or tenants of the houses containing paragraphs which regulate the (non)ownership and usage of private cars.</p>		
<p>Main objectives and reasons for implementation:</p> <p>Those laws and regulations relevant for car-free housing weren't originally set up for fostering car-free housing projects. Car-free housing projects were not developed because of existing regulations but despite them. Today, some federal states adapted their laws and regulations for defining rules or creating better preconditions for car-free housing.</p>		
<p>Spread of the policy:</p> <p>See consistency of application of the policy</p>		
<p>Consistency of application of the policy:</p> <p>Most regulations belong to the building law sector (all levels from federal to the municipal). Therefore the regulations in general are applied in various ways. Car-free housing projects exist, but are not very common. Detailed negotiations between the developers and the city are always needed for getting a building permission for car-free housing in new developments.</p>		
<p>Targeted at:</p> <p>Planning authorities (local and/or regional and developers (public or private)</p>	<p>How binding is the policy?</p> <p>Between mandatory and voluntary (explained in the additional comments)</p>	

Designated to which kind of development?	
Theoretically designated to all housing developments that need a building permission.	
Applied or applicable in which kind of process?	Influenced by main policies:
<ul style="list-style-type: none"> • development of a Detailed Site Development Plan • building permission process 	<ul style="list-style-type: none"> • Car-free housing projects are generally bottom-up approaches
Kind of influence in the set-up of Mobility Management at the site level:	
<p>The influence is indirect: There is no obligation to implement Mobility Management within the car-free housing developments. But the car-alternative modes play a central role in setting up the plans. Therefore, the location of the project, good public transport accessibility and good quality bicycle storage facilities are considered early in the development process and are included in specific regulations (e.g. the construction plans of the buildings). Car-sharing stations are in most cases included in the plans as well, in order to offer many alternative transport options to the inhabitants. In many cases, the respective association or the developer negotiate for special conditions e.g. for PT or car-sharing, thus some MM aspects are often included in the planning process in order to successful implement such car-free projects.</p>	
Information sources:	
<ul style="list-style-type: none"> • Case study: Car-free living in Hamburg - Saarlandstraße (in German) • Globalrichtlinie: 'Notwendige Stellplätze und notwendige Fahrradplätze' HH (in German) • State Building Code: Hamburg (in German) 	
Additional comments:	
Reference to binding of policy: Using the mentioned regulations for granting building permissions is mandatory; but there is no requirement to develop car-free housing projects.	
Information provided by:	Date:
ILS, Dortmund, Germany	04.12.2008

C11	Gartenstadt Siedlung Weissenburg (Car-free housing project)	
Applied in: city of Münster	Country: Germany	Name of the developer: Wohnungsgesellschaft Münsterland mbH (WGM)
Status of the development: development in use	Type of developer: private	(Expected Date) where development gets in use: first construction stage in use since 2001; completion of whole project in 2012
<p>Description of the development:</p> <p>The car-free project "Gartenstadt Siedlung Weissenburg" covers an area of 3.2 ha and is located in the inner city area called "Geistviertel", only 2.5 km south of Münster's city centre. Many supply facilities are close-by and a car-sharing station is located at the edge of the development. Within the area a training centre is situated for people doing their civilian service for a special organisation. The main area is for residential use, a total of 196 accommodation units for car-free households shall be built on former military grounds. The flats are of various sizes, from 1 room apartments to 5 room flats. The first two construction stages with 70 and 60 accommodation units were ready to get in use in 2001 and 2003. The third and last one should be finished until 2012. All accommodation units are reserved for social housing.</p>		
		 <p>Source: WGM</p>
<p>The development is connected with the city centre by a net of cycle paths; it takes approx. 10 min. Three bus lines with a frequency of 10 min are within walking distance. With a bus it takes about 15 min to main station and 7 min to the city centre.</p>		
<p>Type of applied process:</p> <ul style="list-style-type: none"> • Building permission process • Detailed Site Development Plan • Urban planning contract (public private) 	<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • City of Münster • Local public transport provider 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <ul style="list-style-type: none"> • law: Bauordnung NRW (in German) • local charter: parking pay-off (in German) • Detailed Site Development plan: Weissenburg (in German) 		
<p>Requirements from the public authorities:</p> <p>The municipality required 0.2 parking spaces per accommodation unit for the use for car-sharing vehicles and visitors. The implementation of a car-sharing offer was one of the requirements for the reduced number of parking spaces. This reduction is content of the Detailed Site Development Plan (<i>Bebauungsplan</i>) and the housing company "Wohnungsgesellschaft Münsterland mbH" WGM closed an urban planning contract with the city in order to get the building permission. Tenants sign a private contract with the WGM, stating that they do not own and use a private car.</p>		
<p>Additional agreements between authorities and developer:</p> <p>Urban planning contract (<i>Städtebaulicher Vertrag</i>) including sections on urban design, car-free living and car-sharing. The WGM is responsible to secure the car-free project via private contracts and a car-sharing station with 8 spaces for car-sharing vehicles.</p>		

Influences in establishing the implementation of Mobility Management measures:

The competition "living without an own car" of the German federal state of North Rhine-Westphalia (NRW) influenced this car-free housing project. The local housing company WGM developed in cooperation with the City of Münster the first car-free housing project in NRW.

Main Mobility Management measures

<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
car sharing	residents	in act	StadtteilAuto / WGM	StadtteilAuto
bike parking	residents	in act	WGM	WGM
public transport time tables located at entrances of the buildings	residents	in act	-	no information available

Organisation of the Mobility Management activities at the development:

The status of car-free households is secured by private contracts between residents and the housing company WGM. The households declare that they neither own nor buy a car. Those who do own a car lose the right to live in the quarter. An arbitration board decides about exceptions from this car-freeness, which may be granted for persons with handicaps or temporary professional reasons. The car-sharing organisation offers all tenants of the area a reduced membership fee.

(Envisaged) effects:

no information available

Information sources:

- [ADD HOME Case Study: Weißenburg](#)
- [information website: wohnen plus mobilität - case study \(in German\)](#)
- [residents: Autofreie Siedlung Weißenburg e.V. \(in German\)](#)
- [housing company: Wohnungsgesellschaft Münsterland \(in German\)](#)

Additional comments:

None

Information provided by:

ILS, Dortmund, Germany

Date:

08.12.2008

C12	Access Contingent Model (<i>Fahrtenkontingent Modell</i>)	
Applied in: City of Zurich	Country: Switzerland	Produced by: Transport Planning Department, city of Zurich
Type of policy: planning instrument	In force since: 1999	Level of application: Local level
<p>Content:</p> <p>The Access Contingent Model defines the maximum number of car trips which are allowed to be generated from a development respectively from the different types of utilisation allowed. The calculation of the allowed car trips starts from the number of allowed parking spaces defined in the parking regulation of the city of Zurich. Compared to the parking regulation the Access Contingent Model does not regulate the utilisation of the parking spaces. This allows certain flexibility in the management of the parking spaces within a pre-described limit of car trips per time period. The maximum number of allowed car trips is calculated on the base of following factors: the maximum number of car parking spaces according the parking regulation of the city (which includes the quality of accessibility of the area with public transport), the specific trip potential per type of utilisation (number of trips which a specific use generates per a certain time period), the capacity of the road network in the surroundings of the development area and the specifications concerning air and noise emissions defined by the Environmental Law. The Access Contingent Model has to be assured with an organisation scheme installed by the developer/landowner and includes the monitoring of the trips, the parking management and the reporting procedure. The controlling has to be done periodically by an independent institution that reports to the Transport Planning Department of the city of Zurich. In case that the maximum number of trips is exceeded sanctions can be applied. First, infrastructural or organisational measures have to be implemented do these additional measures not guarantee that the maximum number of allowed car trips can be maintained the public authority has the duty to act according the rules defined in the parking regulation of the city. This can be to re-distribute the parking spaces to the uses of the development or to reduce the overall number of allowed parking spaces.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The main objectives and reasons for the implementation of the Access Contingent Model are:</p> <ul style="list-style-type: none"> • To allow development in dense urban areas, already saturated with traffic, • To control the environmental effects of large buildings/real estate developments, • To allow flexible and multi-use of parking spaces, • To keep car traffic volume under control by defining the maximum number of car trips. <p>With the application of the Access Contingent Model a contingent of allowed car trips is already defined in the planning phase and for the overall development. The trip contingent can be claimed stepwise as partial limit according to the progress of realisation of the overall development. Consequently the developer has not to appeal for parking space permission every time a part of the development is getting in use. The model allows furthermore verifying the compatibility of large and traffic intensive developments with regard to the capacity of the existing road network on the one hand and on the environment on the other.</p>		
<p>Spread of the policy:</p> <p>Since 1999 the Access Contingent Model is applied at new developments that fulfil certain preconditions (see below).</p>		
<p>Consistency of application of the policy:</p> <p>Once decided by the public authority that a certain development fulfils the necessary preconditions the model is strongly applied.</p>		
Targeted at: Developers (public or private)	How binding is the policy? Between mandatory and voluntary (explained in the additional comments)	


<p>Designated to which kind of development?</p> <p>Following main preconditions for the application of the model must be fulfilled:</p> <ul style="list-style-type: none"> • Access of the development by car must be controllable (limited number of access and exit points), • Development area is well connected with public transport, • Clear information about the future mix of uses of the entire development, • More than 150 parking spaces or more than 2000 car trips per day generated from the development, • Uses with high demand on parking spaces at peak hours, • Wide mix of uses and high density of uses. 	
<p>Applied or applicable in which kind of process?</p> <ul style="list-style-type: none"> • development of a Detailed Site Development Plan (recommended) • building permission process (to be defined case by case) 	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Parking regulation of the city of Zurich, 1996 (in German) • Federal Law on Environment, 1983 (in German)
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>The application of the Access Contingent Model has an indirect influence on the set-up of Mobility Management measures. In order to assure that the number of allowed car trips are not exceeded a (paid) parking management scheme often is applied. This is done either by the developer itself or by tenants or owner of buildings which have received a contingent of allowed car trips (defined in a contract with the developer). Furthermore the tackled developments are always well accessible with public transport. So further financial incentives like Job-Tickets and information will help to promote the use of public transport at employees and clients. Often the developments have also an extended amount of bike parking at disposal of employees and clients.</p>	
<p>Information sources:</p> <ul style="list-style-type: none"> • Tiefbauamt, Umwelt- und Gesundheitsschutz der Stadt Zürich (Editors): Fahrtenmodell - eine Planungshilfe, Zürich, 2007. (in German) 	
<p>Additional comments:</p> <p>It is not mandatory for the public authority to apply the Access Contingent Model at every new development. But once it is applied due to the impact of the new development would be too negative in terms of car traffic and environmental effects, it is mandatory for the developer. The defined requirements (number of trips, organisational scheme, sanctions) are fixed in a contract between the public authority and the developer. The contract is a part of the building permission or the Detailed Site Development Plan.</p>	
<p>Information provided by:</p> <p>synergo, Mobility – Politics – Space, Zurich, Switzerland</p>	<p>Date:</p> <p>16.10.2008</p>

C13	Sihlcity, multifunctional development	
Applied in: city of Zurich	Country: Switzerland	Name of the developer: Karl Steiner AG, Zürich (now Sihlcity AG: Association of owners of Sihlcity)
Status of the development: development in use	Type of developer: private	(Expected Date) where development gets in use: since 2007
<p>Description of the development:</p> <p>Sihlcity is a multifunctional development composed by several buildings in the city of Zurich. On around 97,000 m² ground floor space different uses like retail, services, culture, cinema, hotels, fitness, wellness and few housing are located. Sihlcity has around 19,000 visitors per day and 2,300 working places.</p> <p>The development is placed outside of the city centre nearby one important highway ending at the city of Zurich. The development is also well connected to the regional train system (the railway stop is located at one of the main entrances of the area) and to the local public transport system (one bus and two tramway stops are located nearby the area). The area has furthermore a recreational function for the neighbourhood which is a mix of working and living area. The overall number of parking spaces at Sihlcity is 850, which means 1 parking per 110m² ground floor space.</p>		 <p>Source: Sihlcity AG</p>
<p>Type of applied process: Building permission process</p>		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • Department for building permission of the city • Transport Planning Department of the city • Environmental Department of the city
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management: Access Contingent Model of the city of Zurich</p>		
<p>Requirements from the public authorities:</p> <p>Within the process of getting a building permission different transport solutions were fixed legally by contract: number of parking spaces was fixed on 850 and the parking had to be taxed, 600 bike parking spaces and a home delivery service by bike had to be installed by the landowners, and they were imposed to finance the improvement of a tramway line and a bus line for the first two years of operation. Furthermore an Access Contingent Model was requested, allowing the generation of maximum 8,800 car trips per day (to achieve after 5 years).</p>		
<p>Additional agreements between authorities and developer: See requirements from the public authorities</p>		
<p>Influences in establishing the implementation of Mobility Management measures:</p> <p>Mobility Management measures like paid parking and the installation of a bike home delivery service were imposed by the public authority. As a consequence the association of owners of Sihlcity implemented further measures like information services on the Web-Site about the accessibility of Sihlcity with all type of modes and no parking allowances for the employees of the shops within the development.</p>		

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
paid parking	clients	in act	-	Sihlcity AG
restricted distribution of parking permits	employees	in act		Sihlcity AG
tramline extension	clients, employees	in act	public transport company, Sihlcity AG	public transport company
bus line extension	clients, employees	in act	public transport company, Sihlcity AG	public transport company
home delivery service by bike	clients	in act	private provider (subsidised by public authority)	private provider
bike parking	clients, employees	in act	Sihlcity AG	Sihlcity AG
accessibility information on Website	clients, employees	in act	Sihlcity AG	Sihlcity AG
Organisation of the Mobility Management activities at the development:				
<p>The number of generated trips is regularly monitored and reported by the Sihlcity AG to an independent organisation which controls the reported numbers and informs the public authority about the ongoing development of car trips. The most of the indicated Mobility Management measures are organised by dedicated persons within the Sihlcity AG.</p>				
(Envisaged) effects:				
<ul style="list-style-type: none"> • Mode-Split of clients: around 70% are visiting Sihlcity without a car 				
Information sources:				
<ul style="list-style-type: none"> • Transport Planning Department of the City of Zurich: Mobilitätsmanagement - Fahrtenmodell Sihlcity, presentation at the salon de la mobilité, Neuchâtel, Switzerland, 2007 (in German) • Website Sihlcity (in German) 				
Additional comments:				
None				
Information provided by:			Date:	
synergo, Mobility – Politics – Space, Zurich, Switzerland			16.10.2008	

C14		Environmental Management Act (<i>Wet Milieu Beheer</i>)	
Applied in: Netherlands	Country: Netherlands	Produced by: National Government (Ministry responsible for environmental and spatial planning)	
Type of policy: law	In force since: 1993	Level of application: Regional and local level	
<p>Content:</p> <p>The Environmental Management Act (“Wet Milieubeheer” or EMA) of 1993 is meant to “protect the environment”. This broad interpretation includes:</p> <ul style="list-style-type: none"> • Improvement of the environment, • Promoting the suitable removal of waste materials, • Promoting efficient use of energy and raw materials, • Reducing the harmful effects on the environment of individual and goods transport within cities. <p>Under the terms of this act, approximately one quarter of Dutch companies must receive an environmental permit in order to operate. They are selected because of their larger than average environmental impacts. To receive the permit, they must fulfil the requirements of the EMA. The act states that within the framework determined by the competent authorities, the companies themselves are responsible for the reduction of their environmental impact. Companies can take responsibility for the reduction of their environmental impact by, for example, measuring the impact of their operations and drawing up a plan to reduce it (much in the same way MM plans comprise both diagnostic and action phases). Such diagnoses and action plans may also focus on specific environmental aspects, such as: energy-saving and transport management.</p>			
<p>Main objectives and reasons for implementation:</p> <p>The law is intended to put responsibility on companies for taking reasonable steps to reduce their environmental impacts. To expand, change location or simply to carry on operating, companies have to obtain a triennial permit from local authorities, based on an application that demonstrates how environmental impacts will be mitigated and minimised. This could be interpreted to include the impacts of transport to, from and at the site, although only the City of Amsterdam ever interpreted the law in this way. MM was not specifically mentioned in the law – its definition of environmental impacts was much broader, to permit the companies themselves some flexibility in selecting their most significant impacts.</p>			
<p>Spread of the policy:</p> <p>The environmental law is applied by municipalities and occasionally provinces right across the Netherlands.</p>			
<p>Consistency of application of the policy:</p> <p>With respect to transport, the use of the environmental law to regulate in favour of MM is very rare. The only example of the use of the law to require MM by companies is in Amsterdam.</p>			
<p>Targeted at:</p> <p>Planning authorities (local and/ or regional) and developers (public or private)</p>		<p>How binding is the policy?</p> <p>mandatory</p>	
<p>Designated to which kind of development?</p> <p>The law did apply to larger companies in all sectors. Since 1/1/2008 it has been reduced in scope, so that only companies with significant environmental impacts need to apply it. This definition excludes almost all service industry like banks or shops.</p>			

<p>Applied or applicable in which kind of process?</p> <p>The application for the environmental permit is required for companies to continue operating and if they are planning to increase in size or move location – but only for those companies now required to apply for an environmental management permit (see above, re the change in the law on 1/1/08).</p>	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> - Netherlands Environmental Law (in Dutch) - Netherlands Environmental Law 1/1/08 modification (in Dutch)
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>Potentially strong influence but in practice minimal (except in Amsterdam) because most local authorities chose not to interpret the law to cover transport to, from and at the site, as they did not want to be seen to be over-regulating, at the possible risk of deterring investment in their area.</p>	
<p>Information sources:</p> <p>see main policies influencing the law</p>	
<p>Additional comments:</p> <p>In 2000, the Dutch government published a document called “The environmental law and Mobility Management”, which supported the idea of using the law to cover MM for at least larger trip generating uses – those with more than 100 staff, for example. In 2004, there was a motion in Parliament to extend the law to explicitly include reference to MM. However, this was rejected on the grounds that the competent authorities (i.e. local authorities) should have the flexibility to interpret the law for their areas, and also because work was already underway to simplify and reduce the regulatory load on companies from the Environment Ministry's various regulations.</p>	
<p>Information provided by:</p> <p>Edinburgh Napier University, Edinburgh, United Kingdom</p>	<p>Date:</p> <p>16.10.2008</p>

C15	De Telegraaf newspapers (production site)	
Applied in: city of Amsterdam	Country: Netherlands	Name of the developer: De Telegraaf Newspapers
Status of the development: development in use	Type of developer: private	(Expected Date) where development gets in use: in use at this site since at least 1995
<p>Description of the development:</p> <p>De Telegraaf is one of the largest newspapers in the Netherlands. It is part of the Telegraaf Media Group (TMG), based at a very accessible site (by both public transport and road) on a business park around 800 m from Sloterdijk station in the west of Amsterdam, en route to Schiphol airport; there is also ample free parking (around 1 space per employee!). The office and plant employs 2100 people in editing, marketing, sales, administration and printing/dispatch. In 2001 TMG applied to the municipality for the periodic renewal of its environmental permit – it was one of those organisations in the Netherlands required under the 1993 Environmental Law to obtain an environmental permit from the local municipality to continue to operate. Thus this was not something that was part of the planning process – it applied to a continuing operation. That said, many new, relocating and expanding organisations were (until 1/1/08) also required to obtain such a permit. In the case of TMG, Mobility Management was a condition of the granting of the permit. However, this requirement did not extend to the specification by the municipality of specific Mobility Management measures.</p>		 <p>Source: Gemeente Amsterdam</p>
<p>Type of applied process:</p> <ul style="list-style-type: none"> • application for replacement environmental permit • environmental permit required for operation of existing site – not part of the planning process per se 	<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • city of Amsterdam 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <ul style="list-style-type: none"> • 1993 Netherlands Environmental Act (Wet Milieubeheer) as interpreted by City of Amsterdam (in Dutch) 		
<p>Requirements from the public authorities:</p> <p>TMG was required to carry out an assessment of its accessibility, current travel patterns, specify MM measures already in use and planned measures, covering commuters, visitors, business travel and freight/deliveries.</p>		
<p>Additional agreements between authorities and developer:</p> <p>None</p>		
<p>Influences in establishing the implementation of Mobility Management measures:</p> <p>For TMG accessibility was not a problem so in fact the main objective for the management was to keep the costs of any MM measures as low as possible.</p>		

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
cycle plan	employees	under consideration	municipality	municipality and TMG
car pooling	employees	in act	TMG	TMG
public transport travel info and personalised advice	employees	in act	TMG	TMG
route descriptions	mainly employees	in act	TMG	TMG
business travel measures to cut costs	employees	in act	TMG	TMG
freight transport – Eco-Driving training	employees		TMG	TMG
flexible working pattern	employees	in act	TMG	TMG
Organisation of the Mobility Management activities at the development:				
About five person months were invested by TMG in setting up the plan, which was then run by the company's environmental coordinator.				
(Envisaged) effects:				
no information available				
Information sources:				
Slimreizen.nl (in Dutch)				
Additional comments:				
None				
Information provided by:			Date:	
Edinburgh Napier University, Edinburgh, United Kingdom			01.12.2008	

C16	Environmental Impact Assessment Procedure (<i>Umweltverträglichkeitsprüfung</i>)	
Applied in: Switzerland	Country: Switzerland	Produced by: Federal council
Type of policy: law	In force since: 1983	Level of application: All levels
<p>Content:</p> <p>The Environmental Impact Assessment (EIA) is a procedure defined by Swiss Law of Environment. It is targeted to new or re-newed constructions which can pollute the environment in a considerable way. The type of constructions which are subject of an EIA are defined by the Federal Council and are listed in the decree of EIA. Beyond others also parking construction with more than 300 parking spaces are subject of an EIA. Developers which are asking for building permission for a new development which includes more than 300 parking spaces have to deliver a EIA report to the building permit authority. In general the report has to include information on the following main issues:</p> <ul style="list-style-type: none"> • Construction and foreseen measures to reduce the environmental impact, • Starting situation in terms of transport, • Environmental impact of the construction (building and using of the construction), • Further measures foreseen by the developer to reduce the environmental impact. <p>The report will be checked during the building permit process by the relevant departments. For parking constructions with more than 300 parking spaces this is normally the environmental department of the municipality and the canton. The check is done under the aspect if the requirements of the environmental law are fulfilled. The result of the check can lead to the consequence that the developer has to reduce the number of requested parking spaces and/or install additional measures as a condition for obtaining the building permit.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The main reasons and objectives for the implementation of the EIA were to keep the environmental impact of a new construction under control and minimise them as much as possible.</p>		
<p>Spread of the policy:</p> <p>The EIA is a national law and has to be applied in whole Switzerland.</p>		
<p>Consistency of application of the policy:</p> <p>In terms of the thresholds on air and noise pollution the check by the involved environmental departments is applied strictly. With regard of other issues concerning the environmental impacts (like landscape) of a construction there is a margin of interpretation.</p>		
Targeted at: Developers (public or private)	How binding is the policy? Mandatory	
<p>Designated to which kind of development?</p> <p>All developments where more than 300 parking spaces are foreseen to be constructed.</p>		
Applied or applicable in which kind of process? <ul style="list-style-type: none"> • building permit process 	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Federal Law on Environment, 1983 (in German) 	

Kind of influence in the set-up of Mobility Management at the site level:

The influence is normally indirect but it can also be direct. The result of the check of the EIA report can lead to a reduction of number of parking spaces which may implicate the developer to install Mobility Management measures.

The check can also lead to the result that the developer is enforced to install directly Mobility Management measures and / or reduce the number of parking spaces.

Information sources:

- [Schweizerischer Bundesrat, Verordnung über die Umweltverträglichkeitsprüfung, 1988 in German](#)

Additional comments:

None

Information provided by:

synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:

19.12.2008

C17	Traffic Impact Assessment Study (<i>Estudio de tráfico</i>)	
Applied in: Municipalities, Autonomous Region of Madrid	Country: Spain	Produced by: Autonomous Region
Type of policy: recommendation	In force since: 2001	Level of application: Local level
<p>Content:</p> <p>The Traffic Impact Assessment Study has the aim to analyse and evaluate in a preliminary way the kind of transport generated and attracted in new urban developments. The analysis is done in relation to existing infrastructure in the surroundings and planned infrastructure in the planned area, with the purpose to identify principal traffic flows, major conflict situations and capacity problems. Generated and attracted trips are calculated based on future uses of the areas. The connections and accesses to the existing road network are also evaluated.</p> <p>Only car and public transport is evaluated in the study, pedestrians, cyclists or other potential modes are not taken into account. Nor is the pedestrian infrastructure network analysed.</p> <p>In case of conflict situations or capacity problems of calculated traffic flow or general inadequacy of the planned infrastructure, actions and solutions are proposed to improve the situation.</p>		
<p>Main objectives and reasons for implementation:</p> <p>In the Land Use Law in the Autonomous Region of Madrid it's specified that a Detailed Site Development Plan (<i>Plan Parcial</i>) has to be elaborated for "land possible to develop" (<i>suelo urbanizable</i>). In order to have the Detailed Site Development Plan approved and for the following procedures of development some specific studies have to be elaborated and included as additional documentation as "technical commitment and guarantees of sustainability of the proposed solutions for the area", e.g. water and sewage, tele-network. The surface cannot be developed unless all specific studies have been approved within the plan.</p> <p>Regarding the traffic assessment study it doesn't say expressively that it is obligatory to develop it, but specific studies including the "right connection, extension and reinforcements of every infrastructure, equipment and public municipal and supra-municipal services, that will be used by the future population (supposing they will be permanent residents), and as a minimum the integration of networks of education, welfare, sanitary, sports, culture, spare-time, daily commerce, security service, firemen and the connection to the infrastructure and road service... ..urban and regional public transport on road and rail." (Art. 48 2a Number d) in the same paragraph states that a specific study of the connection and autonomy of the public transport system has to be done, guaranteeing there will be no congestion or capacity overloading with the existing traffic or for different future scenarios.</p> <p>These two paragraphs are interpreted as the traffic assessment study.</p>		
<p>Spread of the policy:</p> <p>Part of the technical studies presented within the planning instrument Detailed Site Development Plan (DSDP) for new developments on "land possible to develop". Different legislation in every Autonomous Region - in the case of Madrid it is mandatory to present it, but the extension and detail of the study depends on the responsible in the town council. In the worst case, neither the responsible person nor the committee approving the DSDP ask for such a study.</p>		
<p>Consistency of application of the policy:</p> <p>Once decided that an area is "possible for building development" and has to develop a DSDP for building development it is strongly applied.</p>		
<p>Targeted at:</p> <p>Planning authorities (local and/ or regional) and developers (public or private)</p>	<p>How binding is the policy?</p> <p>Between mandatory and voluntary (explained in additional comments)</p>	

<p>Designated to which kind of development?</p> <p>It must be an area classified as "possible for building development" (<i>suelo urbanizable</i>) in the Municipal General Urban Plan (<i>Plan General de Ordenación Urbana</i>).</p>	
<p>Applied or applicable in which kind of process?</p> <p>It is part of the process of the development of a Detailed Site Development Plan.</p>	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Land Use Law of the Autonomous Region of Madrid, Ley del Suelo, 9/2001, de la Comunidad de Madrid (Land Use Law) • General Urban Plan (municipal). E.g. Plan General de Ordenación Urbana de Getafe 2002, Ayuntamiento de Getafe 2004. • Detailed Site Development Plan (site-level). E.g. Plan Parcial del sector PP-02 de Suelo Urbanizable Sectorizado de Los Molinos. Mónica de Blas, Euroestudios, and Rueda y Vega asociados, 2005
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>The application of the Traffic Impact Assessment Study has an indirect influence of the set-up of MM. At the moment the influence is low or none, very few studies lead to a change in the original plans. Many times the study is not being carried out and taken into account in a serious way -just done and included. It's up to the responsible mobility department in the Municipality to demand the study and this does not always happen. Only if there are special interests on regional/national level, the Autonomous Region might not approve the plan if some of the specific studies are missing or poorly elaborated. If the people responsible for mobility wishes, they can demand a very good study and take into consideration the corrections proposed.</p> <p>This means the traffic assessment study could be improved. There are no legal barrier, legally, hindering that other modes and networks than road and rail can't be studied. So the municipality has the freedom to change the requisites, e.g. add to the content the pedestrian and bicycle network, analysis of parking spaces and evaluate the distribution of all modes of transport. In this way the influence of MM measures could be much more direct and stronger.</p>	
<p>Information sources:</p> <ul style="list-style-type: none"> • see main policies influencing the law • Personal communication with expert 	
<p>Additional comments:</p> <p>At the moment the Land Use Law is too wide and open to interpretation. The Detailed Site Development Plan has to be approved in an Urban Commission consisting of representatives from local and regional administrations and external actors from e.g. ecological associations, but only some of the representatives have the right of voting, and if no one acts and demands a more specific study it will not be done.</p> <p>This is an advantage if someone wants to demand higher criteria but a disadvantage if no one cares. In many of the administrations in Spain no one cares since that means more work and a possible delay in the plans.</p> <p>The Traffic Impact Assessment Study has been classified as recommendation, although it's not entirely correct. It's more of a study and if the planners want to ignore it that is possible.</p> <p>An example of a multi-modal Transport Assessment study from the UK can be found at http://www.hw.ac.uk/sistech/rae/documents/HWUTP-HWU_travel_plan.pdf</p>	
<p>Information provided by:</p> <p>ETT, Madrid, Spain</p>	<p>Date:</p> <p>17.11.2008</p>

C18	Environmental Quality Standards in the Environmental Code (<i>Miljöbalken</i>)	
Applied in: Sweden	Country: Sweden	Produced by: Ministry of Environment
Type of policy: law	In force since: 1999	Level of application: all levels
<p>Content:</p> <p>The Environmental Code (<i>Miljöbalken</i>) is Sweden's environmental legislation. Adopted in 1999, it gathers all relevant legislation in one code. The Environmental Code allows the Swedish government to introduce so called Environmental Quality Standards, regulations on the quality of land, water, air or nature in other respects, for certain geographical areas or for the country as a whole. Environmental quality standards are a type of legally binding policy instrument introduced to deal with the environmental impacts of diffuse emission sources such as traffic and agriculture.</p> <p>Authorities have a duty to ensure that an environmental quality standard is not violated. The local authorities' comprehensive plans have to show how the municipality intends to enforce environmental quality standards. County administrative boards have a duty to ensure that the standards are taken into account in planning.</p> <p>In cases where there is a risk for exceeding the standards, an action programme should be established. The action programme specifies which instruments should be used for ensuring compliance with the standard:</p> <ul style="list-style-type: none"> • Administrative instruments, e.g. requirements that physical planning be changed with respect to environmentally sustainable infrastructure, traffic planning and build-out of public transport; • Economic instruments, e.g. fees and taxes; • Informative instruments, e.g. education and public information campaigns. <p>At present, action programmes have been established, due to exceedances of the environmental quality standards in the County of Stockholm (NO₂, PM10), the Gothenburg Region (NO₂, PM10), and the municipalities of Helsingborg (NO₂), Uppsala (NO₂, PM10), Umeå (NO₂), Norrköping (PM10), and Malmö (NO₂).</p>		
<p>Main objectives and reasons for implementation:</p> <p>The Environmental Code came into force in 1999, replacing fifteen previous environmental acts which were unified into the Code. The purpose of the Environmental Code is to promote sustainable development which will assure a healthy and sound environment for present and future generations.</p> <p>The main reason to introduce environmental quality standards was to enable implementation of the EC directives that prescribe this type of standard.</p>		
<p>Spread of the policy:</p> <p>Since 1999 the Environmental Code is applied in planning at all levels, nationwide. The Environmental Quality Standards are also enforced in the entire country, forcing municipalities to perform continuous measurements in the street environment.</p>		
<p>Consistency of application of the policy:</p> <p>The Environmental Code and the Environmental Quality Standards are part of the national Swedish legislation, i.e. strongly applied.</p>		
Targeted at: planning authorities (local and/or regional) and developers (public or private)	How binding is the policy? mandatory	

<p>Designated to which kind of development?</p> <p>The Environmental Quality Standards apply to all kinds of development. When measurements or calculations show that there is a risk for exceeding the standards on a specific site, the responsible authority must use all measures imaginable to set the figures straight.</p>	
<p>Applied or applicable in which kind of process?</p> <ul style="list-style-type: none"> • process of development of a Detailed Site Development Plan • building permission process • process of setting up comprehensive plans for municipalities 	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe • Environmental Code (1998)
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>When there is a risk of exceeding the environmental quality standards, the government demands from the county administrative board to establish an action program showing how the local air quality can be improved. In some of these action programs, Mobility Management (e.g. information to the public and to corporations, parking management, congestion charging, requirement for transport plans for large enterprises) is part of the solution. As of today, several action programs have been adopted, where emphasis has been put on municipal measures (that is, measures that are to be implemented by the municipality) within the field of Mobility Management. As for companies, there are no examples available, where a company has been required to set up any direct Mobility Management measures (for example, mobility plan). In short, this is due to the fact that there is no support for such requirements in the national regulations. However, this has been highlighted in several of the action plans, where the County Administrative Board and/or the municipality have required an amendment in the regulations.</p>	
<p>Information sources:</p> <ul style="list-style-type: none"> • Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe • Preparatory work for the Swedish Environmental Code legislation 	
<p>Additional comments:</p> <p>None</p>	
<p>Information provided by:</p> <p>Trivector, Traffic AB, Lund, Sweden</p>	<p>Date:</p> <p>17.12.2008</p>

C19	The “City entrance” project (and integration of Mobility Management in the action programme of the city)	
Applied in: City of Malmö	Country: Sweden	Name of the developer: TK Development (in dialogue with the city of Malmö)
Status of the development: development in construction	Type of developer: Public	(Expected Date) where development gets in use: March 2009
<p>Description of the development:</p> <p>Malmö's action programme was developed due to the exceedance of the environmental quality standards. It contains a specific chapter about Mobility Management (the main general measures are further described in the section „main Mobility Management measures”). In Malmö it is also of interest to shortly look at one concrete example, "The City Entrance", a project initialised by the municipality concerning the area fronting the main highway leading into the city (see picture of the block, with the new buildings in light blue and the high way in the upper top of the picture). Here it is suggested that a large shopping centre with app. 60 stores and an underground garage with 1000 parking places should be developed. This was also as a way for the municipality to renew a nowadays rather shabby block with great potential. In short the chain of events was as follows: All relevant departments within the municipal organisation were positive, except for the Environment Department. This department advised against the development with reference to the already existing air quality problems in the area, which of course would be further deteriorated by a shopping centre, which will increase traffic on some of the most frequented streets in the area by 10 %. However, this department could not by itself hinder the decision to go ahead with the development. Also the County Administrative Board expressed serious doubts with reference to air quality, but chose not to stop the development. However, in the action programme for Malmö, which is now adopted, this area is highlighted. Several measures should be conducted by the municipality, concerning the concrete traffic environment (for example, bus lanes, new solutions for traffic signals, giving priority to public transport, one-way street directions for private cars). Furthermore, a number of soft measures within the field of Mobility Management should be initialised by the municipality in dialogue with the stores and the developer when the shopping centre opens up in march 2009. For example campaigns for sustainable travels to and from the shopping centre, as well as real-time public transport signs within the centre, are mentioned. However, no requirements have been directly put on the developer, since the national regulations give no support for such measures as of today.</p>		
<p>Type of applied process:</p> <ul style="list-style-type: none"> • process of comprehensive planning • Detailed Site Development Plan 	<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • city of Malmö • Country administrative board 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <ul style="list-style-type: none"> • Environmental Code (adapted in 1999) (in Swedish) 		
<p>Requirements from the public authorities:</p> <p>In the city of Malmö, measurements or calculations have shown that the Environmental Quality Standards are exceeded. The Swedish government has requested from the county administrative boards to establish an action programme the municipality. The county boards then require that the municipality itself takes action to reduce exhausts from traffic.</p>		
<p>Additional agreements between authorities and developer:</p> <p>None</p>		
<p>Influences in establishing the implementation of Mobility Management measures:</p> <ul style="list-style-type: none"> • 		



Source: TK development

Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
campaigns for reduced car use to/from the City Entrance (specific)	visitors, employees	Planned	city of Malmö	city of Malmö
bus lanes, traffic signal adjustments, one-way streets in the area of the shopping centre (specific)	visitors, employees	Planned	city of Malmö	city of Malmö
real-time public transport signs in shopping centre (specific)	visitors, employees	Planned	city of Malmö	city of Malmö
measures to increase the status of bicycling	inhabitants	in progress	city of Malmö	city of Malmö
reducing car traffic at four specific sites in Malmö	visitors, employees	in progress	city of Malmö	city of Malmö
counteracting free work site parking	employees	in progress	city of Malmö, County administrative board	city of Malmö, County administrative board
new travel policy for employees of the city	city employees	in act	city of Malmö	city of Malmö
information to people moving in to the city	new inhabitants	in act	city of Malmö	city of Malmö
Organisation of the Mobility Management activities at the development:				
Within the municipality of Malmö, about five employees work part time with these issues. There is no specific development that has its own organisation of staff. Projects are carried out continuously, according to the yearly budget.				
(Envisaged) effects:				
<ul style="list-style-type: none"> • Transport: less private cars in the area • Environment: Less air pollutant levels 				
Information sources:				
<ul style="list-style-type: none"> • The City of Malmö's webpage (in Swedish) • The webpage of the development (in Swedish) • Action Programme for Malmö 				
Additional comments:				
•				
Information provided by:			Date:	
Trivector, Traffic AB, Lund, Sweden			17.12.08	

C20	Maximum parking standards	
Applied in: England	Country: United Kingdom	Produced by: National Government (Ministry responsible for spatial planning)
Type of policy: guideline	In force since: 2001 England	Level of application: Regional and local level
<p>Content:</p> <p>As their name suggests, England's maximum parking standards (MPS) set nationally-applicable maximum amounts of parking that are allowed to be built with new developments. The MPS are an Annex to PPG13, although they were only introduced in the last version of PPG13 in 2001. Earlier versions of PPG13 suggested that local authorities set their own maximum standards at local level, but many were reluctant to do so because of the fear that neighbouring authorities would set less restrictive standards in order to attract development. The standards in PPG13 do not apply to residential developments; these are covered by a different PPG, PPG3, and set a maximum of 1.5 spaces per dwelling across an area – meaning that some can be built with more spaces, and some with fewer, as long as the average is 1.5 spaces. The standards and the minimum size of developments to which they are applying are shown on the next sheet in this spreadsheet. This means that many authorities can be – and are – in the situation of having maximum standards for large developments and minimum standards for smaller developments.</p>		
<p>Main objectives and reasons for implementation:</p> <p>The main objective of PPG13 is to use the planning system to reduce the need to travel and to reduce the use of the car to access developments. Maximum parking standards are seen as an important way to achieve the second objective and indeed the limited literature on this topic bears this out (see COST342 report (2006)), for example. PPG13 seeks to reduce car use to deal with congestion and environmental problems.</p>		
<p>Spread of the policy:</p> <p>It must be taken into account to at least some extent in making planning decisions for all large developments. All municipalities apply the standards.</p>		
<p>Consistency of application of the policy:</p> <p>The standards are not primary legislation, although as part of planning guidance, they have legal status. They can be ignored/adapted but if this occurs, there must be a very good rationale for so doing. If a local authority grants permission to a building with more than the national permitted maximum standards, national government could reverse the decision. In general, however, they are applied with reasonable consistency.</p>		
<p>Targeted at:</p> <p>Planning authorities (local and/ or regional) and developers (public or private)</p>	<p>How binding is the policy?</p> <p>mandatory</p>	
<p>Designated to which kind of development?</p> <p>Policy is targeted at all types of developments except residential ones (residential maximum standards covered by PPG3).</p>		
<p>Applied or applicable in which kind of process?</p> <p>First part of building permission process</p>	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Planning and Compulsory Purchase Act 2004 • PPG13 	

Kind of influence in the set-up of Mobility Management at the site level:

Strong influence – a key reason why MM at site level has been encouraged through the planning process. Some anecdotal evidence suggests that maximum parking standards and no availability of free on-street parking near the site will lead to an increase in lift-giving (and therefore vehicle km travelled), but the DfT (2002) publication *Making Travel Plans Work* cited parking management as “the hallmark of high-achieving travel plans”, suggesting that MPS can have a very strong influence on the effectiveness of MM at the site level – and because they in some sense lead to a parking problem, they also encourage the use of MM as a solution.

Information sources:

- [PPG13](#)
- [Dft \(2002\) Making Travel Plans Work](#)
- [The Effect of maximum car parking standards including inward investment. Scottish Govt. \(2001\)](#)
- [Barker Review on Land use Planning \(2007\)](#)

Additional comments:

MPS for residential parking have now been abandoned, due in part to practicality problems – in many developments, residents have two or more cars per household, leading to parking on footways and on green areas. The recent (2007) Barker review of the planning system (see information sources) as one of the periodic shifts of policy direction that the British planning system seems to find necessary; without presenting any clear evidence, the review decided that MPS for other land uses may be deterring economic development and so it seems likely that they will be relaxed in the next version of PPG13, although this has not yet (December 2008) been published. The only actual research on the topic of MPS and economic development, carried out before their introduction in Scotland in 2003, could find little evidence that they would deter economic development (see information sources).

Information provided by:

Edinburgh Napier University, Edinburgh, United Kingdom

Date:

16.10.2008

C21		Cork City Development Plan Section 49 Policy T12	
Applied in: Cork City		Country: Ireland	Produced by: City Council
Type of policy: planning instrument		In force since: 2004	Level of application: local level
Content: Development Plans are the principal mechanism in the Irish planning system for guiding and regulating development. As a planning authority, Cork City Council must (under the requirements of the Planning and Development Act 2000) produce a Development Plan. Within the Plan it is able to set out any number of policies that it believes are relevant to the regulation of development. With regard to mitigating the environmental and transport impacts of development, the Cork City Development Plan includes a policy T12 which reads “[the Council will require] Mobility Management plans to be prepared and implemented for all significant new and expanded developments”. The supporting text to the policy provides some more detail, including explaining what a MM plan is, what it might contain, and how it should be implemented – including the requirement for a MM coordinator at the largest developments covered by the policy. It also highlights the need for targets, monitoring of these, and regular reporting to the City Council. The effectiveness of the policy is strengthened by maximum parking standards for all new developments, with some developments permitted no additional parking.			
Main objectives and reasons for implementation: The policy was enacted to try to reduce congestion and pollution from traffic generated by new developments. Ireland has until very recently been enjoying a period of very strong economic growth and in consequence congestion has become a major concern.			
Spread of the policy: Not known. In common with the UK planning system, the Irish system is permissive so if there are good reasons for not following policy T12 then a development can still be permitted.			
Consistency of application of the policy: Not known. Given current (2008) economic conditions, unlikely to be that strong. However, certain employers e.g. university college Cork have strong and active travel plans (MM plans) related to the planning process.			
Targeted at: Developers (public or private)		How binding is the policy? between mandatory and voluntary (explained in additional comments)	
Designated to which kind of development? “Significant” developments – all uses. Appears that this is defined as developments with more than 100 staff.			
Applied or applicable in which kind of process? Building permission process		Influenced by main policies: - Cork Regional Planning Guidelines - Irish National Spatial Strategy	
Kind of influence in the set-up of Mobility Management at the site level: Potentially strong influence but new policy so experience and knowledge of how to apply it (by Council and by developers) still developing. In addition, recession in Ireland is likely to reduce pressure to manage development impacts.			
Information sources: <ul style="list-style-type: none"> Cork City Development Plan Within Development Plan, Chapter 5 (Transportation) contains policy on MM plans; Chapter 11 includes max parking standards			
Additional comments: For explanation of its non-mandatory nature see explanation under “consistency of application of policy”. Draft Development Plan 2009-2014 includes reference to MM plans although policy T12 has been removed. Maximum parking standards strengthened in 2009-2014 plan compared to 2004 plan.			
Information provided by: Edinburgh Napier University, Edinburgh, United Kingdom		Date: 16.12.2008	

C22		Swiss Normative on Parking Standards (SN 640 281)	
Applied in: Swiss municipalities	Country: Switzerland	Produced by: Swiss Association of Road and Transport Experts	
Type of policy: recommendation	In force since: 2006	Level of application: Regional and local level	
<p>Content:</p> <p>The Swiss Normative on parking standards SN 640 281 is a concrete recommendation or guideline for defining the appropriate number of parking spaces at new developments. It includes specific values on the number of parking for different types of uses like housing (1 parking space per 100 m² ground floor space for residents and 0,1 for visitors) or businesses with high client frequencies (2 parking spaces per 100 m² ground floor space for employees and 0,5 for clients). For the application of the values the embedment of a development within existing bicycle and public transport network has also to be considered. Therefore the normative defines 5 so-called types of localisation. Those types are defined by a matrix where on the one hand the amount of pedestrian and bicycle traffic in the surrounding of a development (more than 50 %, 25 - 50 % and less than 25 % of the entire traffic) and on the other hand the quality of public transport accessibility in terms of the amount of stops per hour (more than four times per hour, one to four times per hour, not served at all with public transport) are classified. A further element of the normative is a matrix where the five types of localisation are combined with the specific values per use. That means for example if a development is classified in a type of localisation A (that means with share of pedestrians and bike traffic of more than 50 % and a frequency of more than 4 public transport journeys per hour) the specific number of parking per use should be reduced to a minimum of 20 and a maximum of 40%.</p>			
<p>Main objectives and reasons for implementation:</p> <p>The Swiss Association of Road and Transport Experts is an established and accepted organisation by federal, cantonal and local administrations. The normatives are seen as a thematic input from the part of experts without any political motivation or background. Regarding the specific normative on parking standards the idea was that municipalities all over Switzerland have a common base on which they can formulate their own parking standards and procedures for calculation and include them in legally binding instruments, like parking regulations or requirements in the building permit process. The objective behind was, that the normative serves as a kind of common reference.</p>			
<p>Spread of the policy:</p> <p>The normative is widely applied by Swiss municipalities, because it is accepted as a consolidate background information.</p>			
<p>Consistency of application of the policy:</p> <p>The consistency of the application varies. There are municipalities which take over the values of the normative in their parking regulations completely/ directly. Others are using it as a base but the values are modified.</p>			
Targeted at: local planning authorities	How binding is the policy? Voluntary		
<p>Designated to which kind of development?</p> <p>All type of developments and uses located in a municipality</p>			
<p>Applied or applicable in which kind of process?</p> <ul style="list-style-type: none"> development of a new parking regulation building permission process (to be defined case by case) 		<p>Influenced by main policies:</p> <ul style="list-style-type: none"> none 	

Kind of influence in the set-up of Mobility Management at the site level:

In general the normative is an important base for the development of the local parking regulations. The parking regulation itself is then the legally binding instrument which is used for evaluating if the number of parking spaces at a new development granting for building permission is appropriate or not. If the regulation includes not only the specific values of the amount of parking per use but also considers the quality of the embedment within the existing bike and public transport network the maximum allowed number of requested parking spaces can be reduced (in case that the accessibility of the development with alternative modes to the car is of high quality). In a lot of cities within Switzerland which have a high quality public transport network the parking regulations are considering this fact with regard of the allowed parking rates for new development. This has an indirect effect on the set-up of Mobility Management at the site level because the reduced number of realisable parking spaces lead as a consequence to further measures in order to have a well-balanced mode-split.

Information sources:

- VSS, SN 640 281, Parkieren – Angebot an Parkfeldern für Personenwagen, Zürich, 2006.

Additional comments:

None

Information provided by:

synergo, Mobility – Politics – Space, Zurich, Switzerland

Date:

18.12.2008

C23	Bicycle parking standards as a part of the Municipal Spatial Plan (<i>Občinski podrobni prostorski načrt</i>)	
Applied in: City of Maribor	Country: Slovenia	Produced by: Planning department of the city of Maribor
Type of policy: Recommendation	In force since: 2006	Level of application: local level
Content: The policy is prepared as part of the Municipal Detailed Spatial Plan (<i>Občinski podrobni prostorski načrt</i>). It is set as a recommendation in the paragraph of the plan describing surfaces for bicyclists. Paragraph prescribes standards and conditions regarding bicycle network like types of bicycle paths according to road hierarchy, dimensions of bicycle lanes according to type, recommended pavement types or minimal distances from buildings, fences and trees. Paragraph also describes basic standards for bicycle parking as: location of parking regarding the building entrance, design of parking facilities, compatibility with other urban equipment and other conditions. Larger part of the paragraph is binding for all new developments and renovations. Only the parking standards for bicycles, as only recently added component of a spatial plan, are set as a recommendation. Standards are prescribing the number of spaces depending on type of development (residential, office, retail, culture, education, sport and industry). Overall number of required bike parking spaces is set as a sum of spaces for everyday users (residents and/or employees) and occasional users (visitors). Calculations are made according to number of employees (for workplaces), housing units, rooms or beds (for residential areas, hotels, student dormitories and hospitals), seats (sport facilities, theatres, religious buildings) or according to gross surface area of the development (most other uses). For example, a recommended number of parking spaces for hotels is a sum of spaces for employees (1 space per 10 employees) and spaces for hotel guests (calculated according to hotel surface, 1 parking space per 500 m ²).		
Main objectives and reasons for implementation: There is no national regulation or guidance concerning the number, location and quality of bicycle parking. Legislation allows the municipal spatial plan to prescribe standards and norms in appropriate detail, but most municipalities do not decide to specify the bicycle parking standards. Developers often use leftover space for placing a minimal number of parking spaces or in worse case do not plan any. After a building is put to use and the lack becomes obvious, bicycle stands are added where place is still available. Often placement is inconvenient, unsafe and without cover.		
Spread of the policy: Policy has been accepted in June 2006 as a part of amendment of Municipal Detailed Spatial Plan of the Municipality of Maribor. All new developments applying for building permit after that time should follow the plan, but bicycle parking standards are set as recommendation only. Procedures takes relatively long time before the permit is issued so there are only few buildings which have been finished in accordance with the amendment regulation.		
Consistency of application of the policy: Since the policy is a recommendation there is no strict demand of application		
Targeted at: Developers (public or private)	How binding is the policy? Between mandatory and voluntary (explained in the additional comments)	
Designated to which kind of development? Policy is targeted at all types of developments with a special focus on public buildings and housing.		
Applied or applicable in which kind of process? Policy is applied in planning process and should be considered when applying for building permission.	Influenced by main policies: none	
Kind of influence in the set-up of Mobility Management at the site level: Appropriate number and quality of bicycle parking are Mobility Management measures. Good quality bicycle facilities reflect the attitude towards cycling and can help to promote the bicycle use.		

Information sources:	
<ul style="list-style-type: none"> • Municipal Spatial Plan of the City Municipality of Maribor, amendment June 2006 (in Slovenian) 	
Additional comments:	
Policy is a recommendation. Developer should predict approximately the number of parking places, prescribed by the policy. Exact number will not be checked before building permit is issued.	
Information provided by:	Date:
Urban Planning Institute of the Republic of Slovenia, Ljubljana, Slovenia	20.11.2008

C24	Parking regulation of the city of Krakow		
Applied in: City of Krakow	Country: Poland	Produced by: City Council	
Type of policy: Planning instrument	In force since: 2003	Level of application: local level	
Content:			
<p>Parking Policy is one of the most important planning measures. It establishes recommended and maximum numbers of parking spaces for new/renewed development. The recommendation exists in only few Polish cities as a part of Urban Transport Policy (e.g. Kielce, Krakow, Poznan, Warsaw), in some other cities it is included in the Spatial Development Policy (SPD). In Krakow, for the whole city, recommended and maximal parking standards are established dependant on land use intensity: number of flats, number of working places, usable floor area of service. As a general principle, the parking policy is spatially differentiated, according to the accessibility level of public transport service in corridors and degree of congestion in car traffic. Prior to the existence of these detailed guidelines, the SPD divided the city into three areas with viewpoint of their intensity. For each of the areas the permitted and recommended factors of parking spaces were established. However, in some cases, the number of maximal permitted parking spaces, regulated in the SPD is unsuitable - for some areas in the city (depending on the kind of land use and development of the transport network) this number of parking spaces could cause a serious problem with increasing volume of traffic. Then in such cases, the Local Spatial Development Plans should establish a maximal permitted number of parking places each detail area for each activity (housing, production, services, education) dependent on the level of public transport service, the level of street network development (including bicycle network), and the expected level of congestion. This approach will allow to influence solutions in favour of sustainable transport. Very similar is the situation with minimum number of parking spaces, especially in housing areas. The Krakow SPD formulations as a contribution to the Parking Policy, state the minimum number of parking spaces but it is only a recommendation, not an obligation. Developers in housing areas established even lower number parking spaces than recommended. This can be very inconvenient for residents in areas, where the public transport service is very bad or there is a lack of service.</p>			
<p>The parking standards are mainly established in Spatial Development Policy for city. In Krakow, the parking standards are linked to the public transport access to the area and the type of zone of the city. SDP determine spatial areas which are defined by public transport access as a sum of the walk access and waiting time for the public transport. There are following times of access: up to 7 minutes, 7-15 minutes and more than 15 minutes. Moreover, the number of parking spaces was established taking into account the type of the city zones: downtown, urban and suburban zones. On that base, one can determine the parking zone for the city (A, B, C, D). According to each parking zone policy, the planners can determine maximum number of parking spaces for commercial and working areas. For housing and commercial areas, the number of parking spaces is determined taking into account also the type of the city zones: downtown, urban and suburban. For the housing and commercial areas, the SDP defines recommended and maximal number of parking spaces as well. It is recommended to establish maximum permitted number of parking spaces for each detailed areas and for each type of development (housing, production, services, education). Those values should depend on the level of public transport service, the level of street network development (including bicycle network) and expected level of congestion. Proposed approach will allow controlling solutions in favour of sustainable transport.</p>			
Main objectives and reasons for implementation:			
<p>In some cases (e.g. simulation site in Krakow - Czyżyny Dąbie) the maximal permitted number of parking spaces is too high. The kind of development requires to accept the number of parking spaces resulted from the SPD. Unfortunately, developers/investors use the various possibilities to construct more parking spaces for shopping and multifunctional areas. However, the traffic generated by these parking areas is too high in relation to the capacity of street network, leading to congestion or decreasing of its effectiveness. In some cases, e.g. for housing areas, where public transport service is very bad, the developers establish very low number of parking spaces, even under the recommended minimal amount. They explain that the value of the land is very high, and they must provide the required percentage of green area (according to the SDP standard), so they predict to build additional number of parking spaces as a second step in their development, if car ownership of residents will increase. However usually, they don't fulfil their promises and as a result, the habitants of such housing areas have a really serious problem to travel directly to the work, school, etc. because PT service is poor and therefore cars are the principle means of transport, but at the same time not enough parking spaces are available. Developers are also not required to provide or to improve public transport or cycling links to their development.</p>			

Spread of the policy:	
Spatial Development Policy and especially the Parking Policy could state in more detailed way the recommended and maximal and minimal number of parking spaces for each type of use. Based on those documents, the Local Spatial Development Plan could establish those numbers for particular sites (zones?). Almost all the cities in Poland have the SDP, but the parking policy is not an effective part of these documents. Perhaps there is no national standard for parking in new developments.	
Consistency of application of the policy:	
Parking regulations should bring about a situation in which planners and developers will not determine and realise too many number parking places which could generate too intensive traffic from new developments. They will also help to protect the public transport services against competition from private car use. Nowadays, all notations in SDP and LSDP are applied in correct way. So, it is possibly that also those new requirements will be applied correctly.	
Targeted at:	How binding is the policy?
developers (public or private)	mandatory
Designated to which kind of development?	
Those changes will have influence for all kind of development, especially for commercial, offices and housing areas.	
Applied or applicable in which kind of process?	Influenced by main policies:
<ul style="list-style-type: none"> • building permission (obligation) • preparation transport and land use documents (obligation) 	<ul style="list-style-type: none"> • Spatial Development Policy for Krakow (in Polish) • Local Spatial Development Plan for Czyżyny Dabie (in Polish) • parking standards were approved by City Council based on theirs experience
Kind of influence in the set-up of Mobility Management at the site level:	
Defining the numbers of max. and min. number of parking spaces could create the areas with reduced number of volume traffic and to allow to take under control the public transport development. The application of minimum and maximum parking standards could lead to a situation in which a developer has not that much parking spaces as he wants and that he has to set-up Mobility Management measures in order to handle the traffic generated from the specific site with other modes than the car.	
Information sources:	
<ul style="list-style-type: none"> • Spatial Development Policy for Krakow (in Polish) • discussions with planners/administrative units/own knowledge 	
Additional comments:	
None	
Information provided by:	Date:
Cracow University of Technology, Krakow, Poland	8.01.2009

C25		Parking Regulations and Parking Pay-off in North Rhine-Westphalia	
Applied in: Federal State of North Rhine-Westphalia (NRW)		Country: Germany	Produced by: Federal Government (BauGB); State Government of NRW (BauO NW)
Type of policy: Law		In force since: 2005 (BauGB); 2000 (BauO NW)	Level of application: all levels
<p>Content:</p> <p>Generally, the legal framework for car parking is the Federal Building Code (<i>Baugesetzbuch: BauGB</i>). The State Building Code North Rhine-Westphalia (<i>Bauordnung NRW: BauO NW</i>) fills in this framework. Legal basis for parking regulations and parking pay-off in NRW is § 51 BauO NW.</p> <p>Main contents:</p> <ul style="list-style-type: none"> • Duty to construct car parking spaces within building permission process (if car traffic is expected); • Similar duty to construct bicycle parking spaces within building permission process (no quality standards); • Possibility to restrict or limit the number of car parking spaces (reasons of urban design, transport or safety) by municipal charter; • Parking pay-off is possible in agreement with municipality (criteria: construction is impossible or unacceptable, even on a near-by located parcels); • Pay-off money is ear-marked for improving accessibility of development; since amendment in 2000, investment (<i>investiv</i>) measures for PT or bicycle transport are possible as well. <p>Municipalities can set up additional local parking charters for further concretisation of parking aspects within the building permission process or for setting up detailed site development plans.</p>			
<p>Main objectives and reasons for implementation:</p> <p>To give alternative opportunities regarding parking affairs within building permission process or when setting up detailed site development plans.</p> <p>Parking pay-off is possible if the urban design of the development and the neighbouring areas (esp. in city centres) or reasons of transport system makes it impossible to construct all of the minimum required car parking spaces on the own development parcel. If this is not possible, parking spaces shall be built alternatively on another parcel in close vicinity. If this is not possible as well, the developer pays a certain amount of money to the municipal authority. This amount is defined in a local parking charter and has to be used for car park facilities, PT, bicycle or other transport infrastructure in order to deal with the expected car traffic/parking demand or enhance car-alternative options in order to reduce the demand for car parking related to this development.</p>			
<p>Spread of the policy:</p> <p>This option is applied mainly in densely built up areas, like city centres or elsewhere if space is scarce or expensive.</p>			
<p>Consistency of application of the policy:</p> <p>Parking regulations in BauO NW and local parking charters have to be taken into account within the building permission process or when setting up detailed site development plans; it is possible for the investor to negotiate with the city administration if he/she needs to build all requested parking spaces or can/need to pay-off a certain number instead.</p>			
Targeted at: Planning authorities (local and/or regional and developers (public or private))		How binding is the policy? Between mandatory and voluntary (explained in the additional comments)	
<p>Designated to which kind of development?</p> <p>Theoretically designated to all housing developments that need a building permission.</p>			
Applied or applicable in which kind of process?		Influenced by main policies:	
<ul style="list-style-type: none"> • development of a Detailed Site Development Plan • building permission process 		<ul style="list-style-type: none"> • Baugesetzbuch (BauGB) (in German) • Bauordnung NRW (BauO NW) (in German) 	

Kind of influence in the set-up of Mobility Management at the site level:

Primarily the parking pay-off does not influence MM. The parking regulations give the framework for coping with parking issues within the above mentioned processes. The pay-off money should be used to mitigate expected parking problems. The municipality gets the pay-off money for taking over the duty to solve parking demand from the developers. Therefore, normally the money will be used for additional parking spaces. But since 2000, in North Rhine-Westphalia the pay-off money can be used either for construction of parking spaces or for improvements in PT or cycling/walking infrastructure (but only for investment measures, the so called *investive Maßnahmen § 51 (6) BauO NW*), which should result in a reduction of parking space demand.

Information sources:

see main policies influencing the law

Additional comments:

Generally, the parking regulations have to be considered within building permission process or when setting up a detailed site development plan. The possibility to pay-off instead to build new parking spaces is part of a negotiation process and can be an option if certain conditions are fulfilled.

Information provided by:

ILS, Dortmund, Germany

Date:

04.12.2008

C26		Gelre Hospitals	
Applied in: Cities of Apeldoorn and Zutphen	Country: Netherlands	Name of the developer: Gelre Ziekenhuis	
Status of the development: development in use	Type of developer: public	(Expected Date) where development gets in use: in use 2009 though various changes planned over next 2 years	
<p>Description of the development:</p> <p>Gelre Hospitals is active in the regions of both Apeldoorn and Zutphen. At present, it consists of three hospital locations and one external outpatient clinic (see also www.gelreziekenhuizen.nl)</p> <ul style="list-style-type: none"> the Lukas location, edge of town (Apeldoorn) in a residential area; the Juliana location, centre of Apeldoorn in a residential area; the Het Spitaal location, edge of town (Zutphen), will be replaced by a new building in 2010; the external outpatient clinic, edge of town in Lochem. In 2008/2009 the Juliana location will co-locate at the Lukas location. The Lukas and Juliana location combined have the following characteristics: <ul style="list-style-type: none"> floor area: 30,533 m² (2004) and 62,840 m² (2007) = +106 % employees: 2,000 (2004) and 2,300 (2007) = +15 % (equal fulltime; more part time), number of beds: 658 (2004) and 460 (2007) = -30 % (tendency to ambulant care). 			
<p>Type of applied process:</p> <ul style="list-style-type: none"> building permission process zoning plan process 		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> city of Appeldoorn province of Gelderland Ministry of Health 	
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <p>No specific policies but a desire to reduce transport impacts and maximise accessibility of the hospital on the part of the Province and municipality. Zoning plan for the municipality (=local plan = <i>Bestemmingsplan</i> in Dutch) sets max parking availability for re-developed hospital site.</p>			
<p>Requirements from the public authorities:</p> <p>To gain permission from the city council for the merger of the Lukas en Juliana location, the hospital was required to write a Mobility Management plan under a negotiated agreement. The hospital committed itself to limit the available parking space to 840 spaces (as set out in the zoning plan).</p> <p>The Dutch Ministry of Health, Welfare and Sports appointed Gelre Ziekenhuizen as one of the three "forefront hospitals". These hospitals have been invited to be pioneers in giving form and content to the innovations necessary to deal with future challenges. For Gelre Ziekenhuizen, this means developing into a new-style hospital, which entails a limited clinical capacity, a shift from in-house to outpatient treatment, day treatment and short-stay admissions – with impact on access and mobility. Due to the construction plans, the Province of Gelderland asked for extra attention regarding the accessibility of the hospitals and for parking. Furthermore, the province is keen on transferring the experiences that have been gained within Gelre Hospitals to other hospitals in the province.</p>			



Source: Google maps

Additional agreements between authorities and developer:				
none				
Influences in establishing the implementation of Mobility Management measures:				
Concerns about car parking (overspill) and also the transport impacts of process changes were of interest.				
Main Mobility Management measures				
<i>Measure</i>	<i>Target public</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
cycle plan (showers, parking, repairs)	employees	in act	Hospitals	Hospitals
Business process re-engineering (BPR) meaning that patients make fewer trips for same treatment	employees	in act	Hospitals	Hospitals
Shuttle bus to link sites but privately contracted – not with public transport operator	all users, especially employees	in act	first financed through OPTIMUM2 project, then Hospitals	Hospitals
Marketing and communication	all users, especially employees	in act	Hospitals	Hospitals
Mobility service point	all users, especially employees	in act	Hospitals	Hospitals
Organisation of the Mobility Management activities at the development:				
There is a Mobility Management coordinator for the hospitals who reports to the board.				
(Envisaged) effects:				
<ul style="list-style-type: none"> • Transport (employees, outpatients and visitors): Reduction in car use to fit in with limited number of parking spaces available (840) which was around 360 spaces less than current peak demand in 2005. This was to be achieved by increased promotion of cycling, shuttle bus and business process reengineering (BPR). • Social and costs: BPR realised significant benefits for patients by reducing number of times they had to visit the hospital for a given treatment. This also saved the hospital costs and had transport benefits. 				
Information sources:				
<ul style="list-style-type: none"> • OPTIMUM2 cookbook on Gelre Hospitals • Report on mobility at Gelre Hospitals (tussentijdsrapportage) (in Dutch) • Report on marketing mobility at Gelre Hospitals (in Dutch) 				
Additional comments:				
Considerably more information on this useful case study is available by looking at the first information source.				
Information provided by:			Date:	
Edinburgh Napier University, Edinburgh, United Kingdom			01.01.2009	

C27	Spatial Development Plan (SDP) and Local Spatial Development Plan (LSDP)	
Applied in: City of Krakow	Country: Poland	Produced by: City Council
Type of policy: Planning instrument	In force since: 2003	Level of application: Local level
<p>Content:</p> <p>In Poland, there are no planning policies or laws which could require developers to implement Mobility Management measures. However, there are some planning documents, where those requirements <i>could</i> be included. One such document is the Spatial Development Policy (SDP?) within which the Local Spatial Development Plan is a subsidiary document. The document is prepared for cities (also for the State) and usually approved by the City Council. The SDP is put into effect as a form of public policy, encompassing various disciplines, which seek to order and regulate the use of land in an efficient and ethical way. The document defines the issues of land development (the area zoned for different buildings and land uses, for example), the corridors for main transport routes, protected areas, etc. This document is passed by the district/city town council, but it isn't a legal document itself, but rather the basis for a legal document, the Local Spatial Development Plan. The SDP is prepared based on the Spatial Development Act (- SDA (for the State)). However, in the SDA, there are no requirements for the SDP to include any references to sustainable transport and Mobility Management in SPD. So, although Polish cities and regions prepare an SDP, it is not certain that their principles and recommendations reflect a sustainable transport approach. Generally, Spatial Development Policies approved for many Polish cities only poorly take into account the development of bicycle and public transport facilities. However, based on the existing document it seems possible for city authorities to use the SDP to implement some Mobility Management measures both in terms of public investment and with regard to the activities of developers. So, if the SDP required more sustainable transport and Mobility Management measures from stakeholders (especially developers), then the LSDP (as a policy document) could require the same measures but in a more concrete and detailed way.</p>		
<p>Main objectives and reasons for implementation:</p> <ul style="list-style-type: none"> • To enable implementation of sustainable transport measures/solutions in the framework of the existing legal regulations, • To ensure that the documents reflect a consistent approach to sustainable transport, • To promote sustainable transport on the country, regional and local level, even by the "soft requirement formulations" only and subconscious increasing awareness among planners and decision makers. <p>In general, plans should consider the following aspects: necessities to include the bicycle network in all cities, proper solutions for public transport network (with detailed description depending on the ranges of the plan, providing information for the passengers and applying of Mobility Management measures).</p>		

<p>Spread of the policy:</p> <p>SDP and LSDP can include additional notation concerning sustainable transport and a new approach to the public transport and bicycle network. It seems that it is possible to include some statements in these documents, but it would require changes in the structure of the documents and the willingness of planners and decision makers to follow the new requirements. For example, when developers request a building permission decision, they must show how they will provide access to the development by car from the public road. Road and Transport Authorities could in this context require the preparation of a travel plan (including the bicycle and public transport network) for the development area if the predicted generated traffic is likely to exceed a certain threshold. This demand would be based on the Environmental Act, Public Road Act, etc. Any changes in the structure and scope of transport, environmental and land use documents should introduce formulations to include sustainable transport in new development areas.</p> <p>For these changes to take place it will be necessary for planners, administrative units and decision makers to prepare and to approve Local Spatial Development Plans with public transport network, bicycle network, traffic restrictions in city centres or parking restrictions.</p>	
<p>Consistency of application of the policy:</p> <p>New requirements, which could be included in the SDP and LSDP, could ensure that stakeholders (especially the investors, developers) implement Mobility Management measures in their investments. Nowadays, all notations in SDP and LSDP are applied in correct way. So, it is possible that also those new requirements will be applied correctly.</p>	
<p>Targeted at:</p> <p>Planning authorities (local and/ or regional) and developers (public or private)</p>	<p>How binding is the policy?</p> <p>Between mandatory and voluntary (explained in additional comments)</p>
<p>Designated to which kind of development?</p> <p>Those changes will have influence for all kind of development, especially for commercial, offices and housing areas.</p>	
<p>Applied or applicable in which kind of process?</p> <ul style="list-style-type: none"> • process of building permission demands (to be defined case by case) • process of preparation of transport, environmental and land use documents (recommendation/obligation) 	<p>Influenced by main policies:</p> <ul style="list-style-type: none"> • Spatial Development Policy for Krakow (in Polish) • Spatial Development Act for Poland (in Polish) • Local Spatial Development Plan for Czyżyny Dąbie (in Polish)
<p>Kind of influence in the set-up of Mobility Management at the site level:</p> <p>Proposed solutions with interpretation of existing notations in documents and changes in structure and content of the transport, environmental and land use document will have a significant impact of Mobility Management implementation.</p>	
<p>Information sources:</p> <ul style="list-style-type: none"> • Spatial Development Policy for Krakow (in Polish) • Spatial Development Act for Poland (in Polish) • discussions with planners/administrative units/own knowledge 	
<p>Additional comments:</p> <p>All of these proposals are in accordance with results gathered from the discussions within and after the planning simulation workshop. The ideas were also proposed by the University - MAX team, especially based on the work experiences in the Urban Planning Office in Municipality of Krakow for doctoral study of the Mrs Aleksandra Faron. Some of the mentioned recommendations are in accordance with the law, and their application will depend on awareness and understanding of the sustainable transport approach among administrative units (planners, decision makers) and developers.</p>	
<p>Information provided by:</p> <p>Cracow University of Technology, Krakow, Poland</p>	<p>Date:</p> <p>8.01.2009</p>

C28	Irvine Spectrum Business Park Development Trip Reduction Program	
Applied in: City of Irvine, CA	Country: United States	Name of the developer: The Irvine Company
Status of the development: 50% Developed - in use	Type of developer: Private	(Expected Date) where development gets in use: Since 1986-ongoing
<p>Description of the development:</p> <p>Located in the City of Irvine, and the southern part of the greater Los Angeles metropolitan area, the Irvine Spectrum development is a 5,000 acre Business Park and high density development which is now home to over 3,600 companies employing in excess of 65,000 people. At the time of development, the Irvine Spectrum comprised one of the largest undeveloped parcels in Southern California metropolitan area. In 1986 the Irvine Company gained final development approval by the City of Irvine following an extensive consultative process. Transportation management goals and use provisions were assigned to the development permit. These permit provisions established goals and requirements for land use design that considered and planned for alternative transportation modes. The mobility strategies set by the City of Irvine included a hierarchy of streets and thoroughfares, commuter rail and public transit service utilizing the Irvine Transportation Center as a hub and an extensive variety of high occupancy vehicle, bicycle and walking amenities. Additionally, the development was permitted with trip generation targets and assigned permitted future growth planning goals. A Transportation Management Authority (TMA), Spectrumotion, was chartered to provide ongoing management of the transportation plan for the development and its tenants.</p>		
<p>Type of applied process:</p> <ul style="list-style-type: none"> • Permit- Use restrictions • Consultative- ongoing public and private negotiations • Advisory Board – 13 members elected 		<p>Main public authorities involved in the process:</p> <ul style="list-style-type: none"> • City of Irvine • Orange County Transportation Authority • Spectrumotion TMA (public/private partnership)
<p>Relevant policies behind in order to encourage/enforce the developer to considerate Mobility Management:</p> <p>The City of Irvine provided the regulatory framework for managing the development through permit and planning restrictions. The Spectrumotion Transportation Management Association (TMA) is charged with implementing the planning requirements through transportation goal attainment, alternative mode promotion and program development, and follow-up survey and evaluations. The Irvine Company is responsible for permit compliance and raises funding through tenant assessments (annual fees paid to the developer). Tenant employees then receive TMA support, including subsidies, for alternative modes of transportation. The TMA promotes alternative transportation modes and monitors ongoing compliance with city permit goals through ongoing trip surveys. Data collection is done through observed driveway counts in and out of the 4 Spectrums and is prepared in an annual report. The TMA compares the observed data and determines whether or not permitted trip generation caps (set by the City of Irvine) have been exceeded. The annual report is the primary information source to determine transportation goal compliance and is submitted to an advisory board consisting of 13 members, one being the City of Irvine. This annual process yields additional potential consultation and direction to the TMA and the Irvine Company development group for any additional compliance direction or potential further program development.</p>		
<p>Content of the negotiation and influence on establishing Mobility Management measures:</p> <p>In 1985, the City of Irvine and The Irvine Company formed a partnership and devised an overall transportation management strategy and monitoring system in the Irvine Spectrum. Planning requirements and goals were established in meeting the City of Irvine vision for successful development mitigation. Several demands were placed upon the developer including the establishment of a multi-modal transportation system including rail, bus, car- and vanpooling, and preferential parking within the development. The ultimate agreement by the developer and city was codified in the permit and development plan. This plan details acceptable levels (goals) for traffic generation and called for the formation of a Transportation Management Association (TMA) to monitor and measure traffic levels and provide traffic mitigation programs and services. To insure the success of this concept, deed restrictions known as Covenants, Conditions and Restrictions (CC&R's) were created which require the Irvine Company and Irvine Spectrum property owners to support the operation of the TMA financially through semi-annual assessments. This is how Spectrumotion can offer all its services to commuters free of charge.</p>		

Knowledge of the end-user:

In 1986, Spectrumotion was organized to implement the vision established by the City and developer. Spectrumotion is a private, non-profit, public benefit corporation and began meeting the transportation needs of the Irvine Spectrum immediately upon its founding. A database exceeding 8,000 individual commuters is maintained and comprises the core network for program participants. Of these participants, 34% partake in ridesharing activities versus a regional norm of 18% (projected regional surveyed rate). New businesses located in the Irvine Spectrum can become members of Spectrumotion without paying any membership fee. Spectrumotion currently offers a free monthly bus pass, a free 10-trip Metrolink (rail and bus) ticket, or vanpool for a month for commuters who currently drive alone and are willing to try one of these alternatives. Follow-up surveys show that 80 percent of those who try ridesharing continue participating after their free trial period.

Main Mobility Management measures

<i>Measure</i>	<i>Target</i>	<i>Status</i>	<i>Responsibility for financing</i>	<i>Responsibility for planning, implementation and running</i>
Free one-month ridesharing trial via bus, train, or vanpool	Employees in the Irvine Spectrum	in act	Businesses located in the Irvine Spectrum	Spectrumotion
Well lit bicycle and pedestrian lanes and paths	Employees in the Irvine Spectrum	in act	Irvine Co. and land owners located in the Irvine Spectrum	Spectrumotion
Reserved preferential parking for carpooling	Employees in the Irvine Spectrum	in act	Businesses located in the Irvine Spectrum	Businesses located in the Irvine Spectrum
Emergency ride-home services for members	Employees in the Irvine Spectrum	in act	Owners of the land located in the Irvine Spectrum	Spectrumotion
HOV lanes on adjacent highways	Employees in the Irvine Spectrum	in act	Federal and state transportation funds	State of California Department of Transportation
Promotions/incentives	Employees in the Irvine Spectrum	in act	Owners of the land located in the Irvine Spectrum	Spectrumotion

Organisation of the Mobility Management activities at the development:

The Spectrumotion TMA maintains a staff of 5 full time employees as well as 6-10 part-time trip data specialists at a budget exceeding US\$600,000. The primary role of the TMA is to promote alternative modes of transportation, disperse subsidies and collect ongoing survey data. Program evaluation data is gathered and analyzed, then reported to an advisory board consisting of 13 members, one being the City of Irvine and to its members. This ongoing process yields additional potential, consultation, and direction to the TMA.

Envisaged effects:

- There are 5 sectors within the development called Spectrums. Spectrum 1, 3, 4 and 5 are covered by the permit. Spectrum 2 was developed before the requirements were imposed. Each sector represents a phase of development and the trip reduction requirements are different for each, both in terms of targets, but also performance measures. Some use average vehicle ridership, others use a trip limit per usable square footage.
- Key findings conclude that mode shift is occurring as planned and goals established in the growth and planning projections are being met. The permit caps have never been exceeded and are well within established limits.
- It is possible, however, that the trip generation goals were too loose and the caps were established too high. It is unclear if the Irvine permit caps provide a meaningful measure of success for comparison purposes.
- Spectrum number 3 and 4 exceeded all goal levels. In Spectrum 3, 34.4% fewer than expected trips were generated and 48.3% fewer in Spectrum 4.
- In 2006, only two individual sites which exceeded their expected trips in Spectrum 3; a “warehouse” retailer, which generated 245.8% of its expected trips and a technology center, which generated 135.7% of its expected trips. Both of these sites are have retail uses and have consistently exceeded their expected trips.
- In Spectrum 4, only FedEx exceeded its expected trips, as a large percentage of the trips generated at this site are delivery trucks

Information sources:

- Irvine Spectrum Transportation Management Association (www.72share.com)

Additional comments:

The Spectrum development has reached approximately 50% of development density within the 5,000 acre area. The development has incorporated high density development phases including large apartment complexes and mixed use retail development most recently. Ongoing coordination with the City of Irvine and Southern California Association of Governments (regional planning agency) is occurring for trip modelling and infrastructure demand planning.

Information provided by:

Eric Schreffler, ESTC

Date:

16.8.09