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Advisory

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ANNEX: Outline of the EIA procedure on Amsterdam Airport and surroundings

SUMMARY OF THE ADVICE

A mainport function for Amsterdam Airport (Schiphol) has been laid down in the Fourth National Physical Planning Programme Extra (VINEX). The mainport function has been further elaborated in the Plan of Approach Schiphol and surroundings (PASO). The decision-making process that has now been started with the help of environmental impact assessment (EIA) must structure the series of decisions that must enable the implementation of the proposed activities. This EIA has a phased approach. In the first stage, the so-called integral EIA, the decision-making takes place for a partial review of the National Structure Scheme for Civil Airports and a partial review of the Regional Physical Plan Amsterdam-Noordzeekanaal-area. The second stage concerns the implementation EIA for the change of the designation of Amsterdam Airport in the scope of the Aviation Act.

This advice for specific guidelines has been drafted to establish the contents of the integral environmental impact statement (EIS). Below the main points of this advice have been summarised.

Problem definition, objective and decision-making (section 2)

It has been stated in PASO and in the notification of intent for the integral EIA that the proposed activity must satisfy twin objectives, i.e.

- strengthening of the mainport function of Amsterdam Airport
- improvement in the quality of the physical environment in the area around Schiphol.

These two objectives must first of all be well defined. The Commission gives in the advice some proposals for a definition and elaboration of both objectives. All possible solutions must satisfy the twin objectives. Solutions that are somewhat neutral for one objective and strengthening for the other will also be counted among these. It must become clear which reference year must be observed as bench mark to measure an increase in the quality of the physical environment.

Both objectives must be viewed in relation to various macroeconomic scenarios that take into account diverse development directions for Schiphol and surroundings as a result of economic trends in and outside Europe, differences in rates, deregulation of aviation in Europe, developments in aircraft technology, etc.

As regards the spatial arrangement of Schiphol and surroundings it is of the utmost importance that it becomes clear which planning area will be observed for the partial review of the regional physical plan. In addition, it will also be necessary to involve the planned and desired developments in the area around the planning area in the statement of the problem on account of the large mutual relationship between such developments and those around the airport. It concerns in particular urban development locations (Haarlemmermeer-West) and infrastructure.

Both objectives must be confronted with each other in their spatial implementation. This means that the EIS has to address the following questions:

- can all anticipated and desired activities be accommodated in the area while keeping or improving the quality of the spatial structure?

- can these activities be realised without exceeding of the applicable environmental standards and with due observance of the environmental objective?

The Commission naturally assumes that the financial means will be timely made available to implement the 111 measures of PASO according to the demands of environmental quality and standards.

It must be explained in the integral EIS which implementation decisions must still be taken in addition to the implementation decisions ex Aviation Act. It concerns the developments at the landside of the airport and in particular urban development locations, highways, rail and metro connections, a pipeline for the supply of aviation fuel, a golf course, urban agglomeration green-structure, all together a large number of activities. The guidelines and the integral EIS must bring structure herein by classifying the projects and proposed activities according to their importance for the development of Amsterdam Airport into mainport.

Furthermore, the findings of the 'working group noise standard for night flights' are of great importance to the decision-making process on a strategic level on the basis of which in 1993 the government will adopt and implement a national standard for aircraft noise during the night (Measure 32 of PASO).

Proposed activity and alternatives (section 3)

All alternatives must satisfy both objectives. They must be related to the macroeconomic scenarios that depict the size in traffic movements, the number of passengers and the amounts of freight to be transported.

Alternatives can be discerned at the airside and at the landside of Schiphol. On the basis of current information it will be easier to formulate the alternatives at the airside than those at the landside. This is connected with the current lack of clarity about plans and projects concerning urban developments, infrastructure and green-structure around Schiphol.

At the airside the following alternatives will be possible:

1. No-action or zero alternative, maintenance of the current tangential four-runways-system.

This alternative does not seem to satisfy the twin objectives.

2. Four-runways-system alternative with additional southern use of the Zwanenburg runway and extension of the Kaag runway.
3. Four-runways-system alternative with turning of the Zwanenburg runway to the northwest and shutdown of the current Zwanenburg runway and realization of the possibility of southern use of the turned fourth runway and extension of the Kaag runway.

4. Five-runways-system alternative with three variants:

- parallel fifth runway
- turned fifth runway north
- turned fifth runway south

All variants of the five-runways-system alternative also entail southern use of the Zwanenburg runway and extension of the Kaag runway.

At the landside there are also alternatives possible that must be compatible with the alternatives at the airside.

This concerns particularly the new industrial sites near Schiphol and the new structure of the rural area around Schiphol which also influence the quality of the physical environment. The alternative most favourable to the environment cannot be indicated in advance but must be distilled from the impact of above-mentioned alternatives. The alternative most favourable to the environment must satisfy as best of all alternatives the environmental objective. It has become clear from the remarks by the public participation that this alternative must pay due attention to a share of rail transport as large as possible in the development of Amsterdam Airport and surroundings.

In the advice a number of measures are put forward that may play a role in the elaboration of the alternative most favourable to the environment.

Current state at the environment and autonomous development (section 4)

The study area is much larger than the planning area. Concerning noise the study area should observe the area within the 20 Kosten units¹⁾ contour and within the contours of the new national noise standard for night flying. Concerning air quality the study area can be restricted to the Dutch airspace insofar as it concerns the emissions of aircraft flying from and to Schiphol and to an area of approx. 10 x 10 kilometres with a maximum of 3000 feet height around Schiphol as far as immissions (affecting air quality) are concerned. With respect to the aspects of soil, groundwater and surface water the size of the study area is determined in section 4.1 of this advice.

With respect to the aspects of nature, landscape and outdoor recreation the entire area of the Haarlemmermeer polder with adjacent recreation areas (Spaarnwoude, Amsterdamse Bos, Westeinderplassen and Kagerplassen) must be counted as part of the study area.

The current situation concerns the situation as it existed in 1990 plus any on-going developments assuming that no new developments will be started affecting the mainport function of Amsterdam Airport.

The following aspects are discussed in the advice: current land use, noise hindrance, air quality, soil, groundwater and surface water, ecology, external safety, perceived environmental quality and perception of health risks.

Environmental impacts (section 5)

All environmental impacts must be differentiated according to the various macroeconomic scenarios and the alternatives. Detailing the environmental impacts will only be necessary in the integral EIS insofar as this serves to clarify how the twin objectives can be satisfied.

1 The Kosten unit (Ke) hindrance measure for aircraft noise gives a calculation of the average noise hindrance around an airport during one year corrected with the application of weighing the perception of noise hindrance during the day, in the evening and at night by means of so-called punishment factors (factor 1 during the day increasing to factor 10 during the night). The 35 Ke contour is the contour within which it is not allowed to build any new houses according to the Aviation Act. In the case of Amsterdam Airport an extra zone of an additional 5 Ke units (to the 30 Ke contour) will be observed in which no new housing will be allowed.

As far as the aspect noise is concerned it must be differentiated according to geographic spread of noise relative to the location of the various runways and the proposed use thereof, and relative to the location of roads and industrial sources. Geographic differentiation will not be necessary for the aspects of air, soil and water.

Reference is made to sections 5.3 through 5.9 of this advice for those environmental impacts that deserve full attention in the EIS.

The methods and models which are used in the impact prediction must be indicated as well as to which extent the environmental standards are met and the environmental objective is satisfied.

Comparison of alternatives, gaps in knowledge, post project analysis (sections 6 and 7)

The differences in the impacts on the environment of the alternatives and variants considered must be clearly presented per environmental aspect. The comparison must also present the extent in which the various alternatives can satisfy the twin objectives. The same applies to the remaining gaps in knowledge and the meaning thereof for the decision-making process.

The post project analysis is an important part of this EIA. Through monitoring amongst others actual noise and air pollution levels it must be established in this analysis to which extent the predicted levels will agree with reality.

Summary of the EIS (section 8)

The essence of all main parts of the integral EIS must be summarised and conveniently arranged for a broad audience, including decision-makers and the public.

1. INTRODUCTION

It has been determined in the Fourth National Physical Planning Programme (Extra) that reinforcement of Amsterdam Airport (Schiphol) (together with the seaport of Rotterdam) forms an important part of the physical planning policy for the economic key area of the Netherlands. It concerns strengthening of the economic functioning of the airport in the region and the improvement of the accessibility thereof, within the restrictions dictated by the environment. In the decision-making process of the reinforcement of the mainport function of Schiphol the relation between economics and environment will be considered openly.

On account of the complexity of the environmental development and the problems of the environmental quality of Amsterdam Airport and surroundings the region has been designated as area in which an integrated, area-directed environmental policy must be developed and implemented. A *Plan of Approach Schiphol and surroundings (PASO)* had to be drawn up for this policy, in which, taking into account the environmental developments desired for this area, agreements had to be laid down about the measures to be taken and the necessary policy instruments in the fields of physical planning, environment, land reform and nature. Such measures and instruments will be necessary to realise in an adequate manner the environmental demands made by those functions upon the region.

The project *Schiphol and surroundings* started in September 1989 by means of a covenant of intent. In April 1991, a policy covenant was signed by the central government, the province of North Holland, the municipalities of Haarlemmermeer and Amsterdam, the N.V. Airport Schiphol (NVLS) and KLM (Royal Dutch Airlines), in which the signatories agree to the draft Plan of Approach (which was ready in December 1990) and pronounce the willingness to start with the legally prescribed decision-making processes to execute the plan.

The *Integral version Plan of Approach Schiphol and surroundings* was ready in September 1991. In this Plan of Approach a coherent package of in all 111 measures has been laid down that must contribute during the two consecutive planning periods (from 1990 – 2003 and from 2003 – 2015) to the realisation of the twin objectives concerning mainport development and improvement in the environmental quality.

The decisions enabling this, relate to the following four developments:

- the development of the airport into mainport
- the continuous urbanisation pressure on the region (construction of houses, industrial sites)
- fitting in of new traffic and transport infrastructure
- the development of a coherent green-structure.

The decision-making process about a number of these developments must be supposed with EIA. It concerns the following decisions:

- a partial review of the National Structure Scheme for Civil Airports for the national Amsterdam Airport
- a partial review of the regional physical plan Amsterdam-Noordzeekanaal-area (ANZKG) for the spatial arrangement of the mainport development of Amsterdam Airport

- a change of the designation of Schiphol in the scope of the Aviation Act.

A coordinated EIA is executed for these procedures. The EIA for the first two strategic decisions (entitled *Integral EIA*) started with an announcement in various newspapers on September 5, 1991. The competent authority is made up by the following agencies:

- the Council of Ministers for the procedure of the partial review of the National Structure Scheme for Civil Airports
- The Provincial Council of North Holland for the procedure of the partial review of the regional physical plan ANZKG
- the Minister of Public Works (V&W) in conformity with the Minister of Housing, Environmental Planning and Environmental Management (VROM) for the procedure of the change of the designation of Amsterdam Airport ex Aviation Act.

The Provincial Council of North Holland acts on request of these agencies as coordinating competent authority. The initiators for this EIA are the Ministers of V&W and of VROM, the Secretary of State of Economic Affairs (EZ), the provincial board of North Holland and the NVLS.

The advice has been compiled by a working group of the Commission for EIA. The working group acts on behalf of the Commission for EIA and hence further in this advice will be referred to as 'the Commission'. The advice aims to demarcate which environmental aspects are important to the decision-making process in the light of both objectives of the PASO that also apply as points of departure for this EIA.

In the drafting of the advice the Commission took into consideration, on request of the coordinating competent authority, all written advices, comments and remarks received through the competent authority.

2. PROBLEM DEFINITION, OBJECTIVE AND DECISION-MAKING PROCESS

Environmental Protection Act, section .10, subsection 1, sub a:

An EIS shall contain at least: "*a description of the purpose of the proposed activity*".

Environmental Protection Act, section 7.10, subsection 1, sub c:

An EIS shall contain at least: "*an indication of the decisions in the preparation of which the environmental impact statement is to be drawn up, and a review of the decision previously taken by government bodies relating to the proposed activity and the alternatives described*".

2.1 General

This EIA is announced in the notification of intent as an integral EIA. This means that it serves as support for the decision-making about a large number of different, but mutually strongly connected proposed and desired developments for Amsterdam Airport and surroundings. These proposed activities are prompted on the one hand to find a solution for the current problems about

the use and the accessibility of the airport, both at the airside and at the landside, and on the other hand to safeguard the future development of the airport and surroundings within the context of a rapidly developing Europe. Traffic development at Amsterdam Airport led to aviation noise exceeding the fixed levels according to the zoning contours of the National Structure Scheme for Civil Airports; hence the necessity to lay down a new policy.

In the *Master Plan 2003* NVLS explained that, if a new policy is not laid down, the current developments will lead to capacity problems, to congestion of the airport both at the airside and at the landside, to damage to the competitive position of the airport and the depending industrial activities and to an imbalance in the coexistence of the airport with its surroundings on account of environmental impacts and space claims and the accompanying planning problems.

As far as the future is concerned Amsterdam Airport made it known in the Master Plan that the enlargement of the transshipment capacity until 2003 can be met within the current area with an approved zoning destination but that thereafter an extension will be required. Furthermore, an adaptation of the runways system will be necessary for solving the noise problem and for the solution of bottlenecks in the function of Schiphol as transit airport.

The accessibility of Schiphol at the landside must be improved as well; the airport strives for a 40 percent share therein of public transport.

In the Fourth National Physical Planning Programme (Extra) a mainport function has been laid down for Amsterdam Airport. The mainport function has been further elaborated in PASO with in all 111 measures. The decision-making process that has already been started with the help of the integral EIA must structure the series of decisions that must enable the proposed activities. In the notification of intent the types of decisions are described which must be taken with the EIA and in which order. First of all, the decisions on a strategic level must be made, followed by the implementation decisions. The strategic decisions entail the adoption of a partial review of the National Structure Scheme for Civil Airports for Amsterdam Airport and the adoption of a partial review of the Regional Physical Plan Amsterdam Noordzeekanaal Area (ANZKG). According to the notification of intent decisions must be made in the partial review of the National Structure Scheme about:

- intensifying the use of the airport
- the nocturnal use of the airport
- the construction of an extra runway
- relocation of activities to other airports.

The partial review of the regional physical plan ANZKG will include decisions about:

- new industrial sites near Schiphol for the mainport development
- physical arrangement of infrastructure (High Speed Railway, main roads structure, and underlying road network)
- new structure of the rural area around Schiphol (Urban agglomeration green-structure)

- extra exclusion zone for house building around the noise contour of 35 Ke²)).

When the decision-making process about these strategic decisions has progressed, a beginning must be made with EIA at the level of implementation. The notification of intent refers only to decisions related to the change of the designation of Amsterdam Airport according to the Aviation Act with respect to the following subjects:

- establishment of noise zones for both the situation with the four runways system until a fifth runway is operational, as well as for the future situation with a five runways system
- extension of the Kaag runway
- additional southern use of the Zwanenburg runway
- construction of an extra (fifth) runway
- enlargement of the designated airport area.

In the decision-making process the twin objectives included in the Policy Covenant of PASO dated April 16, 1991 and in the notification of intent apply to all decisions:

- the reinforcement of the mainport function of Amsterdam Airport
- improvement in the quality of the physical environment in the area around Amsterdam Airport.

The Policy Covenant of April 16, 1991 stipulates that *"if no coherent solutions are found for the development of Amsterdam Airport into mainport and for the simultaneous increase of the quality of the physical environment, the risk will be very large that both the mainport development of Schiphol in particular where it concerns the impact on the national income and the desired increase of the number of jobs, and the improvement in the quality of the physical environment in the vicinity of the airport in particular where it concerns noise and air pollution, will be seriously endangered"*.

This means for the integral EIS that must be compiled for the strategic decisions:

- the twin objectives are normative and that the mainport development must be verified against the principle of sustainable development as laid down in the National Environmental Plan;
- further demarcation is needed in a planning area and in surrounding areas of influence or areas of study with which an interaction exists both in terms of planning and environmental impacts;
- the strategic decisions must be followed by a number of implementation decisions for which EIA may be compulsory.

Although PASO, the accompanying partial studies and the notification of intent provide already a lot of information giving insight into the meaning of the foregoing for the drafting of the EIS, much still remains unclear needing further elaboration. The guidelines for the EIS and the EIS itself must give a

2 Kosten units = Kosten eenheden = Ke: see for an explanation footnote nr. 1.

definite answer about this. Those guidelines must also indicate that the EIS itself must contain all information that is necessary to clearly define the statement of the problem and objective and mutual comparison of all alternatives.

2.2 Twin objectives

In PASO both objectives are separately elaborated. However, no confrontation takes place. Both objectives seem rather conflicting. The reinforcement of the mainport function of Schiphol will give rise to strong increase of the air, road and rail traffic resulting in more noise production and emissions of gases and particles. The increase of the accompanying nuisance and pollution can be influenced by taking measures but cannot be made undone.

The EIS must give information about the change in environmental pollution in particular where it concerns noise hindrance and pollution of air, soil and water, and about the spreading thereof across Schiphol and surroundings. This environmental pollution must be related to the notion 'mainport' and the inherent developments for the functions living, working and leisure activities and the connected development in mobility. In this respect, the EIS should refer to the Fourth National Physical Planning Programme (Extra) and the desired developments described in PASO.

Mainport development

PASO does not give a clear definition of what constitutes a 'mainport'. The presentation of absolute figures in terms of numbers of future passengers and tons of freight or numbers of flight movements per year does not seem to give sufficient insight into the mainport function.

The term mainport is always used in the various documents (PASO, Master Plan, Notification of Intent) in a relative meaning. In the introduction of the notification of intent it is stated that Schiphol must keep its current position as one of the most important airports in Western Europe and that this means that the development of Schiphol must keep at least pace with the largest Western European airports, in particular London, Paris and Frankfurt. The key function of Schiphol in intercontinental aviation plays an important role.

It seems therefore meaningful that the EIS does not only quantify the economic aspects of the desired growth of Amsterdam Airport (into 'mainport') in numbers of passengers, tons of freight and numbers of flight movements per year, but also in terms of a desired minimum share in intercontinental transport from and to Western Europe and in addition in aviation within Europe, with due observance of the impact of substitution through high speed railways³].

An optimistic and a pessimistic macroeconomic scenario must be taken into account while simultaneously estimating the consequences for Amsterdam Airport of deregulation of European aviation. In the pessimistic scenario must

3 The latter on account of the assumption that from the environmental point of view it is desirable to execute transport across distances shorter than 1000 kilometres in Europe between the most important population centres for an important part with high speed trains.

be indicated which critical values and factors determine the development of Schiphol into a mainport.

Quantification of the impact of the two scenarios on the environment through various variants of use of a four- and a five-runways-system, and of the possibilities of substitution of air transport to transport per high speed trains as well as the possibilities of partial movement of activities to other airports enables assessment of the magnitude of environmental pollution.

Improvement in the quality of the physical environment

As yet the second objective concerning the *'improvement in the quality of the physical environment in the area around Schiphol'* is also not clearly described.

The EIS must elucidate whether the improvement in the quality of the physical environment aimed for in the area around Amsterdam Airport must be considered for the area in its entirety or that this improvement must be considered per residential or rural subarea. In addition, 'the area around Amsterdam Airport' must be defined as the area of study that will differ per environmental aspect on account of the range of influence (see section 4.1 of this advice about the current situation of the environment and its autonomous development).

Before it is possible to determine an improvement in the quality of the physical environment, that quality must be defined. A possible approach could entail the following:

- determination of certain environmental criteria per location or partial area as weighed combination of qualities for a number of relevant environmental aspects among which there should be in any case noise and air quality but also space occupation, soil, groundwater and surface water;
- aggregation of the qualities per subarea for the total area with weighing of the importance of the various locations or subareas for instance as function of the number of inhabitants or the economic interest of a subarea⁴;

Another approach may be found in a demand that the quality of the physical environment in the area of Schiphol and surroundings must improve for every environmental aspect or for a number of yet unspecified environmental aspects. In that case the Commission expects large problems with the air quality (and through the process of atmospheric deposition on crops and on the earth surface also on soil and water qualities). With the current technology (incineration of fossil fuels) it is almost inconceivable that an increase in mobility of people and freight will be coupled to a decrease of use of energy and air pollution.

In yet another way the notion about environmental quality can also be related to health (man and fauna) and surviving chances (fauna and flora, including aquatic life in ditches and lakes). In this connection, the environmental quality changes if the proposed activity leads to a change in the chance that the health of species is affected and/or that they disappear. This would entail the

4 This will be difficult to realise for the environmental components soil and water because the environmental pollution of soil and water is brought about through an accumulation of polluting materials and because polluted water may move to areas with other functions.

development of criteria such as for the number of people who experience serious noise hindrance or sleep disturbance or the use of the so-called red list of endangered animals and plants.

Apart from the question whether a definition of environmental quality can or cannot be presented as an aggregate of various elements, the EIS must in any case deal with the question what environmental quality covers for every environmental aspect separately. Concerning noise hindrance from air traffic this means for example that environmental quality is not only determined by the geographic distribution of the number of people who will experience serious hindrance according to the Ke method but also with the number of people who experience sleep disturbance from aircraft noise during the night. This does not only apply to occupants of houses but also to vacationists in boats, tents or recreational vehicles.

The noise levels of road and rail traffic and the test running of aircraft engines (which is considered to be industrial noise) must be expressed separately in dB(A). Adding both kinds of sound calculation (Ke and dB(A) calculations) is not yet possible; a suitable method is not (yet) available.

In the definition of the environmental quality for the most important air polluting compounds CO, NO_x, SO₂, VOM (volatile organic materials), PAH (polycyclic aromatic hydrocarbons) and the compound CO₂, which is emitted by the various sources (see section 5.4 of this advice) must be involved. Contrary to the emissions of sound all emissions of the various sources of air pollution can be added together per compound.

With respect to the environmental quality of soil and water the following can be remarked: soil and surface water are in particular polluted through dry and wet deposition and run off from precipitation falling on runways; groundwater is affected by polluted water infiltrating into the soil.

In order to be able to determine the nature and the spreading of the pollution the following three questions must be addressed:

- which materials fall in which concentration (as a function of the distance to e.g. the runways and the influence of wind direction) through dry and wet deposition on crops and on the earth surface (soil and surface water)?
- which harmful elements are present in these materials (grindings of tires and conventional and so-called carbon brake linings, deicing chemicals etc.) that flow with the precipitation from the runways (e.g. cadmium in tire grindings and copper in grindings of conventional brakes)?
- how harmful (concentration and toxicity) are these elements for the environmental quality?

Finally, a reference year must be selected as bench mark for the environmental objective. The year 1990 can serve for this purpose.

2.3 Spatial arrangement of the planning area

The notification of intent writes that the regional physical plan ANZKG in force for the covenant's area of PASO must be partially reviewed. The extent of the area is not indicated. During the location visit that the Commission paid on September 25, 1991 to Schiphol airport the province of North Holland explained that the partial review concerned will only include the airport site and the direct surroundings.

It is of the utmost importance that the guidelines for the EIS establish which planning area is observed for the partial review and account for this. In addition, the EIS is obliged to involve the planned and desired developments in the area around the planning area in the statement of the problem on account of the mutual connections between the developments at and around the airport. The best example hereby concerns the interaction between the airport and newly planned urban developments outside the planning area. It is a fact that at least a part of the planned and desired developments in the infrastructure have their origin and destination outside the planning area of the partial review.

With respect to the industrial sites the integral EIS must give insight into the needs for additional industrial sites and the capacity that can be accommodated in current physical plans. Which maximum distances to Amsterdam Airport, to the existing industrial sites and to residential areas play a role in the selection of new industrial sites? Which relationship will the planned industrial sites have with the airport activities?

In order to be able to investigate to which extent each of the two objectives can be reached, the following questions matter:

- can all anticipated and desired activities in the area be accommodated while maintaining or improving the quality of the environmental structure (living, working, recreating, mobility)?
- can these activities be realised without exceeding the valid environmental standards and with due observance of the environmental objective?

The Commission naturally assumes that there will be timely sufficient financial means available to execute the 111 measures of PASO according to demands of environmental quality and environmental standardisation.

2.4 Strategic decisions

In the first stage of the decision-making process about the development of Amsterdam Airport and surroundings decisions will be made about main lines with the help of the integral EIA. These decisions are of a strategic nature and must be followed by implementation decisions that, at least for a part, will be founded on the implementation EIA. In the notification of intent and also in section 3.1 of this advice it has been indicated which decisions of a strategic

nature^{5]} are involved. The formulation of alternatives at the strategic level will have to suit the following strategic options:

1. Maintaining the current tangential 4-runways-system
This is the situation of the zero alternative (see section 4 of this advice) that does not seem to satisfy the twin objectives.
2. Modification and intensification of the 4-runways-system
Intensifying the airport into a mainport can be realised at the airside with the necessary adaptations while using a 4-runways-system. Two alternatives can be distinguished:
 - use of the current 4-runways-system but with two-sided use of the Zwanenburg runway and extension of the Kaag runway. This is the alternative as meant in the notification of intent.
 - use of a 4-runways-system with a northwesterly turned Zwanenburg runway and closing down of the present Zwanenburg runway with the possibility of a two-sided use of the turned Zwanenburg runway and extension of the Kaag runway.
3. Expansion of the airport with a fifth runway
This possibility has been described in the notification of intent as the planning alternative with three variants:
 - parallel fifth runway (5P)
 - turned runway in a northern position (5GN)
 - turned fifth runway in a southern position (5GZ)PASO and the notification of intent prefer this option with a clear preference for variant 5P, expecting that this is the best solution to achieve the twin objectives.

2.5 Implementation decisions and other decisions yet to be made

In the notification of intent the matching is described between the integral EIA and the implementation EIA. The question where the integral EIA ends and the implementation EIA begins has not been completely answered. There is a chance that following a general integral EIA later during the implementation phase choices must be made that imply adjustment of the points of departure that were adopted in the integral EIA. There is nothing against that as experience teaches that such processes have rather an iterative/cyclic than a straight-lined nature. Looked at it this way it is a question of a developing decision-making process in which spatial arrangements and environmental aspects subsequently receive attention. The emphasis will later switch to further improvement of the infrastructure and landscaping after which the planning, implementation and management cycle is again gone through to process further adjustments. It will be good in this connection to pay attention to the relation between the plans with respect to the development of Schiphol both at the airside and at the landside and those for the wider surroundings.

5 A strategic decision can be defined as a decision that leads directly to deployment of an implementation route and that in case of postponement or non-implementation leads to more than marginal impact on the proposed objectives.

In the notification of intent only those implementation decisions are mentioned which must be subjected to EIA and that are necessary in the scope of the change of the designation of Schiphol according to the Aviation Act. It is noted that if the decision-making process about the future of Schiphol as a five-runways-airport is delayed a separate implementation decision can be made. This initial decision concerns the establishment of a noise zone for the four-runways-system including the extension of the Kaag-runway and the two-sided use of the Zwanenburg runway.

In addition to the necessary decisions according to the Aviation Act there are many other decisions necessary to realise the mainport function of the airport. Some of these decisions are EIA compulsory. The decision-making process about the Main Road Network of the Schiphol Region has already been realised with EIA. The decision-making process with EIA about the high speed railway Amsterdam – Schiphol – Rotterdam – Brussels is still pending. Other decisions with EIA that are important to the realisation of the mainport function will be made in the course of other procedures. It concerns in particular the urban development location Haarlemmermeer-West, roads, rail and metro connections, a golf course and urban agglomeration green areas in various structure plans (Haarlemmermeer and Amsterdam) and other partial reviews of the regional plan ANZKG.

The EIS must also state which non-compulsory EIA decisions must further be made. The supply of aviation fuel that now takes place per river-tanker must also take place by pipeline⁶. Each of these decisions must be related to the measures of PASO.

Finally, the work of a 'working group on standardisation of noise from night flying' is important to the decision-making process on a strategic level. On the basis of the findings of this working group the government will lay down and implement in 1993 a national standardisation for aircraft noise during the night (Measure 32 of PASO). The resulting standard is of crucial importance to the expansion possibilities of Schiphol.

3. PROPOSED ACTIVITY AND ALTERNATIVES

Environmental Protection Act, section 7.10, subsection 1, sub b:

An EIS shall contain at least: "*a description of the proposed activity and the manner in which it will be carried out, and of the alternatives which should reasonably be taken into consideration*".

Environmental Protection Act, section 7.10, subsection 3:

"The alternatives to be described in accordance with subsection one, under b shall in any case include the alternative which makes use of the best means available for protecting the environment".

6 The Commission for EIA has made an inquiry into the proposal for a pipeline for the transport of aviation fuel. At present, the technical preparations take place. It is expected that the pipeline will be ready for use by the end of 1993. Transporting aviation fuel by pipeline will reduce the number of tanker transports drastically thereby also diminishing safety risks from the transports passing through a number of population centres.

It appears from PASO and the notification of intent that the proposed activity includes a system of actions, measures and facilities that together must lead to the development of Amsterdam Airport into a mainport.

At the airside of the airport this concerns the following actions:

- intensifying the use of the airport
- the nocturnal use of the airport with a permitted growth of the number of night flights with 1000 per year
- the construction of a fifth runway or turning of the fourth runway
- the southern use of the Zwanenburg runway or of the turned fourth runway
- extension of the Kaag runway with 250 meters
- the relocation of certain activities to other airfields.

At the landside of the airport the following environmental measures and facilities are mentioned in PASO and the notification of intent, which must enable the continuous accessibility of the airport following the intensification and expansion:

- actual implementation of infrastructure concerning the main road network of Schiphol and high speed railway as well as the underlying road network
- connection of Schiphol to the high speed railway Amsterdam – Rotterdam – Brussels and a high speed railway Schiphol – Amsterdam – German border intending to provide an as large as possible substitution of aircraft movements by high speed train traffic for both passengers and for freight traffic
- development and implementation of a regional rail network, metro and express bus connections while limiting the growth of the automobility in the region Schiphol.

Finally, there are environmental measures and facilities that must stimulate the mainport development or at least do not impede development:

- the choice of location and implementation of new industrial sites and transshipment facilities near Schiphol for the mainport development
- the establishment of an extra zone around the 35 Ke contour in which urban development and house construction will not be permitted^{7]}
- the land use of the rural area around Schiphol

This construction of activities, technical actions and environmental measures and facilities must deliver the elements from which the alternative solutions for the mainport development of Amsterdam Airport must be compiled. Next, these alternative solutions must be confronted with the environmental measures that for the greater part have already been presented in PASO in order to be able to realise the environmental objective. It concerns the substitution of air by rail traffic, the furtherance of the use of public transport for passengers and commuters, the relocation of certain activities to other airports and environmental measures with respect to noise abatement (including night use of runways and insulation measures), air pollution (including airport-bound measures) and other environmental aspects.

7 The width of the zone must be elaborated in the EIS. In other words, which noise contour forms the outer border of this zone?

