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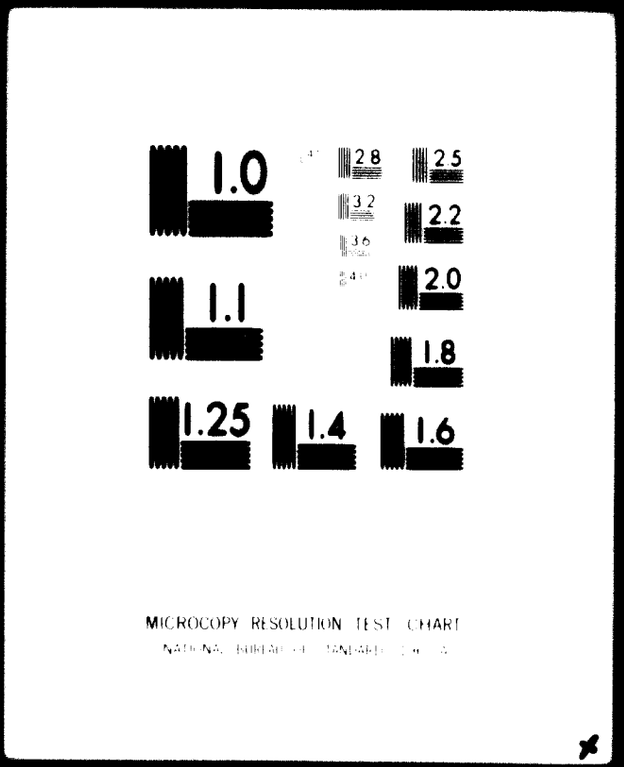

[illegible] INDUSTRIAL SITE SALONIKA

1. SITE BOUNDARIES AND MINISTERIAL DECREE

The boundaries of the site for Phase I, II and III are shown on the Hellenic Industrial Development Bank's Plan No. 1177, received from HIDB, Athens on the 1st June 1971. The gross area of the phases is shown on the Plan and are as follows:

Phase	Area ha
I	310
II	280
III	392
	982 ha

The boundary between Phases II and III has no planning significance and both areas may jointly be regarded as Phase II for planning purposes with an area of 280 plus 392 = 672 ha (gross).

The site boundary for the 982 ha, shown on Plate No.1, is that defined in the Ministerial Decree dated 8th December 1965. The site to be planned and subsequently developed is that shown on Plate No.1 but less certain restrictions referred to in para. 2. The site restrictions are not mentioned in the Ministerial Decree.

2. SITE RESTRICTIONS

Within the site boundaries shown on Plate No.1 and described in para. 1 above, there are certain site restrictions as follows:-

(a) Phase I

Infrastructure work consisting of roads, streets, paths, water supply network, soil and surface water drainage networks.

At the date of this Report, there are:

5	factories in operation
4	factories under construction
9	factories under discussion
Total 18	

(b) Phase II

There are:

2	factories in operation
1	factory under construction
Total 3	

In addition, there are 2 large Institutions: a Cotton Research Institute and a Land Reclamation Station. In view of the time which would be taken to expropriate these areas, it is understood to be the HIDB's intention that these Institutions should be retained on their present site. The HIDB have indicated, however, that to facilitate the implementation of an effective plan for the development of the Salonika Industrial Area, marginal acquisition

of some minor parts of these areas may be regarded as possible.

(c) Phase III

7 factories and 2 storage depots are in operation and one factory is under construction.

In addition, a N.A.T.O. base and a Military Barracks also exist. For the same reasoning as given in para. 2 (b) above, these factories and Institutions will be retained and kept in operation.

The site restrictions, referred to in paras. 2 (a) to (c) above, are shown on Plate No.1 and are listed in Appendix No.1.

(d) Salonika - Athens Highway

The widening of the existing National Highway from Salonika to Athens, north of the site, is understood to encroach into the site area by 20 - 25 m.

(e) Unknown Enterprises

The Consultants require to be advised of any other enterprises which have not been shown on Plate No.1 or listed in Appendix No.1 and are to be located within the site boundaries. It is also recommended that no further freeholds are granted during the formulation of the Master Plan.

The Consultants understand that all the enterprises shown in Plate No.1 and Appendix No.1

shall be permitted to remain in operation and the Master Plan must be arranged in such a way that their continuing activity is unimpaired.

(f) Power Line

The 150 KV power line crossing the Phase II and III areas is a site restriction which limits the full development of the land for industrial purposes. In para. 3 (iv) it is recommended that this line be diverted.

3. PHASE I - PRESENT POSITION

(a) Roads and Streets

The roads and streets for Phase I are shown on Plate No.1. It is understood that the construction of all the infrastructure work will be complete at the end of 1971.

The Consultants do not know how it is intended to terminate the three Class I and the one Class III roads at the eastern part of the site now that the high speed peripheral road is not to be constructed.

(b) Utilities

(i) Water Supply

The water supply for Phase I will be supplied from wells located south of Sindos.

Water will be pumped from these wells to two 6,000 m^3 storage tanks located at ground level at the southern end of Plot No.11.

Until the 52 m high water storage tower (600 m^3 capacity) is constructed, the water supply network will be pressurised to approximately 3.5 atmospheres by means of pressure pumps. After the storage tank has been completed, the system will be pressurised from the tank.

The existing wells and pipeline to the site are understood to have a capacity of 20,000 m^3 per day. This rate of supply could be increased in the future by about 25% to, say, 25,000 m^3 per day by the provision of booster pumps.

Before the combined requirements for Phase I, II and III exceed 25,000 m^3 per day, an additional source of water will be required. This could be provided by further wells sited south of Sindos or by connection to the Aravissos pipeline which, it is understood, will be completed by the end of 1975 and will have adequate capacity to cope with the demands of the industrial site.

(ii) Soil Drainage

The soil drainage for Phase I is collected in a piped network system and discharged to a main collector drain running along the western road (road No.4). This collector is laid in a south-westerly direction and terminates about 100 m from the flood channel known as "1T". Between the end of the soil drain and the flood channel "1T" it was proposed to construct a biological treatment plant. Excavation work commenced for the pumping station but difficulties arose due to water troubles and the work was suspended. No treatment plant for Phase I exists and special measures will eventually be necessary for its construction.

The treatment plant and outfall for Phase II and III will be located in the same vicinity as the proposed plant and outfall for Phase I.

(iii) Surface Water

Surface water for Phase I is collected in a piped network system which discharges to a collector drain located on the western side

of Phase I in road No.4. From the south-west corner of Phase I a drain is laid in a south-westerly direction to the earth flood channel called "T Sindos".

The outfall for Phases II and III may be made into any part of the earth flood channel "T Sindos".

(iv) Electricity Supply

As the proposal put forward by the Public Power Corporation for the overhead reticulation system conflicted with the Greek Railways' proposals within the site, the Consultants recommended, on 19th May, that all permanent work should be deferred until they were able to submit draft proposals for the development of the site at the end of September 1971. This was accepted by HIDB in their letter of 17th June.

The existing 150 KV line crosses the Phase II and III areas at an angle to the general planning of the plots. The Consultants recommend that this overhead transmission line should be realigned along the southern side of the northern railway so

as to reduce to a minimum the amount of land that is sterilised. The order of cost in the diversion of the line would be about 1 M Drachma.

(v) Railways

For the same reasoning as given in (iv) above, the Greek Railways' proposals for Phase I were held in abeyance until the end of September 1971.

(c) Factories

Particulars of the factories in operation, under construction and under discussion are tabulated in Appendix No.2 (Sheets 1 - 4). It will be noted that many of the factories draw water from their own wells and it is understood that they will not be permitted to do so after the permanent water supply is in operation.

The Consultants require a policy decision from HIDB whether Goodyear, for example, shall be permitted to use their well, as their demand is likely to be in excess of the capacity of the permanent water supply system, or whether special provisions are required to be made to provide a supply from the Phase II reticulation system.

Many factories are operating on a temporary

understood
- agreed by HIDC ?
- assumed by GEIC ?
both

supply of electricity; in some cases from their own generators. It is understood that these temporary supplies will be discontinued after the permanent supply is energised.

Septic tanks are at present used at many of the factories. After completion of the biological treatment plant, it is understood that all the factories will be connected to the soil sewage network.

(d) Soils Investigation

A summary of the Soils Investigation Report, for the boreholes sunk at the site for the Water Tower and Sewage Treatment Pumphouse for Phase I, is given in Appendix No.3.

Briefly, the site consists of highly compressible alluvial silts with a safe load carrying capacity between 0.5 and 0.8 Km/cm^2. The water table at the Water Tower site was found to be 13.5 m below ground level and 9.5 m below ground level at the Sewage Treatment Pumping Station.

(e) Infrastructure Work

The state of the infrastructure work in Phase I as at 31st July 1971 is approximately as follows:-

(i)	All pipework	90% complete
(ii)	Kerb-races	80% "
(iii)	Kerbs	60% "
(iv)	Roads sub-grade	35% "
(v)	Black top	-
(vi)	Water Storage Tanks (ground level) and Pumphouse	65% "
(vii)	Sewage Pumphouse and Treatment Plant	-

4. EXTERNAL COMMUNICATIONS

The external communications, both existing and future, are shown diagrammatically on Plate No.2.

(a) Roads

Phase I area is at present served by the Salonika to Athens highway north of the site. This is a heavily trafficked four lane carriageway (i.e. two in each direction). There is considerable light industry on both sides of the road leading into Salonika resulting in the traffic pulling on and off the carriageway causing a reduced effective capacity of this road. It is planned to up-grade this road to a four lane duel-carriage highway and work is expected to be completed in 1973/4. It is expected that endeavours will be made to limit access connections

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(1 of 2)

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SALONIKA GREECE.

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JULY 1971

GIBB-EWBANK INDUSTRIAL CONSULTANTS
24 QUEEN ANNE'S GATE,
LONDON, S.W.1.

to this road. The existing and proposed up-graded road will afford good communications to Salonika, Bulgaria, Yugoslavia and Southern Greece.

A National road from the outskirts of Salonika to Athens is in the process of construction about 2 Km south of the Industrial Site. It is understood that this road will be a four lane dual-carriageway with grade separation and that provision is being made for a further pair of carriageways in the future. This road will have the benefit of shortening the distance from Salonika to Athens by some 40 Km compared with the northern road.

Between the above two main roads radiating from Salonika, three link roads are planned. The inner link road, adjacent to Salonika, is proposed on the left bank of the river Gallicos and the outer link road and part of the highway to Yugoslavia is under construction on the left bank of the river Axios (not shown on Plate No.2). The centre link road, proposed by Efpalino, is indicated on the western side of the Cotton Research Institute, through the Phase II area of the Industrial Site.

The Consultants recommend that this centre

link road should not be constructed through the Industrial Site as it would form a barrier between one half and the other and no benefit would result in introducing a volume of external traffic through the Industrial Site. They recommend that the centre link road should be constructed just west of the western boundary of the Phase III area, as shown on Plate No.2 (see para. 8 in connection with proposed exchange of land at the western boundary of the site).

The existing country road passing the Institutions connects the village of Sindos to the Athens - Salonika highway north of the site. Its existence in an Industrial Estate causes problems as it is not readily feasible to design satisfactory connections with the Phase I and II road system. The Consultants recommend that this road should be eliminated as a through road and converted to a service road to serve the Institutions and existing factories on the western side of this road. They recommend that through traffic from Sindos should be carried on road No.4 in the Phase I area, with suitable modifications at the north and south ends of road No.4 (see Plate No.1).

(b) Railways

A two track railway line from Athens to Salonika forms the southern boundary of the site. A single track railway line from Salonika to Yugoslavia crosses the northern part of the site just south of the Military Barracks and N.A.T.O. Base.

There is a considerable divergence of views between the Greek Railway Corporation and the Ministry of Works as to which of the two lines should be retained, up-graded or abandoned. In the absence of firm decisions being taken by these Government Departments, the Consultants can only advise on what is most appropriate for the Industrial Site.

They recommend that the two-track Athens to Salonika line at the south of the site, passing through Sindos Station, should be retained to serve the Industrial Site. With this line in operation and the general trend for future communications, both road and rail, to be concentrated in a southerly direction, this railway line will serve the needs of the Industrial Site in the best possible way.

Under Section 7 of this Report, the location of the Free-Customs Zone is recommended to be

adjacent to the southern railway line where it will be well placed for the receipt of raw materials and despatch of finished products by rail and road.

The general concept for railways to serve the Industrial Site is that there would be a Freight-line Container Depot located adjacent to the Free-Customs Zone. There would therefore be few plots with rail access and these would be confined to Plots 27 and 28 and to that part of Sindos north of the railway line.

A rail link from the Athens - Salonika southern line has been proposed to Bulgaria by Efpalino to pass through Phase III of the Industrial Site west of the Cotton Research Institute.

The Consultants recommend that this rail link should not be constructed through the Industrial Site as it would sterilise a considerable area of land and detract from satisfactory planning of the area for industrial purposes. They recommend that the proposed rail link to Bulgaria should be constructed some 300 m west of the western site boundary of the Industrial Site, as shown on Plate No.2.

The proposed rail connection to the Viochalko factory would be located as shown on Plate No.2.

5. TENTATIVE LOCATION OF SERVICES CENTRE

The Consultants propose that the Services Centre should be located just west of the Cotton Research Institute and Land Reclamation Centre where it would be situated virtually in the centre of the whole Industrial Site, able to serve all phases effectively (see Plate No.3). The siting would be adjacent to the green belt of the Research Institutes, which would be pleasing. This location would protect the Institutes and prevent industry from being sited immediately in the direction of the prevailing wind.

Access to the area will be obtained from a dual-carriageway road on the western side of the Services Centre and, in addition, it is recommended that expropriation of a small tract of land between the two Institutes should be put in hand so that access from the Services Centre to the Phase I area will be readily available.

A Sub-Services Centre is also proposed in Phase I area. It will be located in the remainder of Plot No.11 in an area of about 2.5 ha.

The buildings and facilities proposed for the Services Centre are outlined in Appendix No.4.

6. TENTATIVE LOCATION OF INDUSTRIAL ESTATE

Taking into consideration the existing infrastructure works and factories in operation and those under construction, the Consultants recommend that the Industrial Estate should be located in Plots Nos. 12, 13, 18, 19, 20, 25 and part of 26, to line up with 18 (see Plate No.3). This will give a usable area of 55.75 ha.

The proposed location is conveniently placed for good road access and its proximity to the main Services Centre. A Sub-Services Centre will also be very conveniently located.

The types of standard factories suggested for the Industrial Estate are listed in Appendix No.5.

7. TENTATIVE LOCATION FOR FREE-CUSTOMS ZONE

The essential requirement for the location of the Free-Customs Zone is that it should be adjacent to good road and rail communications and for this reason and because there is adequate space for considerable future expansion, the Free-Customs Zone has been located adjacent to the southern railway line at the south of the Industrial Site, as shown on Plate No.3.

The Consultants reserve the right to amend this location in the event of their recommendations concerning the location of railways (see para.4 (b)) being varied.

The land tentatively recommended by the Consultants for the Services Centre (para. 5), Industrial Estate (para. 6) and the Free-Customs Zone must be reserved and made unavailable for sale or lease.

8. SUGGESTED EXCHANGE OF LAND AND BOUNDARY MODIFICATIONS

With the communications as proposed in para. 4 and the principal functions sited as recommended in paras. 5, 6 and 7 above, it is evident that a parcel of land at the south-west corner of Phase II will not, due to segregation, be of much value to the Industrial Site. Conversely, the parcel of land between the proposed central link road, referred to in para.4 (a), and the site boundary at the north-west corner of the Industrial Site, would form a logical part of the site and it is suggested that there should be an exchange of land and the site boundaries adjusted accordingly in the future.

9. POTENTIAL INDUSTRIES LIKELY TO BE ATTRACTED TO THE INDUSTRIAL SITE, SALONIKA

A list of potential industries is attached as Appendix No.6.

The forecast of industrial development in Salonika is based on an analysis of existing statistical information on regional and national development with regard to industrial production, imports and exports, and an examination of miscellaneous surveys and publications on various sectors of Greek industry. In addition, discussions have been held with local manufacturers both in the industrial area and elsewhere in Salonika, with representative organisations including the Chamber of Commerce of Salonika and the Association of Manufacturers of Northern Greece, and with Ministries and Agencies concerned with development such as HIDB, the Ministry of Industry, Ministry of Co-ordination and the National Bank of Greece.

These conclusions must be regarded as provisional until more detailed work can be carried out on selected sectors showing the greatest scope for development.

A major reservation that must be made is that industries will only be attracted to the industrial area if proper incentives and policies are followed both by HIDB and by local planning authorities and proper legislation initiated in order to support these policies.

An attempt is made here to categorize these industries into those with possibilities for expansion in the short-term and those which may be established over long-term.

In the short-term, industries are likely to be established on the estate in those sectors which have expanded most rapidly in Salonika over recent years and which still hold prospects for expansion. These industries may be import-substituting or export-oriented. With the successful establishment and operation of foreign firms in the area, and awareness of the advantages offered by the EEC an influx of foreign investment may be expected resulting in the establishment of mainly export-oriented industries - this progress is already under way and could be expected to gain momentum.

Over the longer term, one may expect that industries which are currently satisfying the domestic market from production facilities in Athens may establish plants in Salonika in order to meet growing demand as incomes rise.

Criteria for the Selection of Industries

Criteria used in forecasting these industries may be summarised as follows:-

(a) Industries with a relatively fast growth rate over recent years.

(b) Industries with prospects for rapid development based on domestic demand and export opportunities.

(c) Specifically export oriented industries geared mainly to the Common Market countries but also to North African and Middle Eastern countries.

(d) Industries complementary to major established firms in Salonika, such as Esso-Pappas and Hellenic Steel.

(e) Industries based on local raw materials.

(f) Labour-intensive industries.

(g) Industries assembling components.

With the development of the Esso-Pappas complex in Salonika and policies followed elsewhere for the establishment of major industries, it appears to be unlikely that heavy industry will be attracted to the Sindos Industrial Area. In particular, the expansion programme of Hellenic Steel and Esso-Pappas Chemical Co. Ltd. preclude any major development in these sectors outside the Esso-Pappas estate, and the decision recently made by Peugeot to establish a factory for car production at Volos has excluded, for

the time being, the development of another major industrial complex in Salonika.

The Consultants propose to examine potential industries in greater detail in the second stage of the study and to draw up a list of priorities for industries to be established on the site.

10. METEOROLOGICAL RECORDS

Appendix No.7 is a summary of the Meteorological Records which have been obtained from the Cotton Research Institute situated centrally on the Industrial Site. These records will be used for the Consultants' study of the proposed Master Plan Report on the Industrial Site.

11. HOUSING

It is understood, from a meeting held with the President of the Workers' Housing Organisation, that the present phase of housing construction of 1200 houses in Salonika is due for completion in 1971. A further 300 houses will be built at the north-west side of Salonika and completion is expected in 1972. After this date, there are no further plans for more houses.

A Committee has been set up to study the problem of a satellite town west of the city, in accordance with the Master Plan for Salonika. Consideration will be given to housing the workers for the Industrial Site in the satellite town when the numbers for the various phases of construction are known.

12. LANDSCAPING

Due regard for landscaping and preservation of trees will be

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made in the preparation of the Master Plan.

13. DOCUMENTS AND DRAWINGS

Appendices 8 and 9 give lists of documents and drawings which have been received by the Consultants from various sources and are required to be studied by them in connection with the preparation of the Master Plan.

SITE RESTRICTIONS

PHASE I

1. Factories in Operation

	Factory	Activity	Plot No.
a.	Goodyear	Rubber Tyres	-
b.	Hellas Cans	Tin Cans	1
c.	Varhart Limited	Cardboard Boxes	1
d.	Ilios Ten Cate	Cotton Spinning	3
e.	St. Regis Hellas	Cardboard Boxes	22

2. Factories under Construction

a.	Apostolidis & Co.	Diesel Engines	2
b.	A.P.K.O.	Plastics	4
c.	Vepsy	Synthetic Material	6
d.	Viofit	Insecticides	25

3. Factories under Discussion

a.	N.Krallis	Pharmaceuticals	1
b.	E.Tompoulidis	Fans	1
c.	Tsentellis	Textiles	5
d.	I.Boutaris	Wines and Spirits	16
e.	Flocas Ltd.	Confectionery	16
f.	Ganoulis	Plastics	- *
g.	Xanthopoulos Lazaridis	Leather Tanning	- *
h.	P.Kontellis Limited	Rigid P.V.C. Pipe	- *
i.	Kesselwerke		4

N.B. * Site not yet determined.

PHASE II

1. Cotton Research Institute.

2. Land Reclamation Station.

3. Factories in Operation

	Factory	Activity	Plot No.
a.	Olympos Aeria	Industrial Gases	521 and 522
b.	Zoumbouridis	Cement	526

4. Factories under Construction

a.	Efthimiadis	Plastics	527 and 528

PHASE III

1. N.A.T.O. Base - Fuel Storage Depot.

2. Military Barracks.

3. Factories and Storage Depots in Operation

	Factory or Depot	Activity	Lot
a.	D.E.H. (Electricity Authority)	Storage Depot	16 - 19
b.	Victor A.E.	Turpentine and Glue	17a
c.	Doukaki	Porcelain Sanitary Ware	1471
d.	O.T.E. (Telephone Authority)	Storage Depot	1467 1468 1469 1459
e.	Karagiorgiou Brothers	Cotton Gin factory	1478-1480
f.	"The Two Brothers"	Clay Block factory	1542 1543 1544
g.	Toule Brothers	Clay Drainage Pipes	603
h.	Atlas	Clay Block factory	617 618
i.	T.E.M.E. Limited	Steel Tanks	1463 1464

4. Factory Under Construction

a.	Agrotiki	Agricultural machinery

NIEB INDUSTRIAL SITE, SALONIKA

PROGRESS REPORT NO.1
to 15th June 1971

1. The Consultants were advised by teleprint on 16th April 1971 that their offer for Chapters 1 - 4 inclusive had been accepted. The Consultants confirmed acceptance of the Award by letter on the 27th April.

2. Mr. Bailey, Project Director, J.G.McLellan, Project Manager and D.A.Powell, Deputy Project Manager, arrived at Vienna on the 10th May for briefing. Discussions were held with Mr. Kretovsky, Mr. Dubie, Mr. Zimmerman, Mr. Gold and Mr. Manjuntan on the 10th, 11th and 12th May. The revised requirements for Chapter V - Effluent Disposal were discussed and a request was made for a revised proposal to be submitted as soon as possible after the technical aspects had been confirmed by Mr. Poling. During the afternoon of 12th May the Consultants departed for Athens where they were met by Mr. Poling, the United Nations Project Director.

3. After an introductory meeting with Mr. Crosier, UNDP representative for Greece, the Consultants had meetings on the 13th and 14th May with the Deputy Governor and officials of the NIEB during which the Consultants were given a general outline of the Phase I proposals. W.A.Latto, Assistant to the Deputy Project Manager, joined the discussions on the 14th May. The Consultants were handed a 1:5,000 scale land boundary plan for the Phase I area by NIEB who were unable

to give any information about the boundaries of the Phase II area but they hoped that a decision would be taken during the following week.

4. The Consultants, accompanied by Mr. Konsolas, HIDB, left Athens for Salonika on 18th May. They were introduced to Mr. Dendrinos, HIDB Area Manager for Salonika, who showed the Consultants the office accommodation available to them on the Fifth Floor, 34, Dodekanissou Street (Telephone 523227). During the afternoon a brief inspection of the industrial site was made.

5. Discussions with Professor Triantafillidis, author of the Master Plan for Salonika and Mr. Papadopoulous, Manager of the Salonika Port were arranged and a start was made with the collection of essential engineering information concerning Phase I, with the assistance of Mr. Gergias, HIDB.

6. The Consultants advised Mr. Poling on the 19th May that their task of providing a Master Plan for the development of the industrial area could well be frustrated by the indiscriminate sale of plots by HIDB and they made suggestions for safeguarding the position. The Consultants also advised Mr. Poling that the Railway and Electrical reticulation proposals for the Phase I area conflicted and that it would be preferable to defer construction of these two services until the Consultants were able to submit preliminary proposals for the development at the end of September 1971.

7. It has been noted that serious discrepancies exist between the Greek Engineering Plan and the Land Boundary Plan such that a new

survey of the Phase I area will now require to be carried out by the Consultants.

The Consultants have advised UNIDO that they understand that the two Government Institutions and the Military Barracks and N.A.T.O. base in the Phase II area are not to be included in the Master Plan for development. This matter is being verified with HIDB, Athens in relation to the Ministerial Decree dated 8th December 1965.

Following the HIDB's Director's approval on the 26th May of a total area of 680 ha for Phase II, the Consultants advised UNIDO on 4th June of the effects of the revision to the draft Contract document dated 20th June. This matter has yet to be concluded.

8. Mr. Poling has been asked on 1st June to provide a letter to state that it is the intention that an Agreement will be signed between UNIDO and Gibb-Ewbank to enable it to be used to support an application for the taking of aerial photographs of the site, by arrangement with the Ministry of Defence.

9. Revised Terms of Reference for Chapter V - Effluent Disposal were submitted to UNIDO on the 3rd June. On the 8th June the Consultants were asked to submit their fees proposal. This matter has now been dealt with in a letter dated 11th June.

10. V.Kumar, Economist, arrived in Athens on the 9th June to commence an economic study of the matters affecting the industrial area.

11. <u>Free-Customs Zone</u>

Mr. R.Bailey visited the headquarters of the Shannon Free Airport Development Company at Shannon, Eire from 31st May to 5th June. He

received a full briefing on the different aspects of the work of the Free Customs Zone and visited factories of various kinds. During his stay he had lengthy consultations with the following.

Mr. Paul Quigley	General Manager
Mr. T.A. Callanan	Assistant General Manager
Mr. W.B. Maloney	Planning and Research Manager
Mr. A.C. O'Keeffe	Industrial Promotion Manager

Considerable progress has been made in Head Office in the preparation of a background survey of the Greek economy with special reference to regional development.

18. S.Austin, Surveyor, arrived in Salonika on 14th June to commence a resurvey of the Phase I area and to survey the Phase II area. He will be joined by J.Glover, Senior Surveyor, on 17th June.

UNIDO INDUSTRIAL SITE SALONIKA

SOILS INVESTIGATION FOR WATER TOWER AND SEWAGE PUMPHOUSE

SUMMARY OF REPORT BY GEOTECHNIKI O.E.

1. INTRODUCTION

Two boreholes were sunk on the site of the proposed Water Tower near the intersection of Road No.3 and Street No.7 in the Phase I area. One borehole was sunk on the site of the proposed Sewage Pumphouse sited some 2 Km south of the western corner of the Phase I area near the ditch "Sindos IT".

The work was carried out in May and June 1970 and the Report on the Soils Investigation was prepared by Geotechniki O.E. for the HIDB.

2. WATER TOWER SITE

The two holes at the Water Tower site were put down to a depth of 30 m. Dutch cone penetration measurements were taken at regular intervals down to 15 m. Standing water was encountered at a depth of 13.5 m and 13.3 m from the ground level which was about 11.00 m.

The soil is of recent alluvial deposits consisting of clay, silt and sand in successive layers. The soil is uncompacted. The unconfined compression tests on silty clays and clays taken from near the surface show a resistance of 0.30 - 0.50 Kg/cm^2 (0.274 - 0.456 tons/sq. ft.). This resistance decreased with samples from deeper layers.

These clays are compressible. The sand layers at a depth of 8 - 10 m appear dense from the results of the Dutch Cone Test. The number of blows varies between 30 and 40. This figure should be reduced according to the

formula $N = 15 + \frac{1}{2}(N'-15)$ where N' is the number of blows to allow for hydrostatic pressure.

A dense layer of sand was also found at 12.5 - 17.5 m. This layer is below the standing water level.

From the results of the site and laboratory tests, the ground presents an irregular section both horizontally and vertically containing low strength and extremely compressible strata. There was good agreement between the laboratory tests, site observations and Dutch Cone Tests, such that the data and parameters obtained are valid for foundation design.

Piled foundations are necessary. The toes should penetrate into the sand layer 13 - 18 m below the surface. The length should therefore be 15 m and 0.35 X 0.35 in section to give sufficient end bearing capacity. According to regulations, the bed thickness should be three times the smaller of the sectional dimensions and the pile toe should penetrate into the layer five times this dimension. This means that the toe should be driven 0.35 X 5 = 2.00 m into the sand layer and there should be a depth of sand 0.35 X 3 = 1 m under the toe. So if the piles were driven to a depth of 14.5 m from the ground surface they may be considered as end bearing piles. The underlying soft layer must, however, be tested for failure and settlement.

The allowable load per pile should be determined by test loading. The settlement calculation is necessary because of the underlying soft layers and the existence near the toe of the pile of soft clay layers at about one third of the length of the pile from its toe. The

GIBB-EWBANK INDUSTRIAL CONSULTANTS

PROCESS AND INDUSTRIAL CONSULTING ENGINEERS

Partner Firms: SIR ALEXANDER GIBB AND PARTNERS EWBANK AND PARTNERS LIMITED
Executive Partners: D. B. MINCH, MAI FICE MASCE RICHARD BAILEY BSC(ECON) MBIM
Consultant: G. E. WHEELER, FIMECHE MINSTPET Associates: H. BATEMAN BSC(ENG) MIMECHE MIEE R. A. CROW, MBIM

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Ref: 18a/7180

UNIDO
Lerchenfelderstrasse, 1
A1010 Vienna,
Austria.

30th July, 1971

For the attention of Mr. Gold

Dear Sirs,

UNIDO INDUSTRIAL SITE SALONIKA

In accordance with the provisions of the draft Contract document forwarded to you on 16th July for finalisation and signature, we now have pleasure in enclosing three copies of our report "Summarising the planning requirements and information concerning the Master Plan Chapter I, Services Centre Chapter II, and Industrial Estate Chapter III for the Industrial Site at Salonika, Greece."

The draft Contract document requires the provision of two copies of the report for the UNIDO Project Manager. At Mr. V. Poling's request we are forwarding five copies to him to enable approval to the requirements outlined in the report, or amendment to be given by UNIDO (and HIDB) within 2 weeks.

Your attention is drawn to the Introduction to the Report in connection with the proposed date for discussion in Athens with Mr. Poling and HIDB and trust this has your agreement.

We are sending a copy of this letter to Mr. V. Poling direct.

Yours faithfully,
for GIBB-EWBANK INDUSTRIAL CONSULTANTS

Richard Bailey

cc. Mr. V. Poling,
UNIDO Representative for Salonika
24 Dodecanissou Street,
Salonika, Greece.

allowable load may be estimated from soil mechanics formulae and the results of the penetration tests. This load must, however, be checked by in-situ test loading.

3. SEWAGE PUMPHOUSE SITE

The single borehole at the Sewage Pumphouse site was sunk to a depth of 20 m. Penetration tests were not carried out because heavy rain made the site inaccessible. Standing water was encountered at a depth of 9.50 m from ground level, which was about +3.0 m.

The use of a raft foundation would give a bearing pressure not exceeding 0.5 Kg/cm^2 (0.456 tons/sq. ft.). A shallow raft is feasible provided the top soil is removed to a depth of 1.5 m. The sandy silt found in places shows a low resistance to unconfined compression due to lack of cohesion caused by the presence of granular material. From the triaxial test value of C = 0.3 Kg/cm^2 (0.274 tons/sq. ft.) and $\phi = 22^\circ$ were obtained, i.e. a resistance greater than in the case of the unconfined compression. The bearing capacity should not be taken as greater than 0.5 Kg/cm^2 (.456 tons/sq. ft.) and even this value should only be taken after careful consideration of the test results.

If the design loads give a bearing pressure greater than 0.5 Kg/cm^2 (0.456 tons/sq. ft.) and as the sand layer at a depth of 8.90 - 11.70 m does not provide a bearing layer, friction piles must be used. The allowable load per pile must be estimated by test loading. It is recommended that the piles be precast so that during the driving of the pile skin friction forces develop. In the case

of cast in-situ piles, these friction forces are smaller. Calculations for settlement of the pile grid and the resistance of a group of piles are also necessary in this case.

APPENDIX NO. 4

PROPOSED BUILDINGS AND FACILITIES FOR SERVICES CENTRE

1. INTRODUCTION

1.1 This report covers the work done during the first stage of working as outlined in the original Proposal from Gibb-Ewbank Industrial Consultants.

1.2 While the aims of the original Proposal have been borne in mind throughout, certain objectives have been established for the first stage.

1.3 The objectives are as follows:

1. To estimate population figures at all stages of development in order to plan the Centre.
2. To locate the Centre in the most suitable situation.
3. To identify the needs of the users of the Centre in order to provide the most suitable facilties.
4. To define the scope and function of the Centre.

2. METHOD OF WORKING

2.1 Population figures for all stages of development have been estimated on the basis of the number of people per hectare.

2.2 These numbers have been arrived at in two ways:

1. Reference to the figures for similar industrial areas elsewhere supplied by the Master Plan Group and Sir Sadler Forster's team.

2. From discussion with organisations who have established or intend to establish factories on the Industrial Site.

2.3 The boundaries of the Industrial Site have been defined by the Ministerial Decree of 1965. The subdivision into Phase areas has been agreed after discussion with the Master Plan Group.

2.4 Site visits have been made and discussions have been held with the HIDB and the Master Plan Group concerning the siting of the Services Centre. Topographical and aerial surveys are in hand to map the area.

2.5 Discussions have been held with the HIDB to define the administrative and other functions that will be carried out at the Service Centre, and the offices and other facilities required. Sir Sadler Forster has been consulted concerning a recommended Staff Structure.

2.6 The Public Service Authorities have been consulted about the rooms, offices and other facilities they require to serve the Industrial Site at all stages of development, and their staff structures throughout these stages.

2.7 Organisations who have established or who intend to establish factories on the Industrial Site have been questioned about the functions they would like to see carried out at the Service Centre and the facilities that should be provided.

2.8 Discussions have been held with the Master Plan Group and the Industrial Estate Group about the facilities that should be provided by the Services Centre with reference to experience of similar industrial areas elsewhere.

3. INFORMATION OBTAINED

3.1 Details of the information obtained are shown on the attached Schedule as listed below:-

Schedule 1	Summary of Information concerning Area of Plots, population and requirements from the Services Centre.
Schedule 2	Summary of information concerning the requirements for a Computer Centre.
Schedule 3	Summary of Information concerning the requirements for a Police Station.
Schedule 4	Summary of Information concerning the requirements for a Fire Station.
Schedule 5	Summary of Information concerning the requirements for a Telephone Exchange.
Schedule 6	Summary of Information concerning the requirements for a Post Office.

4. ANALYSIS OF INFORMATION OBTAINED

4.1 From the discussions held to date with the HIDB, the various Consultants Groups, the Public Service Authorities and the users of the Industrial Site, the following conclusions have been drawn concerning the functions of the Services Centre. It must provide:-

1. A base for the Administration of the Industrial Area.
2. A base for the Public Service Authorities from which they can serve the Industrial Site.
3. A meeting point for the users of the Industrial Site and the Administrative Authority.
4. A centre for HIDB Services and for Commercial Services for the users of the Industrial Site.
5. A base for the maintenance of the Industrial Site.

4.2 The following negative conclusions have been drawn from the same discussions:

1. The centre will not be a recreational area.
2. It will not be a shopping area.
3. It will not deal with the routine technical problems of the factories;- this service will be moved closer to the industry on the Industrial Site.

4.3 The following enquiries have yet to be concluded:

1. Public Transport Authority - These should indicate how the problem of moving large numbers of workers

is to be tackled. They should enable conclusions to be drawn as to the best locations for bus stations and what facilities in the way of shelters, offices, refreshments are required.

2. Commercial Banks - From these the allocation of space for Commercial Banks in the Services Centre will be decided, and their location to fit in with the overall plan and with allowances for future expansion.

4.4 The Services Centre will be designed to provide for services in Phase I for an initial population of 12,000 people but able to deal with an increase ultimately to 25,000 people without further extension.

4.5 Provision will be made for expansion of the Services Centre to cater for the ultimate development of the Industrial Site by appropriate plan layouts of the Buildings. Their relation with adjacent buildings and with the overall plan of the Centre will be arranged to allow for the necessary expansion.

4.6 The site for the Centre will be to the west of the Cotton Institute and the Land Reclamation Centre, with access from the east by a road between these two institutions. Allowance will be made for connection in future to the Phase 2 and 3 road layout as shown on the Master Plan.

4.7 Approximately 23 hectares will be required for the Services Centre. This area will include for green areas, tree planting, landscaping, gardens and future expansion.

4.8 It is recommended that the Services Centre comprise the following buildings:

1. A Centre Building
2. A Computer Centre
3. A Restaurant for the use of managerial and office staff of the Centre, business visitors, etc.
4. A Police Station
5. A Fire Station
6. A Telephone Exchange
7. A Post Office
8. A ~~Maintenance~~ Depot

4.9 Centre Building

The Centre Building should provide the following amenities:

1. Approximately 1,000 sq.metres of office space for the Administrative, Commercial and Advisory Services.
2. A Conference Room to house 20-25 poople.
3. A Reference Library for the use of the HIDB.
4. A Public Concourse with Reception facilities. This would also house an exhibition of the products manufactured on the Industrial Site.

5. A Public Commercial Section, which would have a separate entrance to 4 above, and which would contain lock-up shops, An Import and Export Agency, A Transport Agency and a Travel Agency.

6. Rest Rooms and other amenities.

4.10 Maintenance Depot

This should include buildings, covered storage, garages and an enclosed yard to house the staff offices and equipment to carry out day to day maintenance and emergency repairs to the Industrial Site, Services Centre and Free Trade Zone. The following should be provided:

1. Offices and associated facilities for Administration staff and workers.
2. Garages and a small workshop for housing and maintaining Industrial Site vehicles such as street sweepers, rubbish disposal vehicles, lorries, field cars, small mobile compressors.
3. Covered stores for electrical items needed for electrical and plumbing repairs, cement, paint, carpenters stores, small hand tools and the like.
4. Open storage for emergency amounts of sand and aggregate, drain and water pipes and fittings, timber, scaffolding, etc.

4.11 Certain other buildings are still under discussion; these are:

1. A Health Centre
2. Commercial Banks
3. Petrol Stations

4.12 The Banks and Petrol Stations will not be designed by the Consultants. Areas will be allocated for these buildings in order to integrate them into the general planning of the Services Centre and the Industrial Zone. Their design and construction will be the responsibility of the individual organisations in consultation with the HIDB.

It will be necessary for the Consultants to make enquiries from the Banks about their requirements for space, and for any detailed ideas that they may have for their buildings. The Banks will be more closely associated with the Services Centre, will form part of it and will immediately affect the planning of the Centre.

It is envisaged that the Petrol Stations will have space allocated on the Industrial Site main roads.

5. SUMMARY

5.1 The aim during the first stage of work has been to collect information prior to the preparation of sketch plans and drawings of the proposed layout and buildings on the Services Centre.

[redacted] INDUSTRIAL SITE SALONIKA

[redacted]

INTRODUCTION

1. SITE BOUNDARIES AND MINISTERIAL DECREE

2. SITE RESTRICTIONS

   (a) Phase I

   (b) Phase II

   (c) Phase III

   (d) Salonika - Athens Highway

   (e) Unknown Enterprises

   (f) Power Line

3. PHASE I - PRESENT POSITION

   (a) Roads and Streets

   (b) Utilities

      (i) Water Supply

      (ii) Soil Drainage

      (iii) Surface Water

      (iv) Electricity Supply

      (v) Railways

   (c) Factories

   (d) Soil Investigations

   (e) Infrastructure Work

5.2 The objectives listed in 1.3 above have been set to establish the scale of the facilities that should be provided and to identify what these facilities should be.

5.3 Once these objectives have been achieved, planning of the Centre may logically proceed.

5.4 The estimate of population and population growth is the most important of the objectives, since all facilities have to be planned with a definite population in view. The figure of 50 people per hectare initially, increasing to 100 people per hectare as the Industrial Site expands has been derived from past experience and the known figures from established industries.

5.5 The site chosen for the Centre is consistent with the requirements of 4.1 and 4.2 above for the following reasons:

1. It is central to the whole Industrial Site.
2. It has ample room for expansion to north, south and west.
3. It is sheltered from the industries established in the Phase I area by the Cotton Research Institution and the Land Reclamation Centre and this seclusion may be safeguarded as the Phase III area comes into use by the disposition of the surrounding green areas.

4. No industries or structures are at present on the site to provide architectural or other limitations to planning.

5.6 The general needs of the users of the Centre have been identified under the headings listed in 4.1 and 4.2 above.

The users of the Centre comprise both those who will operate on and from it and those who will be affected by its operation.

Information is still required on the proposed staff structure but preliminary recommendations have been made by the Master Plan Group, and proposals for the Centre Building are based on these.

The requirements of the Public Service Authorities have been established with the exception of details of the Health Centre. Discussions will shortly be held concerning this with the appropriate Authorities i.e. the MIDB and IKA. The Consultants are considering their recommendations for the establishment of an Industrial Health Centre in the light of experience on similar schemes abroad.

All the factory organisations at present using or intending to use the Industrial Site have been canvassed for their views on the Service Centre. The factories in these categories take up 20% of the area of Phase I

so their views are held to be generally representative.

5.7 The scope and functions of the Service Centre have now been defined, generally as outlined in 4.1 and 4.2 above.

The conclusions listed in 4.1 and 4.2 above have been obtained for study of the Industrial Site as a whole and the type of population it will enclose.

For the most part the Service Centre will plan an unseen part in the lives of the population, who will be unaware of the Administrative functions carried out and of the fact that the Public Services, which they take for granted, will be based there.

The population will be transient, only being in the Industrial Site for purpose of work.

No housing development is planned in the immediate vicinity of the Industrial Site which would become a focal point.

5.8 From the above we have concluded that social, recreational and commercial facilities will probably not be required, but if circumstances warrant them they should in any case not be included at the Services Centre.

5.9 After discussion with the HIDB and with users of the Industrial Site it has been decided that the technical and industrial functions of the HIDB relative to the factories on the Site can best be carried out from one

or more Technical Centres located among the factories.

Such a Centre would comprise:

1. An office for Technical Advice and Information
2. A Workshop
3. A Toolroom
4. A Laboratory
5. Lecture Rooms and Office

Detailed proposals for these will be included in the Master Plan and with the Industrial Estate proposals. Discussions have been held with UNIDO and HIDB to clarify the requirements for the workshop and laboratory equipment.

The proposals for the Industrial Estate will also include an allocation of space for the provision of warehouses to be operated by the National Warehouse Company.

SCHEDULE 1

SUMMARY OF INFORMATION CONCERNING AREA OF PLOTS
POPULATION AND REQUIREMENTS FROM THE SERVICE CENTRE

Name	Initial Area (Hectare)	Option (Hectare)	Final Max No. of Employees	Remarks Concerning The Service Centre
1. GOODYEAR	28.00	-	350	TRASH DISPOSAL (200 KG of Rubber per day)
2. HELLAS CAN	3.30	-	360	FIRST AID FACILITIES, HAVE OWN CANTEEN AND WAREHOUSES
3. ST. REGIS HELLAS	3.50	-	60	BANKING, SOCIAL SECURITY, CUSTOMS OFFICES, RAILWAY ACCESS
4. ILLIOS TEN CATE	3.00	-	136	-
5. VARIART	1.00	0.50	180	-
6. APOSTOLIDIS	2.00	1.00	80	BANKING FACILTIES
7. VIOFIT	0.60	0.50	30	BANKING AND COMMERCIAL FACILITIES
8. KONTELLIS	1.00	1.00	67	WORKSHOPS, LABORATORIES
9. VEPSY	0.50	0.40	160	CUSTOMS OFFICE
10. APKO	0.25	0.25	200	FIRST AID POST
11. TOMPOULIDIS	0.50	0.50	53	CUSTOMS, BANKS, FIRST AID
12. TSENTELLIS	4.00	6.00	60	CUSTOMS, FIRST AID
13. KRALLIS	0.40	-	20	CUSTOMS FREE STORAGE
14. BOUTARIS	1.00	1.00	30	CUSTOMS, CHEMICAL LABORATORY
15. AERIA OLYMPOS	2.50	-	34	BANKS, CUSTOMS, TELECOMMUNICATIONS

Cont/....

Name	Initial Area (Hectare)	Option (Hectare)	Final Max No. of Employees	Remarks Concerning The Service Centre
16. VICTOR A.E.	0.50	-	30	CHEMICAL LABORATORY, BANK, RESTAURANT, CUSTOMS FACILITIES
17. T.E.M.E.	0.70	-	74	CHEMICAL LABORATORY
18. DOURAKIS	1.80	-	53	TELEPHONE EXCHANGE, CUSTOMS FACILITIES
19. KARAGIORIOU BROS.	2.00	-	84	-
20. TOULEBROS	0.80	0.70	17	-
21. ATLAS	2.00	-	27	CUSTOMS FACILITIES
22. THE TWO BROTHERS	0.30	-	8	-
23. AGROTIKI	0.25	0.25	120	CUSTOMS FACILITIES
24. PEPSI COLA	3.00	-	332	CRECHE, CUSTOMS FACILITIES, FIRST AID. HAVE OWN CANTEEN AND WAREHOUSES.
25. KESSELWERKE	4.00	3.5	600	APPRENTICE TRAINING, RAILWAY ACCESS
TOTALS:	66.90 15.60 82.50	15.60	3165	

Max. overall Density = 3165/66.90 = 47 people/Hectare

Min. overall Density = 3165/82.50 = 38 people/Hectare

SCHEDULE 2

SUMMARY OF INFORMATION OBTAINED CONCERNING THE REQUIREMENTS FOR A COMPUTER CENTRE

SOURCE:- SIR SADLER FORSTER AND MASTER PLAN GROUP

1.	**Overall Floor Area:**	500m^2 Initially
2.	**Area of Computer Room:**	100m^2 with false floor
3.	**Area of Plant Room:**	50m^2
4.	**Room Height:**	3.00m with 1.00m. above false ceiling
5.	**Staff Structure:**	1 Data Manager 2 Supervisors 3x2 Operators 4 Programmers 4 Punch Card Operators 1 Mailing Clerk 1 Secretary 6 On Control
6.	**No. of shifts worked:**	3
7.	**Expansion:**	Allow for 100%
8.	**General:**	These figures are typical of a Centre equipped with an ICL 1900 Computer, Card Reader, Data Bank and Time Printer.

SCHEDULE 3

SUMMARY OF INFORMATION CONCERNING THE REQUIREMENTS FOR A POLICE STATION

SOURCE:- MEETING WITH POLICE AUTHORITIES 16.7.71.

1.	**GENERAL**	
1.1	Will the whole Area be served by one Station situated in Phase I Area?	Yes
1.2	Will the Station be open 24 hours a day?	Yes
1.3	What facilities will be shared in common with the Fire Brigade?	None
2.	**PERSONNEL**	
2.1	How many policemen will be stationed on the Industrial Area at all stages of development?	18-20
2.2	What will be their ranks?	Director, Assistant Director, One other Officer, 2 N.C.O.'s, 15 Policemen
2.3	How many shifts will be worked?	Say 4 on night duty
2.4	How many civilian personnel will be attached to the Station?	None
2.5	How many women will be employed at the Station?	None

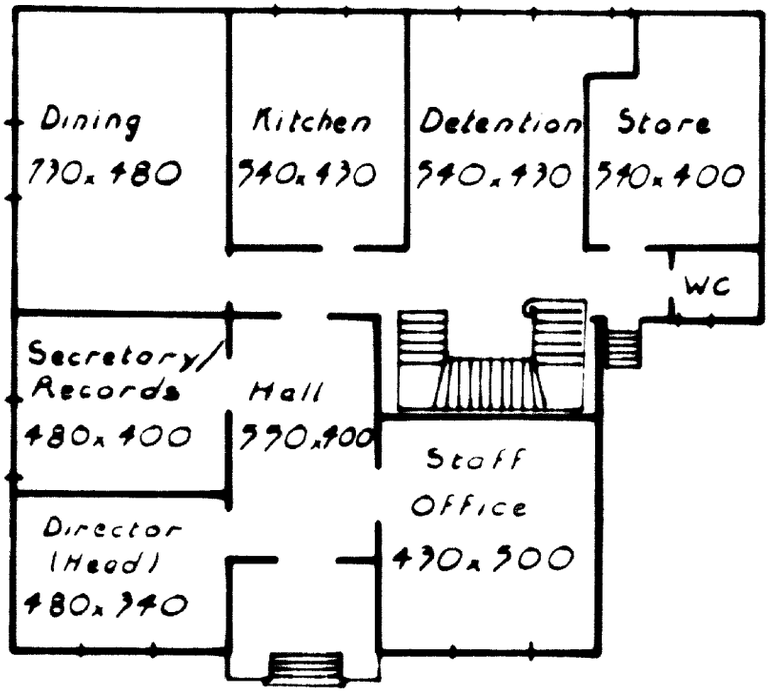
Cont/....

3. ACCOMMODATION

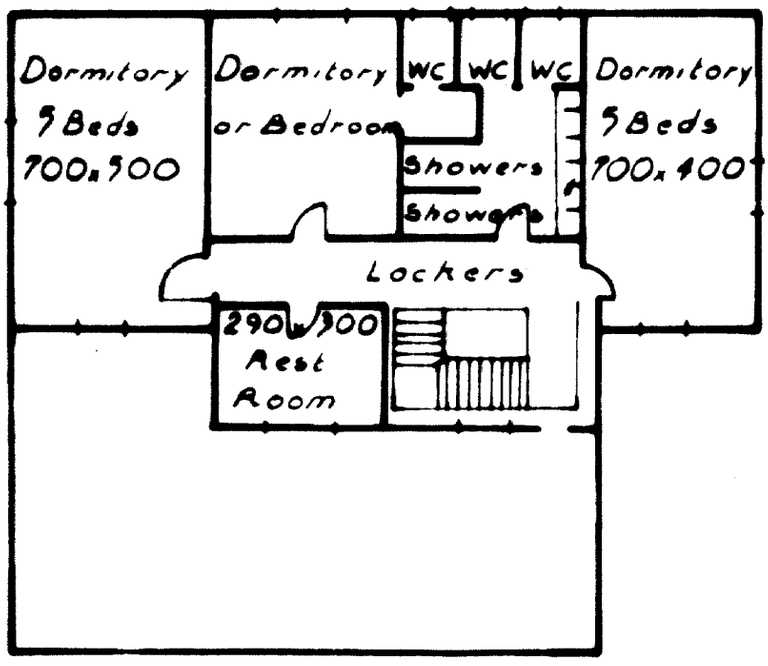
3.1	How many offices or rooms will be required, at all stages of development, for each of the functions listed below? 1. Reception) 2. Administration) 3. Interrogation) 4. Detention) 5. Filing and Records) 6. Stores) 7. Other)	See attached sketch
3.2	Which of the Rooms listed below will be required and at what stage of development?	
	1. Radio Room/Telephone Exchange	Yes
	2. Armoury	No
	3. First Aid Room	No
	4. Kitchen	Yes
	5. Dormitory	Yes
	6. Canteen	Yes
	7. Changing Room	No
	8. Locker Room	No
	9. Recreation Room	Yes
	10. Other	-
3.3	Will Telex be installed?	Yes
3.4	Will Radio/Telephone be installed?	Not immediately, but in near future

4. TRANSPORT

4.1	How many private cars will be parked at the Station?	3 or 4
4.2	How many Police cars and motor cycles will be in use at the Station?	2 Cars, 2 Motor Cycles
4.3	How many vans or other vehicles will be in use at the Station?	1 Van
4.4	How many garages will be required?	3 or 4
4.5	How many petrol pumps will be required?	None
4.6	How many ramps and inspection pits will be required?	One



Ground Floor Plan



First Floor Plan

Police Building
Type 'E'

4. EXTERNAL COMMUNICATIONS

(a) Roads

(b) Railways

5. TENTATIVE LOCATION OF SERVICES CENTRE

6. TENTATIVE LOCATION OF INDUSTRIAL ESTATE

7. TENTATIVE LOCATION OF FREE-CUSTOMS ZONE

8. SUGGESTED EXCHANGE OF LAND AND BOUNDARY MODIFICATIONS

9. POTENTIAL INDUSTRIES LIKELY TO BE ATTRACTED TO THE INDUSTRIAL SITE

10. METEOROLOGICAL RECORDS

11. HOUSING

12. LANDSCAPING

13. DOCUMENTS AND DRAWINGS

LIST OF APPENDICES

SCHEDULE 4

SUMMARY OF INFORMATION OBTAINED CONCERNING THE REQUIREMENTS FOR A FIRE STATION

SOURCE:- FIRE AUTHORITIES, SALONIKA

1.	**GENERAL**	
1.1	Will the whole area be served by one Fire Station?	Yes
1.2	Will the Station be on call 24 hours a day?	Yes
1.3	What facilities will be shared in common with the Police?	None
1.4	Will any special drainage problems exist?	No
1.5	What will be the average daily consumption of water by the Station?	Not known
2.	**PERSONNEL**	
2.1	How many firemen will be stationed on the Industrial Area at all stages of development?	50
2.2	What will be their ranks?	3 Officers, 47 Other Ranks
2.3	How many shifts will be worked?	3 x 15 men on each
2.4	How many women will be employed at the Station?	None
3.	**ACCOMMODATION**	
3.1	How many offices will be required?	5
3.2	Which of the following offices and rooms will be required, and at what stage of development?	
	1. Lecture Hall	Combined with Canteen and Recreation Room 15 x 15m.

Cont/....

2.	Equipment Store (Indicate the type of equipment to be stored)	1 Domestic 1 Other - each 5 x 5m.
3.	Dormitory	Rooms for Officers 5 or 6 per Dormitory
4.	Kitchen	Yes
5.	Canteen	-
6.	Recreation Room	-
7.	Changing Rooms	Combined with Dormitories
8.	Telephone Exchange (How many lines)	Yes, 1 Room
9.	R/T Room	-
10.	Workshops	No
11.	Other	-
3.3	Will a practise yard be required, and if so what size?	Concrete Paved Yard 500 sq.m.
3.4	Will Air Conditioning or Central Heating be required?	-

4. EQUIPMENT

4.1	How many fire appliances will be employed at the Station?	7
4.2	What will be their overall dimensions?	10 x 4 x 6m. each, Sliding Doors to give 5.5m. clear height
4.3	Will they require covered parking?	-
4.4	How many petrol pumps will be required?	Underground Storage 10 cu.m.
4.5	How many ramps and inspection pits will be required?	None
4.6	What size of yard will be required for testing and servicing appliances?	No
4.7	What is the minimum turning circle of the largest machines?	-
4.8	What height of hose mast will be required?	15-20m.
4.9	Will Radio/Telephone be employed?	Yes
4.10	How many vans or private cars will use the Station?	5 or 6

Cont/....

GENERAL: Stores, Kitchen, Canteen/Lecture Room/ Recreation Room and Guard Room/Radio Room all on Ground Floor. Offices and Living Quarters on floor above.

SCHEDULE 5

SUMMARY OF INFORMATION OBTAINED CONCERNING THE REQUIREMENTS FOR A TELEPHONE EXCHANGE

SOURCE:- MEETINGS WITH OTE SALONIKA

1.	Overall Floor Area:	150m^2 for Public Area, Public Telephones and Telex, Staff Room amenities and Canteen. 80m^2 for Battery and Generator Room. 200m^2 for Telephone Relay equipment and racks. 250m^2 for Air Conditioning Plant.
2.	Staff:	Ultimately 10 staff, structure not known
3.	General:	The drawing for a similar Exchange at Sindos will be made available shortly.

SCHEDULE 6

SUMMARY OF INFORMATION OBTAINED CONCERNING THE REQUIREMENTS FOR A POST OFFICE

SOURCE:- POST OFFICE AUTHORITIES, ÂTHENS 16.7.71.

1. **GENERAL**

1.1 One Post Office would be established to serve the Industrial Area during Phase I.

2. **STAFF**

2.1 At the beginning of Phase I, 8 people would be employed 3 of whom would be postmen and possibly 2 would be women. At the end of Phase I the total would be 15 people, 5 of whom would be postmen. For future development beyond that no figures were available, but as a rough guide 1 postman serves 5000 people and requires 2 people for administrative and other purposes.

2.2 Night shifts will not be worked as a rule, but if circumstances required, some night work would be done.

3. **FACILITIES**

3.1 3 General Administrative Offices would be required.

3.2 The following rooms and offices will be required:-

1. Public Sales Area with a counter at least 2 metres long.
2. A Sorting Office, approximately 4m x 3m.
3. A Strong Room as such would not be required, but 2 or 3 safes would be installed.
4. Not required.
5. Not required.
6. A small kitchenette or pantry for tea, coffee, etc. would be required.
7. Showers, W.C.'s, a Changing Room, a Locker Room were all mentioned.

Cont/....

3.3. The number of Post Office boxes would depend upon demand, 100 would be the maximum required, assuming each factory on Phase I had one, but this is unlikely as a delivery service would be provided.

3.4 No public telephone booths would be required. 3 telephones would be needed for Post Office use.

4. TRANSPORT

4.1 10 private cars

4.2 2 Post Office Vans

4.3 No motorcycles, but the Postmen could use bicycles, or mopeds, since the area is generally flat.

4.4 12 covered garages, two of which could be locked.

4.5 No petrol pumps.

4.6 No service facilities would be required except perhaps a workbench for minor repairs.

4.7 No special loading facilities would be required. All mail would be transported in bags weighing not more than 30 Kg.

SUGGESTED TYPES OF STANDARD FACTORIES FOR THE INDUSTRIAL ESTATE

INTRODUCTION

The Consultants are required to provide designs for four or five different types or sizes of standard factory buildings for modern light industry. Provision is to be made for 100% extension. The materials used for the construction of the framework and roof must be of Greek origin. The feasibility of prefabrication is also to be considered.

Before commencing the design of these factories, the Consultants wish to obtain general agreement as to the proposed size of standard factory and the principles proposed for the provision for expansion. Regarding the latter, it is suggested that unless a potential tenant can demonstrate to the contrary, provision for expansion beyond 100% should not normally be considered as it is likely to create an uneconomic provision of roads and services. In the absence of more specific information, the Consultants propose that the Industrial Estate should comprise a number of the following types and sizes of factory buildings which are diagrammatically shown on the attached sketch.

TYPE I - SMALL 'WORKSHOP' UNITS

Small workshop units where small components may be made or assembled or light repair work carried out.

The single units would have a floor area of about 65 square

metres and the double units about 130 square metres. Storage yards and parking areas would be additional to the above. Vehicle access would be to the storage yard and pedestrians to the opposite side of the production area. Each factory would have two toilets.

The factories would be terraced with load bearing cross walls which allows planning of single, double or even triple units.

No provisions for expansion of the basic unit is proposed. A tenant would rent one or more units and would transfer to one of the larger type factories when more space was required.

The height would be between 3 and 4 m and a group of these workshops could be constructed in about 6 to 9 months.

4 - 4.5

TYPE II - SMALL TERRACED UNIT FACTORIES

To encourage the growth of very small industries, terraced unit factories would be provided. This type would consist of a suitable number of units each having a workshop of 230 square metres and a small office of 28 square metres capable of sub-division, three toilets and a screened yard would be provided.

The layout is flexible in that the block of units would be planned in pairs capable of being formed into double sized workshops of 460 square metres, if required. They would have load bearing cross walls and a clear layout of 3.5 m is proposed. Vehicular access would be to the screened yard.

in concrete

No provision would be made for expansion of the basic unit

but the tenant would have the choice to rent a single or double unit.

TYPE III - SMALL EXPANDABLE FACTORIES

For small scale industry a framed type of factory is proposed with provision for expansion. These factories would have a unit size of about 300 square metres. They would be built initially in pairs so that each could be extended by 100% up to 600 square metres. Tenants would have the choice of renting one or more units up to a total area of 1200 square metres.

In each of the 300 square metre units, male and female toilets and an office and yard space would be provided.

The clear height proposed is 4.9 m.

TYPE IV - MEDIUM EXPANDABLE FACTORIES

This type is equivalent to four of the smaller units of Type III above (i.e.) a total of 1200 square metres for the initial construction. This factory type would be capable of expanding up to 2400 square metres or more, provided site planning allows. They would be framed as Type III but with the adjoining side space to be developed as required. The proposed clear height is 4.9 m.

TYPE V - LARGER FACTORIES WITH MODULAR EXPANSION

For larger scale industry the factory would consist of a single framed basic unit with modular growth either in one or two directions.

A framed structural grid or module of 9 to 12 m X 18 to 24 m and a height of 5.5 m is proposed. The initial unit would be between 1300 square metres and 1800 square metres and expansion would be in modular units.

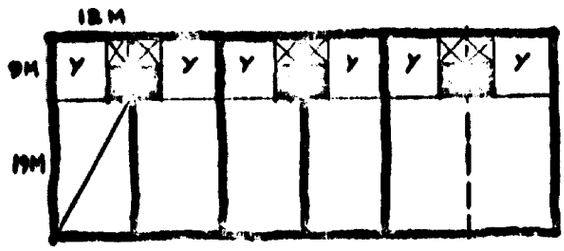
CAR PARKING

For the smaller types of standard factories, reasonable provisions for car parking will be made outside the yard area. For the large types, employing a significant number of employees, car parks will be provided to suit the needs of a group of buildings.

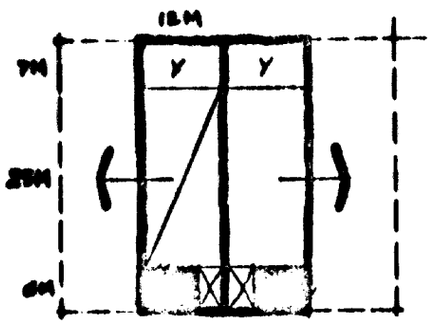
LIST OF PLATES

STANDARD FACTORY TYPES

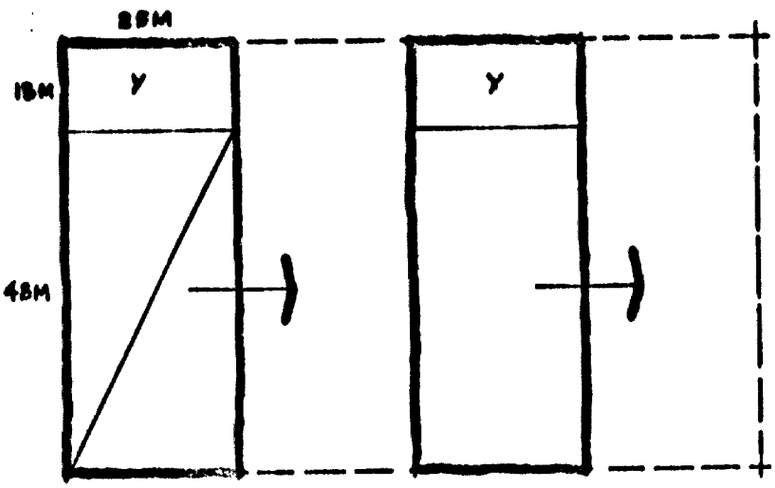
TYPE 1. SMALL 'WORKSHOP' UNITS



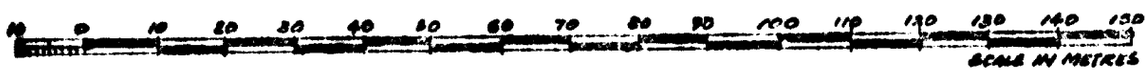
TYPE 2. SMALL TERRACED FACTORY UNITS

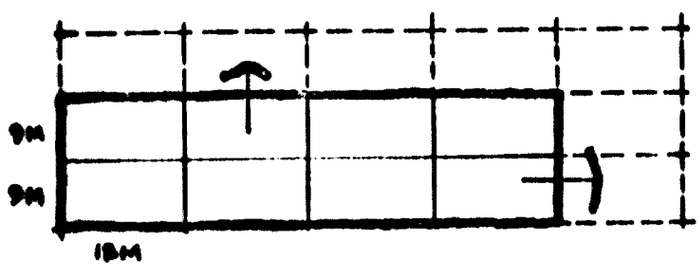


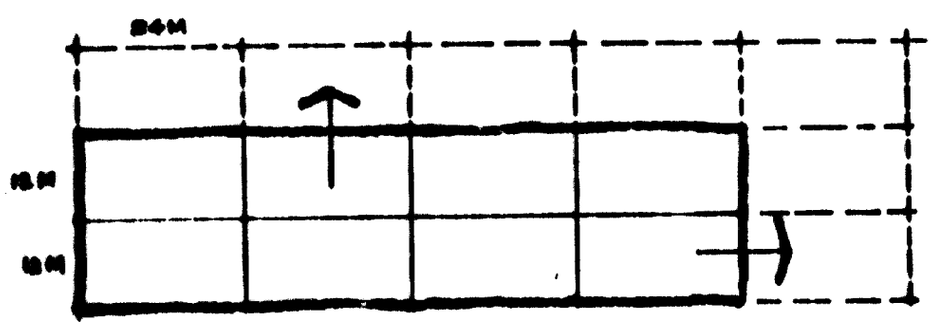
TYPE 3.
SMALL EXPANDABLE FACTORIES



TYPE 4. MEDIUM EXPANDABLE FACTORIES







TYPE 5. LARGER FACTORIES WITH MODULAR EXPANSION

LIST OF POTENTIAL INDUSTRIES

A. POTENTIAL INDUSTRIES OVER THE SHORT-TERM

1. Mechanical and Metallurgical Industries

Agricultural machinery

- Ploughs
- Harvester, Threshers
- Hay Pickers
- Trailers

Can Cases

Tanks and Containers

Chassis for trucks

Elevator cabins

Lamps - decorative and technical

Starters

Cables

Car Components

- Exhaust Pipes
- Fuel Tanks
- Silencers
- Screws, Gaskets, Wires

Office Furniture

Electric Motors and Pumps

Ventilators

2. Textiles

Cotton ginning

Thread manufacture

Ready Made Clothing

Womens
Childrens
Furnishings

Knitting

Bleaching and Dyeing

Acrylic and Man-made fibres

3. Other Clothing and Footwear

Footwear

Childrens
Adults

Leather Clothing

Small Skins Processing

4. Wood and Cork Industries

Furniture

Chipboard and Particle Board

Toys

5. Plastics Industries

Moulding and Fabricating

Containers

For Household Equipment

Toys

6. Paper and Paperboard

Newsprint

Packaging

7. Food Processing

Tomato Pulp and Juice

Vegetable Bottling

Soft Drinks

Bottling of Alcoholic Drinks

8. Construction Materials

Bricks

Asbestos-cement products

Aluminium door and window frames

Pipe manufacture

9. Chemicals

Insecticides and Pesticides

B. POTENTIAL INDUSTRIES OVER THE LONG-TERM

1. Mechanical and Metallurgical

Truck manufacture

Car components

Batteries

Air Conditioners

Refrigerators

Office Equipment (e.g. typewriters)

Domestic Appliances (cleaners)

Children's Bicycles

2. Food Processing

Tobacco

Confectionery

Sugar manufacture

3. **Wooden Materials**

   Floor Tiles/Parquet

4. **Glass Industry**

   Bottles and Containers

5. **Pharmaceuticals**

6. **Paint Industry**

   Soap and Detergents

7. **Electrical Products**

   Television Sets

   Record Players

   Generators

   Accumulators

   Transformers

METEOROLOGICAL RECORDS

The Ministry of Agriculture, Institute for Cotton Research, situated approximately 2 Km north of Sindos (latitude 40° 40' N, longitude 22° 49') central to the Phase I and II areas has extensive meteorological records going back to 1935 in some cases. The principal information is summarised below:

Temperature Records

	Average Monthly Mean Air Temperature (1946-1966) °C	Average Monthly Mean Min. Air Temperature (1945-1966) °C	Average Monthly Mean Max. Air Temperature (1945-1966) °C	Average Monthly Lowest Air Temperature (1942-1946) °C	Average Monthly Highest Air Temperature (1942-1946) °C
January	4.6	0.5	9.0	-6.3	15.9
February	6.1	1.2	11.5	-5.0	16.2
March	9.1	3.5	14.5	-2.8	22.7
April	14.3	6.8	20.4	1.0	26.5
May	19.0	11.4	25.9	6.0	32.0
June	24.3	15.5	30.1	11.1	36.0
July	27.1	16.3	32.7	14.4	37.2
August	26.3	16.1	32.0	14.0	38.1
September	21.9	14.5	26.2	9.5	34.1
October	15.7	9.9	22.0	4.0	28.3
November	11.4	6.7	16.2	-0.7	21.9
December	6.8	3.4	11.2	-4.0	16.1
Year	15.5	9.1	21.3	-6.1	38.6

Rainfall Records

	Monthly Rainfall (1938-1966)	No. of Rain days/month (1938-1966)
	[illegible] mm	
January	80.6	6.6
February	87.7	8.6
March	86.6	8.8
April	84.6	8.5
May	60.6	8.7
June	84.7	8.1
July	14.6	3.8
August	18.0	8.0
September	28.4	8.0
October	81.6	8.4
November	67.1	7.6
December	66.8	7.8
Total for Year	666.7	89.8

(1965-1966)

Spring	114.7
Summer	61.8
Autumn	148.0
Winter	189.8
Year	466.8

Wind Records

Percentage Frequency of Wind Direction (1957-1966)

Month	N	NE	NW	Direction S	SE	SW	E	W
January	24.4	12.3	40.0	2.2	2.2	3.3	11.2	4.5
February	22.2	10.6	37.2	5.3	3.7	4.3	13.8	3.0
March	18.9	11.5	24.3	11.1	6.2	5.5	19.3	3.4
April	14.8	11.6	22.1	19.0	8.1	6.3	14.9	3.3
May	11.1	10.9	23.9	17.6	12.0	7.5	13.8	3.7
June	8.5	8.1	26.6	22.1	10.6	11.5	9.5	2.7
July	6.6	10.5	25.3	22.7	8.4	16.2	5.2	3.2
August	6.2	9.0	25.9	20.0	11.2	16.2	7.0	4.0
September	12.6	11.9	18.7	18.4	13.5	15.6	4.7	4.6
October	13.4	12.8	21.3	15.6	9.2	9.8	13.2	4.3
November	19.8	12.0	25.6	8.6	7.6	7.2	15.7	3.7
December	25.6	11.2	36.0	4.5	5.9	3.2	9.3	4.7
Year	15.5	11.0	27.3	13.9	8.2	8.8	11.4	3.6

NW	27.3%
N	15.5%
S	13.9%
E	11.4%
NE	11.0%
SW	8.8%
SE	8.2%
W	3.6%

Wind Records

	Days of Strong (Force 6) and Very Strong (Force 7) Winds Beaufort Scale (1954-1966)
January	6.5
February	6.6
March	5.2
April	5.0
May	5.0
June	6.5
July	6.6
August	6.0
September	4.3
October	3.8
November	4.5
December	5.8
Year	66.7

APPENDIX NO.8

LIST OF DOCUMENTS TO BE STUDIED BY CONSULTANTS

1. Law 4456/27.8.1965 concerning Industrial Estates.

2. Royal Decree No. 750 concerning approval of Regulations for the operation of the Industrial Estate in Salonika dated January 1969.

3. Estate Sale Agreement.

4. P.E.Consulting Group Limited's Report of 10th April 1967.

5. Master Plan of Salonika - by Prof.

INTRODUCTION

The Consultants commenced work in the project area on 12th May 1971, when a start was made in the collection of information concerning the requirements for the industrial site. The Consultants planned to obtain the essential criteria in a period of 2½ months before proceeding with the preparation of the proposals for the Master Plan - Chapter I, Services Centre - Chapter II and the Industrial Estate - Chapter III.

During this period, terminating at the end of July, the Consultants have held discussions with a considerable number of Government and HIDB officials and others. In many cases, the opinions expressed and the information obtained from various sources has not, for one reason or another, always been consistent.

The purpose of this Report is therefore to set out, as briefly as possible, the essential information in connection with the site and the planning requirements and to obtain confirmation or advanced reaction to enable the Consultants to submit, by the end of September 1971:

(a) A Master Plan for the Industrial Site.

(b) A layout and design of a Services Centre.

(c) A layout and design for standard factories for an Industrial Estate.

(d) A layout for a Free-Customs Zone, if found to be feasible. The feasibility of this function is being dealt with in a separate Report to be submitted at the end of July 1971.

LIST OF DRAWINGS TO BE STUDIED BY CONSULTANTS

1. 1:5000 Boundary of Phase I area E.T.B.A. 1177 (7120/IN/S/2) received from Mr. Konsolas, HIDB, 14th May 1971.

2. 1:5000 Boundary Phases I, II and III E.T.B.A. 1177 (7120/IN/S/13) received from HIDB, Athens 1st June 1971.

3. 1:5000 Boundary Phases I, II and III E.T.B.A. 1177 (7120/IN/1) received from UNIDO, Vienna 17th June 1971.

4. 1:5000 Plan showing Road Layout for Phase I E.T.B.A. 209 (7120/IN/S/1) received from Mr. Konsolas, HIDB, 14th May 1971.

5. 1:20,000 Plan of Salonika showing proposed road network (7120/IN/S/5) received from Professor Triantafillidis.

6. 1:20,000 Plan of Salonika and surrounding region (7120/IN/S/6) received from Professor Triantafillidis.

7. 1:2000 Plan showing proposed and existing roads, etc. in Phase I by C.A. Panaghiotakis, Consulting Group, Athens (205) (7120/IN/S13).

8. 1:1000 Plan showing part of Water Supply Network, Phase I SHEET A39 (7120/IN/S15).

9. 1:1000 Plan showing part of Water Supply Network, Phase I SHEET A45 (7120/IN/S15).

10. 1:1000 Plan showing location of soil and surface water mains south of site for Phase I OTME A61 (7120/IN/S16).

11. 1:20,000 Plan showing layout of surface water mains for Phase I OTME A1 (7120/IN/S17).

12. 1:20,000 Plan showing layout of soil mains for Phase I OTME A2 (7120/IN/S16).

13. 1:20,000 Plan showing water supply network for Phase I OTME A3 (7120/IN/SA.

14. 1:5000 Plan showing general layout of surface water drainage for Phase I OTME A4 (7120/IN/S20).

15. 1:5000 Plan showing general layout of soil drainage OTME A5 (7120/IN/S21).

16. 1:5000 Plan showing general layout of water supply mains OTME A6 (7120/IN/S22).

17. 1:50 Typical Road Sections OTME B0 (7120/IN/S23).

18. 1:2000 Plan showing proposed telephone cables 303/32/24, 5 and 6 (7120/IN/S24, 25 and 26.

19. 1:1000 Survey Plan produced from survey at 1:5000 by Ministry of Public Works, Sheets 1 - 33 inclusive (7120/IN/S27 - 1 to 33 inclusive).

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(2 of 2)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

UNIDO INDUSTRIAL SITE SALONIKA

REPORT

ON THE ESTABLISHMENT OF A FREE-CUSTOMS ZONE CHAPTER IV

PART I FEASIBILITY STUDY

FOR THE INDUSTRIAL SITE AT
SALONIKA GREECE

JULY 1971

GIBB-EWBANK INDUSTRIAL CONSULTANTS
24 QUEEN ANNE'S GATE,
LONDON, S.W.1.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

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GIBB-EWBANK INDUSTRIAL CONSULTANTS

PROCESS AND INDUSTRIAL CONSULTING ENGINEERS

Partner Firms: SIR ALEXANDER GIBB AND PARTNERS EWBANK AND PARTNERS LIMITED
Executive Partners: D. B. MINCH, MAI PICE MASCE RICHARD BAILEY BSC(ECON) MBIM G. J. SHAW BEC PHD FIM
Consultant: G. E. WHEELER, FIMECHE MINSTPET Associates: H. BATEMAN BSC(ENG) MIMECHE MIEE R. A. CROW, MBIM

24 QUEEN ANNE'S GATE · LONDON SW1H 9AJ Telephone: (01) 930 2951/5 Cables: Inprecon London SW1
Telex: 25623

July 29th, 1971.

United Nations Industrial Development Organisation,
Lerchenfelderstrasse 1,
A - 1010,
VIENNA ... Austria.

For the attention of Mr. Gold.

UNIDO INDUSTRIAL SITE
SALONIKA

Dear Sirs,

In accordance with the draft contract forwarded to you recently for approval and signature we now have pleasure in submitting Part I of the Report on the Establishment of a Free Customs Zone, (Chapter IV) the Feasibility Study.

Yours faithfully,
GIBB-EWBANK INDUSTRIAL CONSULTANTS

Richard Bailey

R. BAILEY

RB/pb
Enclosure

FEASIBILITY STUDY ON THE ESTABLISHMENT OF A FREE-CUSTOMS ZONE IN THE INDUSTRIAL AREA, SALONIKA

TABLES.

APPENDICES

APPENDIX A. Visits and Interviews held in Athens, Salonika and Shannon.

B. Motives for the establishment of Industrial Areas, Estates and Zones.

C. Licence issued under the Customs-Free Airport (Amendment) Act 1958 (Copy).

D. Shannon Free Airport Development Company.

(i) General Management and Divisional Structure.

(ii) Outline of Divisional activities.

E. Companies established on the Shannon Industrial Estate.

F. Newly established manufacturing enterprises employing 20 persons and over 1967-1969 Nomos of Salonika.

G. Results of the survey of existing and planned industries in the Industrial Area.

H. List of Potential Industries.

I. Proposed layout of the Free-Customs Zone within the Industrial Area.

PREFACE

This is a preliminary report designed to assess the prospects for establishing a Free-Customs Zone as part of the industrial site in Salonika. Certain aspects of policy such as incentive policies and administration of the Zone have been only briefly examined at this stage. Other aspects such as an analysis of potential industries require greater investigation in order to draw up a list of priorities. In such cases, an indication has been given of the direction in which it is proposed to follow our studies in Part Two of the Report.

The Consultants would like to extend their thanks to members of the Hellenic Industrial Development Bank, Government Agencies and Ministries, and various organisations who were of assistance in the preparation of this Report during visits to Athens and Salonika. These are listed in Appendix A.

CHAPTER I

TERMS OF REFERENCE

The terms of reference agreed with U.N.I.D.O. for part one of the feasibility study into the establishment of a Free-Customs Zone on the Industrial site were as follows:-

Part One: Feasibility Study

(a) The Contractor shall undertake a feasibility study for the establishment and operation of a free-customs zone in an area of 40 ha. The study shall provide answers to the following questions:

1) whether it is feasible and desirable to establish the zone;

2) what will be the most suitable site and how much land should be earmarked;

3) what types of industries and, if need be, commercial activities will be attached to the free zone;

4) what types of facilities are required;

5) whether and to what extent it is necessary to provide such things as improved plots of land, standard factory buildings built in advance of demand, warehousing facilities and a commercial area.

(b) In determining the feasibility of the zone, the following factors which shall be examined and considered shall

The Consultants require the contents of this Report to be confirmed in general terms as a basis for satisfactory planning. To enable the Consultants to proceed with the next step of their work, in accordance with the programme, confirmation or advice of alternative requirements must be received within two weeks from receipt of this Report.

At the meeting held with MIDS in Athens on 7th July 1971, at which Mr. V.Poling, UNIDO representative for Salonika, was present, it was arranged that this Report would be discussed in Athens and agreed, or alternative requirements provided, some 7 to 10 days after its submission.

The Consultants expect to be able to discuss the Report on or about 10th August and, if this is not possible for UNIDO or MIDS, it will be discussed at some later time acceptable to all parties. Any delay would affect the final Report submission date but every endeavour would be made to keep this to a minimum.

include, but not necessarily be limited to the following:

1) Advantages and disadvantages of Salonika as a location

a) Suitability and geographical location of the site.

b) Local industrial development and other economic factors.

c) National economic development and its relevance to Salonika.

d) Availability of plans for infrastructure and utilities in Salonika.

e) Raw materials availability.

f) Manpower availability.

g) Transport and communications comparative costings.

h) Scope for development of local and foreign industry.

2) Potential industries and activities

A) Export industries.

b) Industries for processing hitherto exported raw or semi-processed materials.

c) Industries for processing imported raw materials.

d) Industries assembling imported components.

e) Introduction of appropriate service industries.

f) Entrepot activities.

3) Relevant experience of other Free Customs Zones

4) Local Planning

a) Types and sizes of industries suitable for location in the zone.

b) Selection of site for Free-customs Zone in relation to the Master Plan for Industrial Area.

5) The National Legal and Fiscal Framework

a) Existing fiscal and financial incentives.

(i) National

(ii) Regional

b) Administrative framework.

c) Legal aspects.

d) Other operational factors

(c) The Contractor shall submit the feasibility study in accordance with paragraph 2.09 d.

200.d. Free Customs Zone Feasibility Study

The Contractor shall submit the Feasibility Study required under paragraph 2.01 d. 1 in time to ensure it is received no later than 31 July 1971. Three (3) copies of the study shall be furnished for comment to the UNIDO, Vienna and two (2) copies to the UNIDO Project Manager. The UNIDO will inform the Contractor in writing of the comments on, or approval of, the study within twenty one (21) days after UNIDO's receipt of such study in Vienna. The Contractor shall give due consideration to UNIDO's comments in the preparation of the plan for the establishment and operation of the Free Customs Zone (Para. 2.01 d. 2).

SUMMARY AND CONCLUSIONS

In assessing the feasibility of a free-customs zone in the Industrial Area, Salonika, the study first examines the planning and operation of zones elsewhere. The Shannon Free Airport Development Company is considered in some detail (Chapter III), since it provides an example of a successfully planned and operating zone. The major reasons for its success are considered.

These aspects are vital to the successful establishment of a Free-Customs Zone in Salonika :-

(i) Good incentives and promotion policies.

(ii) Appropriate legislation and policies to ensure correct operating procedures.

(iii) Strict division of responsibilities between the Estate Management company and Customs Authorities.

(iv) Issue of licenses to companies under strict conditions to minimize the risk of smuggling.

Policies for the planning and operation of the zone are examined (Chapter IV).

Alternative approaches are considered and the creation of a free-zone compound is considered to be the most appropriate form for the industrial area in Salonika.

The zone will be mainly concerned with firms processing imported raw materials for export. The attraction of such firms will depend upon:

(i) making attractive conditions on the area

(ii) offering proper incentives and promotion activities

(iii) consistent policies on zoning and co-ordination will have to be carried out.

Consideration is given to the proposed administration and management of the zone. The establishment of an Industrial Area company with a special division concerned with the zone is recommended. The control and procedures necessary, incentives currently offered by the Government and legal aspects for establishing and operating the zone are considered. An indication is given of the direction of studies for Part II of the Report.

The impact of a Free-customs zone in Salonika is examined in Chapter V. Its major effect can be expected on the balance of payments, regional development, provision of employment and attraction of foreign investment. However, its viability is dependent upon a number of factors which the study examines.

The location of the site is found to be favourable both with regard to markets and communication facilities. Expansion of the existing Free-Customs zone at the Port of Salonika is not considered to be a viable proposition.

The location will qualify for provincial incentives and these coupled with other cash and credit incentives and incentives for foreign investment (which will be examined in Part II of the Report) should prove to be attractive to foreign investors.

Further attractions will be the infrastructure facilities available both on the site and in Salonika.

Manpower availability is examined and should not prove to be a major deterrent to foreign investors.

Further advantages offered in Salonika are the high level of industrialization and the cultural and recreational facilities offered by the town which should prove attractive to foreign investors.

Potential industries which may be attracted to the area are examined in Chapter VI. In general industries in the following sectors may be expected:-

Textiles, Chemicals, Plastics, Pharmaceuticals, Paper and Packaging, Metal products, Footwear and Clothing, Furniture, Food processing, Electrical equipment, Electronics, Handicrafts, Leather and furs, Toys, Petroleum products and Tobacco.

Chapter VII gives consideration to planning aspects and location of the zone.

It is recommended that the zone be placed in an area of 60 ha bordering the Athens - Salonika railway line in the southern part of the area.

Types of facilities required by the zone are briefly mentioned. A transportation complex, possibly including a container terminal is recommended to be sited within or in close proximity to the zone.

Recommendations arising from the study are listed in Chapter VIII.

Planning and operating aspects for the free-customs zone/compound will be considered in detail in the Final Study.

CHAPTER III

FREE-CUSTOMS ZONES - CONCEPTS PLANNING AND OPERATION

with reference to the experience of

Shannon Free Airport Development Company

1. Definition

A Free-Customs Zone may in broad terms be defined as an Area into which it is permitted to import material requirements free of duty and without customs control provided that the material is used for processing or manufacturing within the Zone and exported in any form without crossing the border limits of the free zone into a customs territory.

2. Functions and Advantages

There are more than one hundred free customs zone throughout the world, established by executive decree, treaty or legislative action. Some like Hong Kong, Tangiers and Hamburg have a long tradition as free trade cities. Others are a little more than fenced in buildings near border towns. Still others are modern enclaves with a wide range of warehousing, administrative, manufacturing and material/handling services. These latter include such well know free port areas as Colon in Panama, Shannon in Ireland, Antwerp in Belgium and others in Western and Northern Europe. They are managed with modern techniques using staff and services that make it relatively simple to engage in foreign trade at minimum cost with tangible rewards.

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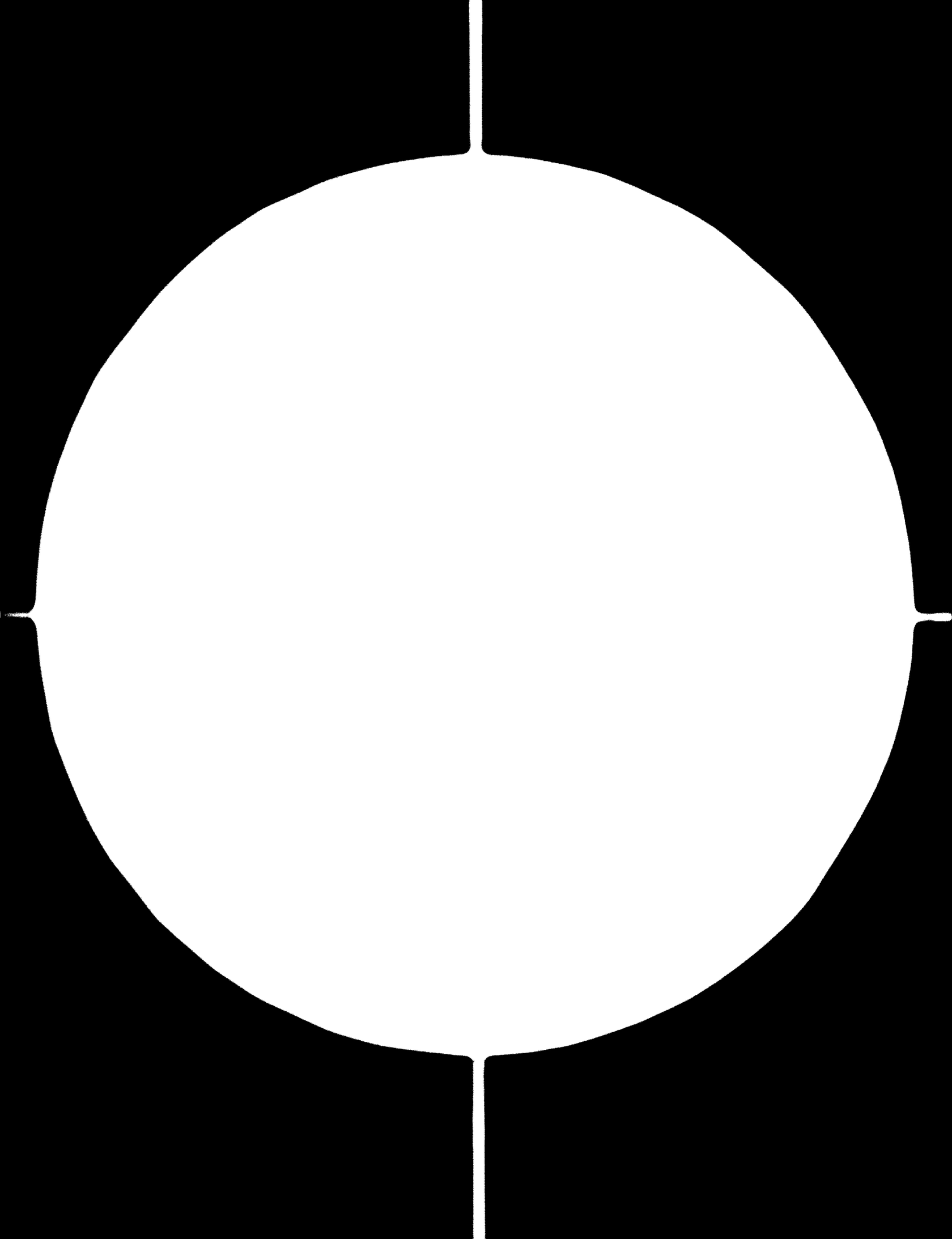

explanatory and outlines the requirements which have to be fulfilled by the firm before it is allowed to remove the goods into the state. It covers both the removal of the goods and their return to the Free Airport. It is presented in duplicate - one copy being retained by the customs officer, the other accompanies the goods. The goods are covered by bond while they are outside the Free Customs Zone.

(b) Administration of the Customs Free Zone

The administration of the industrial estate is the function of the Shannon Free Airport Development Company. The Company acts as estate manager i.e. it builds factories, leases them to industrialists, collects rents, maintains the property, undertakes security etc. Basic to this task is the promotion of industry - it attracts foreign industry to the estate. Through the Company licenses are issued to the industrialists by the Minister for Industry and Commerce allowing them to set up operations with the Free Customs Zone. Appendix D shows a breakdown of the management structure of the Company. The Company is not responsible for the control of Free-Customs Zone aspects of the industrial estate. This is the responsibility of the Irish Customs Authorities. The Customs Authorities were already located at the

Airport before the setting up of the industrial estate and it merely required an extension of their activities to cover the control aspects of the Free-Customs Zone. It is obvious that a Company such as the Shannon Free Airport Development Company could not be responsible for the attraction, promotion and continuing development of industry, while at the same time endeavouring to ensure that industry complied with a set of regulations and procedures. This from the Company's viewpoint would constitute a conflict of interests and would make both tasks untenable. The customs administration within the Free Customs Zone is organised along the traditional customs lines - one preventive officer has overall responsibility for the functioning of both the customs free zone and the normal customs administration connected with the airport itself; he acts as the final arbiter in all disputes and questions of procedure, and as such makes himself freely available and accessible to industrialists on the estate. The accessibility of such a person is thought to be of extreme importance by the industrialists on the industrial estate.

(c) Control

As stated previously control of the Free-Customs Zone rests completely with customs administration within the Zone. Control is ensured in three basic ways

(i) creation of adequate documentation procedure

(ii) the existence of a physical boundary

(iii) the right of frequent inspection by the customs authorities of the factories on the estate.

Both (i) and (ii) above are interlinked - the documentation dovetails with the existence of special customs stations at the main entrances and exits to the Free-Customs Zone. As stated in the outline of the operation of the Free-Customs Zone, all carriers of goods moving into and out of the Zone are required to stop at these customs stations and present their documentation. They can be searched, seals can be broken and a general visual inspection can be carried out of goods. More important is the statistical record of all incoming and outgoing goods kept by Customs through this documentation procedure. The Customs Authority will also have records of goods coming directly from the Airport itself into the Customs Free Zone.

This will enable the Authorities to keep an accurate check on the operation of each Company on the estate. It will form the basis for their frequent inspection of the accounts, stocks of raw material, semi-finished goods and finished products etc. of the various firms. In practice inspection at Shannon is carried out on a monthly basis - each manufacturing firm is inspected roughly once every four weeks. Under various acts

of Parliament, heavy penalties can be incurred by firms which do not comply with the regulations as laid down, or who are found to be engaged in activities contrary to those for which a license was issued. The ultimate penalty in this regard is the revocation of the manufacturing license for any Company which contravenes the law.

(d) Conclusions

The Consultants have deliberately emphasized in detail the operating and administration aspects of the Free-Customs Zone at Shannon. Once the economic viability of the establishment of such a zone has been determined, proper control and procedure are necessary for its effective functioning.

The two most important aspects of operation are as follows:-

1. The administration of the Industrial Estate is in the hands of a separate development organisation - the Shannon Free Airport Development Company which is responsible for the administration, the promotion and the overall success of the industrial estate. Control of the movement of duty free goods into and out of the Free Customs Zone, compliance with the Customs laws and regulations etc. are functions undertaken by the Irish Customs Authorities.

9. Licences are issued to companies enabling them to set up operations on the estate whether that operation be processing of semi-finished goods, assembling of components, warehousing, re-packaging or purely commercial or service operations. These licenses are only issued if a firm gives the under-taking that it will export all or nearly all of its finished product. This together with the operation procedures outlined above minimises the risk of smuggling of goods.

CHAPTER IV

POLICIES FOR PLANNING AND OPERATION OF THE FREE-CUSTOMS ZONE SALONIKA

The industrial area envisaged for Salonika covers an area of 982 hectares or roughly 2,500 acres. This is a major industrial area even by international standards - for example the industrial estate at Shannon Airport when completed will cover an area of 300 acres and will employ 10,000 people.

The kinds of industry which will set up in the Area will be broadly of three types:

1. Firms processing native raw materials for the home or export market e.g. a firm using some of the output of Hellenic steel to make machine parts for the Greek market or possibly for export to the E.E.C.

2. Firms processing imported raw materials for the home market (import substitution) e.g. The existing Goodyear Tyre Company.

3. Firms processing imported raw materials exclusively for export e.g. Firms manufacturing special cutting tools or precision machine parts - getting their steel from France or Italy and selling the finished product into the E.E.C.,or textile companies processing imported raw materials for re-export in a finished form. In addition firms may process semi-finished goods, assemble components into final products, re-package goods etc. The scope for development of various industrial sectors is examined in Chapter VI

These categories of industries are expected to be attracted to the industrial area. (e.g.most of the existing and known potential new firms are in these categories.)

However, it is obvious that the Bank will have to rely to a significant extent on the attraction of industry based on the processing of imported raw materials or semi-finished goods for export, and the assembly of components etc. for re-export. In the light of the existing relatively undeveloped nature of industrial activity in Greece this implies the attraction of foreign industry - capital and expertise. This in turn has many implications for the industrial area and for the H.I.D.B. itself.

An assessment made in Chapter VI of the type of industries to be attracted shows that for the most part they are relatively mobile and therefore will be in the light to medium range, relatively labour intensive and not heavy users of land. On the Shannon industrial estate, 26 manufacturing firms employ over 4,000 workers; their investment in fixed assets is roughly £8 million, and the total floor area involved is less than 1½ million square feet. A list of manufacturing firms at Shannon is shown in Appendix E. The attraction of this type of industry will mean that the Bank will have to ensure:

(a) conditions on the industrial area are made as attractive as possible for industry,

(b) that the range of incentives for the attraction of foreign

industry is competitive in international terms and that the promotion activities undertaken by the Bank are geared to the size of the task confronting them.

(c) That consistant policies are carried out with regard to such aspects as zoning and co-ordination of plans for industrial development and urban and regional planning.

(a) <u>The attractiveness of the industrial area.</u>

One of the ways of making the industrial estate as attractive as possible to the kind of industry envisaged is the establishment of a free-customs zone associated with the area. Firms operating within the free-customs Zone would be facilitated by the absence of complicated and time consuming customs procedures (connected with both the importing and exporting of goods), and this in turn constitutes a real industrial promotion asset. The Treaty of Association with the E.E.C. should prove a real asset in the efforts to attract foreign industry to Salonika.

In addition, the relatively underdeveloped nature of the markets in close proximity i.e. Eastern Europe, and North Africa, would seem to indicate that the Bank will have to organise it's industrial promotion efforts in the short-term on the basis of the full exploitation of the opportunity which entry to E.E.C. markets gives.

The firms to be attracted will, by and large, come from countries at present outside the E.E.C. e.g. Japan, U.S.A., Canada etc.

We believe that the creation of a Free-Customs Zone, associated with the industrial area is a basic pre-requisite to the attraction of these firms to Salonika.

(b) The Free-Customs Zone - Alternative Approaches.

At this stage of the study it has not been possible to develop reliable guidelines with respect to the number of firms likely to be attracted which would be basically import/ export oriented. Having analysed the work already done by the Bank in the area of existing Greek industry, and in the light of experience elsewhere, it is reasonable to assume that foreign firms will have to play a major role in Economic development in Greece. The attraction of foreign firms employing a substantial number of people over a long period of time is a major task. While it is difficult to devise a method of assessing the likely number of foreign firms to be attracted and the area they will require, an indication has been given of the type of industry that may be established. (Chapter VI)

Three alternative approaches are envisaged to the question

of the location of a free-customs zone at Salonika associated with the industrial area. They are as follows:-

(i) to designate all of the industrial area as a free-customs zone

(ii) to designate a specific site within the industrial area as a free-customs zone

(iii) to establish a free-customs compound within the industrial estate.

(i) <u>Designation of all the industrial area as a free zone</u>

If the overall objective of the industrial area development was to attract foreign industry based on imported raw materials and exporting the finished product, then this would be the most obvious and simple solution to the problem. However, the industrial area itself will attract firms serving the Greek market and/or using native raw materials. e.g. of the 18 firms which either have set up or are at the discussion stage most appear to be serving the Greek market and some at least are using native raw materials. This trend will undoubtedly continue for some time until the potential of the Greek market is fully exploited. It is still possible in theory to designate the whole of the area as a free-customs zone. The advantage of this approach would be that customs control problems would be minimised since the boundary would be clearcut and capable of supervision and fencing etc., while at the same time the industrial area

The most common characteristic associated with these free-customs zones is their proximity to international transport facilities - either air or sea, and in some cases rail. By virtue of this location the modern well operated free trade area provides two important and fundamental services to management -

1. it reduces the burden on managers by providing central facilities at forward distribution centres,and
2. it simplifies the manipulation (whether the manufacture, labelling, processing, repackaging or just storage) of merchandise.

Originally the concept of free-customs zones applied basically to the first type of service i.e. providing services which would facilitate break-bulk operations and what is now known as entrepot trading. The main advantage of this to the native country was that it attracted traffic to the port (whether airport or seaport) which in turn had an impact on the economic development of that area. The basic objective therefore was to generate regular traffic rather than the creation of direct employment. However, latterly free-customs zones are being used increasingly as a tool by various governments to attract and facilitate the operation of manufacturing and processing industry, especially in developing countries. In such cases free-customs zones

company would be given maximum flexibility in the location of industry on the area. The disadvantages of this kind of system would be that one would have to set up customs controls and licensing arrangements for industry serving the Greek market thereby placing these firms at a positive disadvantage, minimising the attractiveness of the estate for "Import-substitution" and other home market firms. This would seem to offset any advantages which would accrue to other firms in the zone especially since the initial development of the estate will depend largely on the attraction of home market oriented firms. This would also have the disadvantage that policies such as this would alienate industry which is already set up in the area and would probably detract from the impetus gained at this point of time.

(ii) <u>The designation of part of the industrial estate as a free-customs zone</u>

This is the most straightforward solution in terms of customs procedure and control. By designating a specific limited area as a free-customs zone one would be gaining the advantages associated with the first solution i.e. the clearcut boundary and easier control etc. while at the same time gaining the additional advantage that all the importing/exporting industries would be located in the same fenced off area and would therefore be easy to handle and possibly easier to attract to the industrial zone. The type of industry as stated previously likely to be attracted is in the light and medium range with generally speaking, high standards of cleanliness, low atmospheric pollution, little or no

effluent etc. These firms as a general rule do not want to be located in the midst of heavy,noisy and relatively dirty industry or even in close proximity to such industry, and would therefore seek a "light industry" environment in which to locate.

The basic disadvantage of this solution would be that the area of the free-customs zone would by definition, have to be limited, and this in turn would limit the flexibility of an industrial area company in attracting and locating industry on the area. It would call for the designation of a sufficiently large area of the estate at a very early stage, thereby tying up land that may not be used for many years to come. This would be necessary to ensure that sufficient land area was made available to meet the requirements of incoming industry over the long term. This disadvantage could be offset somewhat by an arrangement with customs whereby the area of the free-customs zone itself would be flexible and could be extended as required. If this proved feasible then the initial allocation of land for the free-customs zone could be quite small with the proviso that the location of the zone would be chosen carefully allowing sufficient room for expansion in the long-term. This implies that the land designated for expansion would have to be "frozen", and omitted from consideration for other types of industry.

(iii) <u>The creation of a free zone "compound"</u>

This solution is an attempt at a compromise between (i) and (ii)above. By the creation of a free zone compound, is meant the designation of a certain area within which a warehousing

complex would be set up and which would have up-to-date and sophisticated transportation facilities (e.g. container facilities) either within the Complex or in close proximity. Goods imported into Greece would be bonded through the country from the port of entry to this warehousing area. These goods would then be distributed as required to the import/export firms on the estate under licence without the payment of duties and with specially adapted customs procedures.

This solution has many advantages, the main one being that it gives maximum flexibility to the Industrial Area company with regard to the location of industry in the Area. i.e. firms exporting and importing could be located side by side with those serving the home market while at the same time enjoying the advantages of a free-customs zone. In effect this would mean that any part of the area could become a free-customs zone as far as foreign import/export industry is concerned.

The most obvious disadvantage of this scheme would be the introduction of fairly rigid customs controls which would be necessary to supervise the operation of the Compound. It would mean regular and frequent inspection of firms on the estate using the compound facilities - examining their accounts, their stocks of raw materials,

semi-finished and finished products etc. It would, in effect, limit to some degree the type of industry which the Industrial Area Company could attract to the industrial area e.g. it could not attract a company producing high duty goods for the export market because of the strong possibility of smuggling out of the industrial area and into the home market. This can be overcome by the introduction of very severe penalties for violation of the laws e.g. license withdrawal . Care would have to be taken not to create a "wrong mix" of light, heavy and medium industry firms located in close proximity to each other. (This problem could be overcome with careful designation and control of incoming industry).

THE CONSULTANTS RECOMMEND THAT THIS APPROACH IS THE MOST SUITABLE FOR A FREE-CUSTOMS ZONE IN SALONIKA.

(c) Proposed Administration and Management of the Zone.

The administrative arrangements would be broadly similar for both the Compound and the Free Zone proposals.

It appears at this stage that an Industrial area Management Company will have to be set up to cater for the whole industrial area.

This Company should have functions broadly similar to those which the Shannon Free Airport Development Company carries out with regard to the Shannon Customs Free Industrial Estate. The exact nature of the powers and responsibilities of this Company will be set out in the recommendations of the final report. However for the purposes of this Report it is assumed that they will in large measure be similar to those now enjoyed by S.F.A.D.Co. at Shannon.

It is recommended that the Company should from the outset have a high degree of autonomy.

The Company will be responsible for the physical establishment of the Zone or Compound (including the building of factories and other facilities), for the Promotion of Industry to the Zone or to the Area (in connection with the Compound), for the day-to-day management of the zone/compound (maintenance, rent collection etc), and for the continuing planning of the Zone/Compound. Appendix D outlines the management structure and division of responsibilities for S.F.A.D.Co. This could be used as a basis for the creation of the Industrial Area Company.

In both cases the Company will have responsibility for the development of <u>all</u> of the estate, - their function with regard to the Free-Customs Zone would form only part of their overall task. It may therefore be deemed necessary to have a special Division within the Company to cater for the administration of the Zone or Compound. This Division would be concerned with day-to-day administration while relying on other Corporate Divisions for Promotion, Planning etc. It would have many of the functions falling under the Development Division in the S.F.A.D.Co.management structure, as described in Appendix D.

It is necessary to stress the importance of splitting the <u>Management</u> and <u>Control</u> responsibilities with regard to any Free-Customs Area. The Company should only be responsible

for the setting up, promotion, planning and administration of the Zone. It should not be involved in Customs Control and Procedures - one of its basic tasks will be to ensure that industry on the estate is functioning smoothly, and this would sometimes entail acting as an intermediary in the many customs procedural problems likely to arise, especially in the initial period.

(d) Control and Procedures

Customs Control of the Zone or Compound should be the responsibility of the National Customs Authorities. The description of the Control and Procedures operating at Shannon given in Chapter III are generally applicable to all Free-Customs Zones. The most significant aspects of these arrangements which might be relevent to the situation in Salonika are as follows:

(i) Within the Zone or Compound, a Central Customs Station would have to be set up, with full facilities for storage of records etc.

(ii) The position of Customs Head within the Zone should be of sufficiently high status to allow for the maximum autonomy in making decisions regarding the day-to-day operation of the Customs Regulations.

(iii) A Customs Post should be located at each entrance and exit of the Zone or Compound, at which all ingoing and outcoming traffic would be obliged to stop for checking.

(iv) The documentation necessary as a basis for the control of the movement of goods could be based on that currently in use elsewhere. The basic principle behind

Such documentation is that it gives the Customs Authorities an accurate record of all goods moving into and out of the Free Zone. It will be necessary to have similar arrangements at Salonika.

In the event of the Compound proposal being accepted, it will be necessary to introduce an even more rigid system of export-reporting, since the firms would not be enclosed by a Boundary Fence and therefore would have a greater opportunity to smuggle goods into the home market. In this case the Customs Authorities would have to be informed of every export shipment made by firms using the Duty Free Compound. An Export Document would have to be completed showing description of goods, weight, value, consignor and consignee etc. This reporting procedure would be made more thorough if all goods had to pass through the Compound on leaving the estate. This may be the case if a complex of transportation facilities is established within the Compound.

Frequent inspections of factories would have to be carried out by Customs officials, especially under the 'Compound' arrangement. Stocks of raw materials, finished and semi-finished goods, as well as the accounts and books of each firm would have to be inspected. Customs officials will already possess documentation showing the precise quantities of duty-free goods imported by each firm. The

onus would then be on each firm to show that such materials were still within the factory.

(v) Severe penalties for breaches of the Regulations should be laid down in the new law. It is recommended that any firm found in serious breach of the law should have its manufacturing license revoked.

(vi) Firms should only be allowed to take advantage of Customs Free arrangements under special licence. The new law should outline the conditions under which this special manufacturing licence can be granted and of equal importance, the conditions under which it can be revoked.

It is recommended that the Greek Customs Authorities visit some Customs Free Zone Industrial Estates before finalising controls such as those outlined. The system of control described above should be regarded as a general guideline as to the type of system required in Salonika. The eventual system to be adopted will have to be created and implemented by the Greek Customs Authorities, within the framework of their existing procedures and traditions.

Detailed proposals for the management and administration of the Free-Customs compound will be made in Part II of the Feasibility study, after full consultation has taken place with HIDB and with the Greek Customs Authority on the practicability of the proposals.

(e) Incentives and Promotion of the Free-Customs Zone

At this stage of the feasibility study a summary is given of the incentives offered by the Greek Government. In Part II positive recommendations will be made on the special incentives required in order to improve the attraction of a free-customs zone.

Incentives offered for Economic development in Greece are adequately described in detail in the HIDB publication "Greece: Investment Guide" (pages 87 - 107). Briefly any investors establishing themselves in the free-customs zone in Salonika will be entitled to the following incentives:-

1. General Tax and Credit incentives.
2. Incentives in favour of provincial enterprises.
3. Incentives in favour of export enterprises.

The second category of incentives are described elsewhere in this study (Chapter V). The Free-Customs Zone is especially concerned with the third category.

Incentives in favour of export enterprises

Inducements offered by most developing countries tend to follow a similar pattern. In addition to some guarantee against expropriation and non-business risks, foreign investors are usually offered general incentives such as tariff protection, duty-free entry for machinery and raw material inputs and freedom to repatriate profits and capital in a convertible currency.

In the case of Greece relevant incentives offered may be summarised as follows:-

Law Number	Incentive Offered
(i) 2687/1953	The Basic Law Governing foreign investments offers various benefits including repatriation of capital as follows: (i) 10% (as capital) of capital imported from abroad. (ii) Profits up to 12% of approved imported capital. (iii) 10% for payment of interest where capital has been imported as a loan. Higher amounts may be allowed to foreign companies manufacturing for export.
(ii) 89/1967	<u>For companies setting up regional offices but not engaging in business activities</u>. Exemption from import duty, other taxes and charges revenue stamp tax, luxury taxes and any other existing or future taxes on imported items of equipment necessary for operation of offices in Greece, exemption of income from income tax. Foreign employees not permanently resident are exempt from Greek tax.

may be regarded as part of a governments' overall plan for development of a particular region or area. The motives for their establishment thus fit into the general pattern of policy whether it be the creation of employment, the promotion of exports, industrialization or regional promotion. These motives are summarised in Appendix B. It is within this context that a free-customs zone at the industrial area in Salonika would be meaningful.

The basic function of a free-customs zone is to facilitate the setting up of industry based on imported raw materials which would export most or all of the finished products. The most notable free-customs zones functioning in this manner are Shannon, Ireland and Colon, Panama. Both these zones are associated with international ports (airport and sea-port).

The Free-Customs zone/Industrial Estate at Shannon provides an example of the impact which successful development and operation of a zone can make on regional and national development:-

> Since the establishment of the Shannon Free Airport Development Co. Ltd. in 1959, 48 firms have been attracted to the Industrial Estate - 26 manufacturing and 22 service and warehousing establishments.
>
> Total value of investment as of March 31st, 1971

(iii) 147/1967 amended by 603/1968

Inducements for minimum investments of Dr. 10 m for new investments and Dr. 5 m for expansion of existing investments.

(a) Under certain circumstances, the Government will provide facilities reducing the cost of money borrowed in Greece by up to 4% (provided that this does not reduce the interest cost below 3%).

(b) For assets acquired after October 9, 1967 additional <u>increases in depreciation allowance</u> are granted dependant upon the region of the investment:-
For Salonika a 100% increased allowance is made.

(c) <u>Tax Free Profits</u> for acquisition of new capital assets and formation of a working capital fund (with certain limitations and within a period)

(iv) Others 4171/1962

Measures to stimulate the development of the country's economy applicable to productive investments over £2 m.

4256/1962 The establishment and expension of Industrial and Handicraft enterprises.

4002/1959 Allowances for accelaratad depreciation and formation of reservas.

Basically thasa can ba described under two broad categorias:

(1) Elimination of disadvantagas and provision of business security through safeguards, guarantaas against expropriation and favourable repatriation of capital.

(2) Special advantagas such as reduction in taxas and exemption from duties, supply of resources (e.g. electricity at reduced pricas), grants of monopolias.

While thasa incentives may ba comparable with thosa offered in othar countries, there may be specific instances where further concessions may be needed, e.g. cash grants or tax holidays as offered by the Industrial Development Authority in Ireland. In the latter case, profits derives from export of Irish manufactured goods get total (100%) relief from Irish taxas up till 1985 and partial relief for a further five years.

The existing range of tax incentives offered by the Government will be examined in Part II of the feasibility study, in the light of the wide variety and depth of

incentives offered internationally. In particular, recommendations will be made on the following:-

A. Fiscal incentives

(i) Exemption from import duties.

(ii) Selective export subsidies.

(iii) Corporation and business tax reductions.

(iv) Tax holidays.

(v) Other tax exemptions.

B. Economic Incentives

(i) Repatriation of capital.

(ii) Depreciation allowances.

(iii) "Soft" loans, credit incentives and cash grants.

(iv) Policies for selling/leasing plots etc.

Promotion of the Zone

One of the major criticisms which the team encountered during its survey of local industrialists was that existing promotion policies did not present the possibilities and advantages of establishing factories on the estate in a way which could easily be understood by potential investors. One possibility that may be considered is the construction of a model showing the Area as it would look when completed. This possibility should be examined in the feasibility study of the Industrial Area as a whole.

Promotion Literature

With regard to the Free-Customs Zone, the consultants are of the opinion that much of the literature produced hitherto does not appear (with one exception) to be as

attractive as that produced for other similar areas such as Shannon, Malta and Hong Kong.

It is proposed to examine this aspect of promotion in greater detail in the Second Stage of the study.

Overseas Offices

As has been noted elsewhere in this report, the Free-Customs Zone will be attracting many of it's investors from countries outside the EEC - this being one of the major motives for investment in Greece by foreign investors. Accordingly it is recommended that steps be initiated to set up agencies in these countries - possibly the U.S.A. and Japan in order to promote the Zone along the lines of the Industrial Development Authority of Ireland with its offices in New York, San Francisco, Chicago, Paris, London and Cologne.

Detailed recommendations on the establishment of such an organisation will be made in the Second Part of the Feasibility Study.

(f) Legal Aspects

Industrial Areas and existing Free-Customs Zones in Greece are covered by a variety of Laws and Royal Decrees, of which the following are of importance:-

(i) Law 4458/1965: Concerning Industrial Areas.

(ii) Royal Decree No. 750/1968: Concerning the regulations and operation of the Industrial Estate in Salonika.

Under Law 4458, the responsibilities for the organisation and operation of industrial estates are described and assigned to HIDB. Article 5 of the law concerns Free-Customs Zone and

laye down the fundemental principles for the operation of auch zones as follows:-

Article 5

"By Royal Decrees initiated by the Ministers of Co-ordination, Finance, Industry and Public Works, an industrial estate or part thereof may be recognized as a free zone provided the actual conditions prevailing in such an estate permit the organization and operation of the said free zone. The operation of such free zones shall be governed by the provisions of Law 390/1914 as subsequently amended, such provisions being accordingly extended in whole or in part or even limited by the aforesaid Royal Decrees.

By Royal Decrees initiated by the Ministers of Finance and Industry, Free Customs Areas may be designated within industrial estates, in which areas industrial units may be established and operate.

Industrial units situated within such districts shall be under the control and supervision of the relevant Customs Authorities.

The aforementioned Royal Decree shall prescribe the terms and conditions of operation of and supervision over the above units and the extent of the benefits to be accorded to them.

Raw materials used by the aforementioned industrial units within the above Free Customs Areas for the manufacture of the products of the said units, shall, on entering the said Districts, be exempt from import duties and taxes incidental

thereto, under terms and conditions specified by the above Royal Decrees. Goods produced within the said Free Customs Areas as well as raw materials imported duty-free as above shall be liable to the current customs duties and taxes whenever they are disposed of for consumption within the customs territory in this country".

Royal Decree No. 750 is specifically concerned with the construction operation and regulation of the Salonika Industrial Estate and does not deal with the Free-Customs Zone in particular.

Existing Free-Customs Zones (at Peiraeus and in the Port of Salonika) are covered by Law 4458 and by special Royal Decrees. Several manufacturing operations in the Salonika Free Zone are covered by such Decrees.

The Free-Customs arrangement for the Fur and skin trade in Kastoria is covered by a number of existing Laws, relating to the operation and management of the zone:-

1. E.L. 1631/1939
2. Laws 1805/1951
3. Common Ministerial resolutions of ministries of Finance and Industry.
   (a) Β 2395/121/1964
   (b) Σ 665/20/1968
   (c) Κ 15124/1968 (amended January 1971)

Since the zone in Kastoria appears to be of the kind envisaged by this study, the Consultants propose to under-

take a detailed examination of the zone in Part II of the study.

Regardless of existing Laws and Decrees, it is recommended that new laws be framed to give legal authority for the relatively wide range of controls which the Customs Authorities will have to adopt, and also to cater for the issuing of manufacturing licenses. Such laws, were specially passed in the case of the Customs Free Zone and Industrial Estate at Shannon which from the basis of the controls and procedures under which they operate.

Recommendations on the substance of the laws concerning a Free-Customs Zone in Salonika will be made in Part II of the Feasibility Study.

CHAPTER V

THE ESTABLISHMENT OF A FREE-CUSTOMS ZONE IN SALONIKA

The proposal to establish an Industrial Area incorporating an Industrial Estate and a Free-customs zone may be seen as part of the broad framework of economic policy which the Government is pursuing in the Five Year Economic Development Plan, 1968-1972. More specifically, the establishment of the Area would contribute to the following basic objectives of the Plan :-

- To effect a radical change in the pattern of production, investment and balance of payments.
- To accelerate the economy's rate of improvement in productivity ... thereby enhancing the competitiveness of domestic products and promoting the adaptation of the Greek economy to market conditions within the EEC.
- To achieve a high rate of economic growth in the range of 7.5% to 8.5%.
- To achieve a rate of growth of manufacturing industry of 11% to 12% p.a.
- To create new job opportunities.
- To promote regional development and reduce the disparities existing between Athens and the rest of the country.

The merits and advantages of industrial estates in general have been stressed in numerous United Nations publications.

As a part of the Industrial Estate, the Free-Customs Zone would play a role in achieving some of these advantages. Of particular significance are the following:-

- Attraction of foreign investment.
- Promotion of exports and the balance of payments.
- Creation of new investment opportunities for local industrialists.
- Creation of new job opportunities.
- Promotion of balanced regional development.

In addition are the advantages of more effective urban planning, promotion of small-scale industries, increasing productivity through greater efficiency and better use of resources. With these potential advantages in mind, assessment of the role of a free-customs zone in Salonika is made below in the context of national and regional development.

A. The National Context

The successful operation of a free-customs zone in Salonika could have a major impact on the following areas of the economy:

1. Balance of payments

As Table 5.1 shows the net deficit on the balance of payments on current account has been increasing over recent years. A major part of the deficit is accounted for by the gap between imports and exports of goods, reaching £903.3 m in 1969 and £1092.4 m in 1970. While

TABLE 5.1.

BALANCE OF PAYMENTS: BASIC DATA

(US $ MILLION)

CURRENT TRANSACTIONS	1969		1970	
	Credit	Debit	Credit	Debit
Goods and Services	1048.3	1677.5	1218.0	1974.5
1. Goods*	530.3	1433.6	612.2	1704.6
2. Foreign travel	149.5	47.9	193.6	55.3
3. Transportation	242.1	30.2	269.8	42.0
4. Insurance premiums	1.8	9.7	3.5	9.7
5. Investment income	9.8	43.7	11.5	60.4
6. Government	44.1	67.1	40.9	45.3
7. Miscellaneous	70.7	45.3	86.5	57.2
Net Balance of Goods and Services	-	629.2	-	756.5
Net Donations	277.7	-	343.2	-
Net Balance	-	351.5	-	413.3

Note * Imports CIF; Exports FOB

Source: Bank of Greece
Monthly Statistical Bulletin - June 1971.

was estimated to be £21 m on the estate (of which £12 m was private investment);

The export surplus of the Estate was estimated to have increased to £13.7 m. in 1969 from a level of almost £3 m. in 1964;

As of April 1971, the Airport complex employed over 7,500 people of whom 4,700 were connected directly with the Industrial Estate and S.F.A.D.Co.

The success of the Shannon Free Airport Development Company has been dependent upon a number of factors which would be of great importance in establishing the viability of a Free-Customs Zone in the context of the situation in Salonika.

These factors need to be considered under two broad categories:-

1. Factors which have attracted manufacturers and investors to the Zone.
2. Factors of administration and management and procedures which have ensured the smooth operation and functioning of the zone.

The first category of factors in the case of Shannon may be summed up as follows:-

- Freedom from import duty.
- Freedom from taxes.
- Abundant and relatively cheap labour supply and high productivity of labour when trained.
- Availability of good communications facilities by air, road and sea.

the problem is alleviated to some extent by "invisibles" (mainly emigrants Remittances), a basic favourable long term balance can only be achieved, as the Plan recognizes by the structural improvements of the merchandise balance. The encouragement of export-oriented industries to be set up in conjunction with Free-Customs Zone will contribute towards this improvement.

2. Regional Development

With regard to regional development the creation of a Free-Customs Zone in Salonika would attract new investment to the area. The imbalance between Athens and the rest of Greece has been highlighted in the National Plan and is shown in Tables 5.2 and 5.3. In 1968 over half of large scale industry was located in the Athens area. The favourable terms and conditions offered by the Industrial Area and Free-Customs Zone should add to the incentives already offered by the Government for development of industries in the provinces outside Athens, in terms of fiscal and financial advantages.

3. Employment

There are two aspects in which the Free-Customs Zone can be expected to play a role. First, it would provide fresh employment opportunities. Second, it would provide better incentives and opportunities to slow down the rate of emigration, and also provide conditions of work sufficient to attract back Greek labour working abroad. These aspects are dealt with in greater detail below with regard to the particular situation in Salonika.

TABLE. 5.2.

COMPOSITION OF GROSS DOMESTIC PRODUCT BY REGION, 1965.

In Drachmae at current prices.

Region	Gross per capita product	Regional Indices	
		Total Greece = 100	Greater Athens = 100
1. Greater Athens	27,050	152.6	100.0
2. Central Greece & Euboea	17,330	97.7	64.1
3. Peloponnese	15,760	88.9	58.3
4. Ionian Islands	12,990	73.3	48.0
5. Epirus	10,930	61.7	40.4
6. Thessaly	12,940	73.0	47.8
7. Macedonia	15,410	86.9	57.0
8. Thrace	11,540	65.1	42.7
9. Aegean Islands	14,110	79.6	52.1
10. Crete	13,350	75.3	49.4
All Greece	17.730	100.0	65.5

Source: Economic Development Plan for Greece 1968-1972
Athens February 1968.

TABLE 5.3.

COMPARISON OF BASIC ECONOMIC MAGNITUDES RELATING TO EMPLOYMENT AND INDUSTRIAL PRODUCTION OF LARGE-SCALE INDUSTRY ATHENS AND ALL GREECE

1968

(Value Dr 000)

	A Athens	B Greece Total	%A/B
Number of Establishments	3,422	6,417	53.3
Remunerated personnel	131,744	219,504	60.0
Gross Production Value	33,159,568	69,821,981	47.5
Value Added	13,831,021	25,296,991	53.5

Source: Annual Industrial Survey for 1968; N.S.S G

4. Attraction of Foreign Investment

The Free-Customs Zone is an added incentive for foreign investors to establish plants in Greece. Under the influence of the liberal incentive laws offered by Greece foreign investment has been increasing rapidly, as shown in Table 5.4. The setting up of the Industrial Area and of a Free-Customs Zone would add to the incentives already being offered. The Treaty of Association with the EEC is an added factor which may cause investors to come to Greece. The implications of the Treaty for the location of the industrial estate in Salonika are examined in detail below.

TABLE 5.4.

PRIVATE GROSS CAPITAL FLOW.

(in million US $)

Year	Private Gross Capital Investment in Manufacturing and Mining.	Foreign Capital Imported Under Law 2687/53.	Foreign Capital as Percent of Total Private Investment.
1960	52.5	11.7	22.5
1961	52.0	13.5	25.9
1962	61.0	16.8	27.5
1963	71.4	40.0	56.0
1964	99.6	59.7	59.0
1965	139.7	111.6	80.3
1966	139.7	157.6	112.5
1968	-	285	-

Source:- Greece Investment Guide HIDB.

8. The Regional Context.

The successful operation of a Free-Custome Zone within the Induatrial Area at Salonika depends upon a number of factors which would be critical both in attracting foreign and local investore to the area and in enauring their profitable functioning once eetablished there. These may be summarized aa follows:-

1. Suitability of the location.
2. Incentives offered.
3. Availability of infrastructure.
4. Availability of manpower.
5. Availability of raw materials.
6. Communication facilities for importing and exporting.
7. Present state of induatrialization.
8. Recreational and cultural facilities.
9. Scope for future expansion and development.

1. Suitability of Location.

Two aspects of location are of importance - the relationship of Salonika to potential export markets and secondly, the relationship of the Industrial Area aite to Salonika.

a) Relationship to export markets.

That the location of Salonika ia not unfavourable is indicated by the direction of trade of producte and raw materials passing through the town and by the eetablishment in recent years of companies which are wholly or partly export-oriented. Destination of products shipped through the Port of Selonika are shown in Table 5.5. As the major Port and Industrial Centre in Northern Greece, Salonika is in a good location to serve European markets. It's proximity to the EEC countries through good road and rail connections is a valuable incentive for potential foreign

TABLE 5.5.

DOMESTIC GOODS LOADED FOR EXPORT ABROAD TO MAJOR MARKETS

FROM 1966 TO 1968 BY COUNTRY OF DESTINATION

COUNTRY OF DESTINATION	1968	1967	1966
EGYPT	28.305	25.456	11.400
ALGERIA	21.501	27.342	18.130
AUSTRIA	8.872	10.111	9.756
BULGARIA	38.703	1.176	33.923
FRANCE	10.932	47.435	70.161
W. GERMANY	36.258	27.695	29.393
YUGOSLAVIA	18.100	8.137	4.145
U.S.A.	34.816	43.600	31.590
JAPAN	3.503	3.749	2.530
SPAIN	5.846	14.550	14.336
ITALY	51.417	47.732	30.262
CYPRUS	3.631	3.015	13.149
LIBYA	40.744	78.842	46.815
GT. BRITAIN	2.303	8.227	28.667
MEXICO	500	2.500	6.500
HOLLAND	16.219	7.689	3.926
HUNGARY	2.483	2.455	4.706
PORTUGAL	4.899	1.936	26.253
SOVIET UNION	8.648	9.239	8.508
CZECHOSLOVAKIA	4.611	1.031	664
FINLAND	1.842	2.783	3.445
TOTAL	359.003	404.689	470.198

Source: Port of Salonika

investors. According to the foreign trade statistics of the OECD Greece's exports to the EEC of all commodities increased by 15% between 1964 and 1969 while exports of processed materials and finished manufactures increased by as much as 55% over the same period. By 1969 over 45% of Greece's exports were destined for the EEC countries. In the same year the Sino-Soviet bloc accounted for over 16% of her exports. The location of Salonika with regard to both these areas is very favourable and should prove even more attractive with the completion of road and rail projects for improving communications with Yugoslavia and Bulgaria.

A number of German factories which are both drawing their raw materials from and supplying finished products to Germany, are operating profitably in Salonika.

The completion of the new Athens highway and in the long term of a major highway on an East-West axis through Salonika and the possible development of the River Axios as a navigable river into East European countries should further improve the locational advantages of the town.

The location of the town with regard to Middle Eastern and North African markets is favourable. This was one of the main reasons put forward for the choice of Salonika as a location for investment by one of the major chemical companies visited by the Consultants.

b) Location of the Zone at Sindos Industrial Area.

The major disadvantage of the Area at Sindos may be its distance from the centre of the town. Based on discussions with

factories already in production in the area, this factor is not as disadvantageous as it may appear in the vital area of communications and labour supply.

(1) Communications

(i) The Area lies on the main Athens-Salonika highway and will be easily connected with the new highway currently being constructed. Firms have hitherto found no difficulty in sending their products either into Salonika or to Athens (as in the case of Goodyear).

(ii) One or both of the railways passing through the Area will be developed for use by the Free-Customs Zone and factories on the Estate and Area. Plans for development of railways to East-European countries and on an East-West axis will further improve communications to and from the Industrial Area particularly for export-oriented industries, both for the provision of raw materials and for transportation of finished products.

(11) Labour

The distance of the Sindos site from the centre of town has not caused any acute problems of labour supply to factories currently in production there. Labour is currently drawn from surrounding villages and from the town. This aspect may however present problems in the future unless proper policies for housing development and labour supply are developed. This is examined in greater detail below.

2. Incentives

Companies operating in the Industrial Area which are export oriented, based on foreign capital or large scale productive investments will be eligible for the special incentives offered by the Government.

In addition they will be entitled to the special incentives in favour of provincial enterprises. These have been adequetely described in the Investment Guide published by HIDB. Of special interest to new enterprises are the following:-

- Income Tax exemption on net profit re-inveated.
- Special depreciation allowance adding up to a total of 15% on plant buildings, 28% on mechinery and 52% on motor trucks.
- Reduction in turnover tax by 30%.
- Exemption from 6% tax on wages and salaries.
- Exemption from import duties on machinery, accessories and parts for initial installation or modernization of plants.

3. Availability of Infrastructure.

The infrastructure facilities which the Industrial Area will provide will be of great importance in attracting investors.

In particular the following facilities will prove attractive:-

- Availability of water.
- Availability of Electricity.
- Direct and easy access to main transportation routes whether road or rail.
- Disposal of waste and sewage.
- Service centre facilities.

These facilities are currently being considered in the Master Plan report for the Industrial Area.

With regard to infrastructure (both physical and social)in the region of Salonika , an indication is given of the priorities

These are examined with relevance to the situation in Salonika in Chapter IV.

In this section the operating and administrative aspects of the Shannon zone are examined in some detail, both because these bring out the full significance of what is entailed by a customs-free zone, but also because the Consultants are of the opinion that this aspect will be vital in the establishment of a free-customs zone in Salonika.

3. The Operation of an Industrial Estate within a Free-Customs Zone

To make the concept of an "industrial" free-customs zone more meaningful, a description of the operation procedures, administration and control of the Shannon Industrial Estate/Free-Customs Zone are given below.

(a) Operating Procedures

Manufacturing companies can only set up operation at Shannon under a special licence issued by the Irish Minister for Industry and Commerce. This licence is given under certain conditions, the basic one being that the goods or services produced should be for export, or for firms on the estate which are exporting firms.

The licence is granted under the Free Customs Airport (amendment) Act 1958. This is attached as Appendix C.

When in operation, manufacturing companies can move goods into and out of the Free Customs Zone by three methods:

(i) Moving goods directly through the Airport by using Air-freight to Shannon.

and level of expenditure of public investment in Table 5.6. In 1969 the largest item of expenditure was on land reclamation projects. Expenditure for major items in order of importance was for regional programmes, transportation, education, agriculture, forestry and fishing, tourism and housing. A preliminary look at the plans of the various Ministries in Salonika, highlights the problem of housing as being one of the critical ones affecting the Industrial Area. Aspects of infrastructure are currently under consideration by the Master Plan.

4. Availability of Manpower.

It has been estimated that when fully developed the Industrial Area will employ about 40,000 people. Manpower availability will therefore become a key problem in attracting investors to the Area. Hitherto, no major problems of labour availability seems to have been met either by firms established on the area or firms in other parts of Salonika such as the Esso-Pappas complex or the Siemens factory. This was confirmed to members of the team by the Chamber of Commerce. However in the course of their investigations the team did come instances where firms were unable to recruit labour in a specific trade (construction) or were temporarily faced with a shortage of labour (during harvest time). In two cases firms specifically mentioned a shortage of trained secretarial staff. There are therefore indications that labour bottle-necks may be met with temporarily and in specific skills.

In forecasting the availability of labour various factors of population growth, emigration and urbanization have to be

TABLE 5.6.

PUBLIC INVESTMENT PROGRAMME FOR NORTHERN GREECE 1967-1969.

in million Drs.

SECTORS	YEARS.		
	1967	1968	1969
1. Agriculture, Forestry fishing.	354.2	178.8	148.4
2. Land reclamation works.	625.5	984.9	819.3
3. Manufacturing-Power-Small industry-Mines.	352.5	215.3	73.9
4. Transportation.	233.2	533.4	406.0
5. Railways.	-	4.1	3.0
6. Tourism-Monument,Museums.	43.3	101.1	143.2
7. Education.	261.3	288.6	243.1
8. Housing-Water supply-Sewerage.	181.6	107.2	140.6
9. Public health-Welfare.	14.8	15.9	34.6
10. Public administration.	15.4	23,4	36.2
11. Miscellaneous.	0.1	1,3	100.0
12. Regional programmes.	352.	476.8	746.3

Source Ministry of Coordination, YPAVE.

considered. Estimates of population in the Salonika area vary. According to one estimate population in Salonika is currently 600,000. Total active population is estimated to be 238,300 of which about one-third is estimated to be working in industry and hadicraft, and 17% in commerce. Natural growth rates of population are estimated to have averaged 2.6% p.a. in the 1950's and 4.4% p.a. in the 1960's The latter rate of growth is still below the annual average rate of growth for requirements in factories in the future, forecast by HIDB. (See Table5.7).

According to this table employees in manufacturing industry are expected to increase from about 33% of the active population to about 43%. This demand for workers, it is hoped, will be met by attracting labour from villages surrounding Salonika, and by encouraging the shift from agriculture into industry. However the problem is further complicated by emigration of labour from Salonika. In 1968 it was estimated that 3,065 persons emigrated permanently and 923 emigrated temporarily from Salonika. The figures for 1969 are 5,266 and 1141 respectively. Taking into account the fact that some emigrants do return, (estimated at 18,000 for the whole of Greece in 1969) it has been estimated that there is still an annual migration out of Salonika to overseas countries - estimates for 1968 to 1972 are 0.4% p.a. This emigration is however countered by a net "internal" migration into Salonika of almost 15% p.a. according to one source. That this figure is realistic is borne out by the "extra" increase in population growth envisaged above the birth rate and by the change in structure of G.D.P. - notably the swing from agricultural employment into industry. (Table 5.8).

The annual rate of "underemployment" in the agricultural

TABLE 5.7.

POPULATION PROJECTIONS FOR SALONIKA.

YEAR	TOTAL POPULATION	ACTIVE POPULATION	EMPLOYEES IN PROCESSING(MFTG) INDUSTRIES	PERCENTAGE	
(1)	(2)	(3)	(4)	4:2	4:3
1951	301,000	120,000	31,600	10.5	26.4
1958	355,000	128,000	34,200	9.6	26
1961	378,000	132,000	39,000	10.3	28.2
1963	420,000	153,000	42,300	10.1	27.7
1967	505,000	184,000	58,000	11.5	31.5
1973	675,000	246,000	80,000	11.8	32.5
1987	1,000,000	350,000	150,000	15.0	43.0

Source HIDB Master Plan, Phase I Area Nov.1968.

TABLE 5.8.

STRUCTURE OF REGIONAL G.D.P.

NORTHERN GREECE

(PERCENTAGE SHARE)

	Primary	Secondary (Mfto)	Tertiary
1. Eastern and Central			
Macedonia 1958:	40.1	22.1 (12.9)	37.8
1969:	29.9	33.3 (17.2)	36.8
11. Western Macedonia			
Thrace 1958:	52.2	15.5 (8.7)	32.3
1969:	45.6	18.2 (9.3)	36.2

Source: Planning office; YPAVE.

sector was estimated to be as follows in 1967:-

Eastern Macedonia:	35.5%
Centre Macedonia:	36.3%
Thrace:	43.6%
Western Macedonia:	46.0%

While these figures are likely to be "guesstimates" they give an indication of the potential movement which could take place into industry. It is expected that this movement will continue and that as job opportunities become available, labour from the villages will flow into towns. This however is likely to be conditional on specific policies such as provision of housing being pursued in conjunction with the development of the Industrial Area.

Unemployment statistics officially published by the N.S.S.G. for Salonika show a seasonal average unemployment over recent years of around 7,000. Different interpretations may be given to this figure and during conversation with economists and industrialists, opposite views were heard on the subject. However, it seems that since this figure concerns only registered persons at the Salonika employment exchange it is not truly representative of the true level of unemployment and it is likely to be an underestimate. Major problems may however occur with regard to the supply of skilled, technical and managerial labour. According to a survey carried out in 1969 the structure of employment in

manufacturing industry was estimated to be as follows:-

Administrative Personnel	9%
University Graduates	4%
Assistant Technicians	14%
Unskilled Labour	43%

With regard to unskilled labour some encouragement is given from the fact that amongst those firms interviewed in the chemical, textiles and metal working industries, training periods for workers had been relatively shorter than experienced in other countries. Workers had been found to be very adaptable. With regard to the higher grades the latest figures for students in technical colleges in Macedonia show a rapid increase in enrolment - in 1966 there were almost 17,000 students. There may moreover be a possibility of recruiting Greeks who have worked abroad into positions of high responsibility.

M.I.D.B. itself has an office in Western Germany and this could be used for publicity purposes in attracting back Greek workers. However, proper incentives must be offered for Greeks to return, comparable to conditions under which they are working abroad especially with regard to wages.

A preliminary conclusion to be drawn from statistics available and conversations held with local industrialists and at the Chamber of Commerce is that no problems should be met with regard to the availability of labour over the next few years. In the case of one firm labour was being recruited not just from Salonika but

from villages as far apart as Panorama, and Sindos.

In another case a factory in the industrial area was employing the majority of its labour from Purgos.

Two aspects need to be stressed however, if labour is not to prove a bottleneck for factories established on the Industrial Area.

(a) Serious consideration should be given to providing housing and accommodation to workers near the Estate.

(b) Transportation facilities for workers should be provided on an adequate basis.

5/6. Availability of Raw Materials, and Communications Facilities.

As noted above, most of the enterprises in the area connected with the Free-Customs Zone will be involved with utilizing imported raw materials. Companies already involved in this category are currently importing textiles and telecommunications goods from West Germany and plastic raw materials from Israel. The major constriction on these firms is therefore likely to be transportation. Firms interviewed were quite satisfied with existing arrangements. With the development of better communications both within the area and outside, raw materials should be readily and easily available from abroad.

7. The Present State of Industrialization in Salonika.

As the second largest city in Greece, Salonika is the dominant pole of growth over the whole area. Apart from offering a favourable location and various infrastructural facilities, the holding of the annual International Fair in the town has ensured that it is a commercial and industrial centre.

Over recent years industrialization in Salonika has increased rapidly. According to the 1963 Industrial Survey, there were 756 establishments in Thessaloniki employing 10 people or more,

with a total employment of over 25,000 in these factories. Between 1963 and August 1967,122 factory units were built with a total employment of over 3,000 persons. By 1968 however the increase in employment was estimated to have been about 15,000 over the previous five years (mainly due to the establishment of the Esso-Pappas complex and Hellenic Steel). Manufacturing industry has therefore been increasing at a rapid rate. Between 1958 and 1969 it was estimated that the manufacturing sector increased at an annual average rate of almost 10% as against 4% for the primary sector and 6.5% for the tertiary sector. The shift in the structure of G.D.P. for Northern Greece has been seen above in Table 5.8.

The industrial structure in Salonika in 1962 is indicated in Table 5.9 based on a survey carried out by H.I.D.B. Since then, the major growth industries have been in the chemicals, food manufacturing, metal industries, petroleum, textiles, tobacco, electrical machinery, metal products and manufacturing industries.

Prospects are examined in Chapter VI.

This high level of industrialization in Salonika has a number of favourable implications for the setting up of the Free-Customs Zone. Firstly, it implies the existence of a number of entrepreneurs and manufacturers who may well be induced to either relocate to the area or to set up new ventures there in order to take advantage of the incentives and opportunities offered. Secondly, there exists in Salonika a relatively large working force experienced in manufacturing industry. This would tend to lessen the problems which new investors may have in acquiring the right

TABLE 5.9.

DISTRIBUTION OF WORKERS ACCORDING TO SECTOR IN SALONIKA 1962.

SECTOR	% Percentage.
Food (excl.drinks)	14.37
Drinks	1.74
Tobacco	5.25
Textile weaving	21.22
Footwear and clothing	12.92
Wood and Cork (excl.furniture)	3.59
Furniture	6.45
Paper	1.45
Printing and publishing	2.04
Skin products (excl.shoes)	1.20
Rubber products	2.89
Chemicals	1.59
Minerals (non.metallic)	2.95
Basic metallic	0.06
Metal products (excl.machinery & transport)	5.80
Machinery (excl. electric)	4.68
Electric machines	2.41
Transport equipment	8.02
Others	1.41
TOTAL	100.00

Source: HIDB Master Plan.
Phase I Area.

(ii) Moving goods through an Irish sea-port or other Airport.

(iii) Moving goods directly from (or to) the Irish Republic.

(i) Airfreight

This method is the most straightforward, since the Airport itself is within the Free-Customs Zone. No customs documentation is required, either for importing or exporting. However, the Customs Office receives a copy of the cargo manifest for statistical purposes, and in this way Customs Authorities have an up-to-date record of goods moved directly through the Airport. Any Free-Customs Zone likely to be set up at Salonika will not be directly associated with an Airport terminal.

(ii) Goods moved through another Port - Airport in Ireland

Although the Free-Customs Zone Industrial Estate at Shannon was set up primarily as a means towards developing air traffic at the airport, upwards of ¾ of all tonnage moved into and out of the Industrial Estate comes through other Ports (mainly sea-ports) in Ireland. This has necessitated the drawing up of special regulations and the creation of special procedures to deal with the importation and export of goods to and from the Free-Customs Zone going overland through Ireland. Goods imported into Ireland and intended for the Free-Customs Zone are entered on a bond note - Transhipment Bill - at Port of entry.

kind of labour, and in training matters.

8. Recreational and Cultural Facilities.

Amongst the foreign companies interviewed, this aspect was regarded as being very important for investors making investment decisions. Salonika was regarded as the next best location in Greece after Athens, from the point of view of schools, recreation and cultural facilities.

In addition are other aspects offered by the town, such as, the Annual International Trade Fair and other international meetings such as the United Nations meeting on regional industrial development. This aspect is of importance to the location of the Zone in Salonika as it is envisaged that many of the investors there will be foreign companies.

9. Conclusions.

The Preliminary conclusions of this brief survey of the advantages offered by Salonika are that the prospects for economic development in the region appear to be favourable mainly because the location is favourable and manpower should be available.

The development of the Free-Customs Zone in Salonika is, as has been noted elsewhere dependent upon a number of policies being adopted to create the right conditions for the attraction of potential investors, primarily in the matter of incentives, administration and promotion. However the successful outcome for the establishment of the Free-Customs Zone and the industrial estate must in the long run depend upon the completion of plans for

infrastructure, communications and social facilities which have been proposed both by H.I.D.B. and by the Urban planning authorities in the Master Plan for Salonika and the various Ministries.

The siting of the Free-Customs Zone/compound in the industrial area at Sindos has a number of advantages over the site of the present Free-Customs Zone in the Port of Salonika. Expansion of the existing zone would not prove to be viable mainly because of the lack of any area for expansion, cost of land which is very much higher in the Port area, and problems of congestion which are likely to arise if a major expansion was to take place there. Moreover, the zone would take up valuable space required by the Port authorities for their plans for modernising and constructing new facilities to serve the dock area.

CHAPTER VI

POTENTIAL INDUSTRIES AND ACTIVITIES

Potential industries likely to be attracted to the Free-Customs Zone will be mainly export oriented industries using imported raw materials. An assessment of these industries may be based on a number of indices which would indicate their value to the zone and the estate. The following are appropriate in evaluating such industries:-

- Export orientation i.e. percentage output exported to total output.
- Content of raw material imported.
- Value added i.e. net output.
- Coefficient of localisation i.e. the dispersion tendency of an industry.
- Growth rate of production.
- Ratio of wages to net output - to indicate whether the industry is labour - or capital - intensive.

In Part I of the feasibility study it is proposed to indicate in general terms the most promising areas for growth. Part II will examine these sectors in greater detail, subject to the above criteria.

Types of Industries

The nature of the Free-Customs Zone envisaged by this feasibility study - that of a compound system of warehouses, immediately restricts the types of industries connected with the zone of those with a high import content of raw materials and a

high export content of finished products (a figure above 90% is envisaged). These industries may either be manufacturing or assembling types. An examination of the types of industries which have been attracted to the Shannon Industrial Estate (basically restricted to these same criteria) shows the following general categories:-

Chemicals

Textiles

Electronic components

Scientific measuring instruments

Metal products, tools and dies

Printing and publishing

Plastics

Pharmaceutical products

"Commercial" Activities

Warehousing

Special industries e.g. industrial diamonds, precious stones etc.

A list of companies at Shannon and products manufactured is attached as Appendix E.

Similar types of industry have been established in the Kaoshiung Export Processing Zone in Formosa. By 1970 the following major categories had been established:-

Industry	No. of establishments	No. of employees
Electronics	32	12,793
Textiles	22	4,611
Handicrafts	18	5,139

Industry	No. of establishments	No. of employees
Ready-made clothes	15	7,554
Metal manufacturing	15	2,512
Plastic products	14	3,921
Leather and fur	10	2,749

Other industries included furniture, paper products, printing and publishing, rubber, chemicals, machinery, packing materials and toys.

In general, it may be concluded that only light to medium-scale industry would be attracted to a Free-customs zone of the kind envisaged.

Forecasting potential industries in Salonika

Two approaches are applicable in forecasting potential industries. First, there is a high probability that these industries would belong to the growth sectors both nationally but particularly in the region. The second approach is that industries would be in the fastest growing export sectors and may be involved in importing raw materials and semi-finished products.

1. Growth industries in Salonika

The major sectors of employment in Salonika in 1962 were textiles, food processing, footwear and clothing, transport equipment, furniture and metal products and machinery. With the establishment of the Esso-Pappas complex and Hellenic Steel since then the structure of production has naturally changed. Manufacturing industry has averaged a rate of growth of around 10% during the 1960's and sectors which have shown the fastest rate of growth have been the following:-

- Chemicals
- Food Processing
- Metal Industries
- Petroleum Industries
- Textiles
- Tobacco
- Electrical Machinery
- Metal Product Manufacturing
- Non-metallic mineral Products

This is confirmed by an examination of manufacturing enterprises established in Salonika between 1967 and 1969 (listed in Appendix F). Textiles, footwear and clothing, food processing, metals and metal products, furniture and chemicals were the most common industries to be established. The indices of growth for industrial production at the national level (see Table 6.1), show that "basic metals", chemicals, metal products and textiles have been the leading sectors.

In addition to the above mentioned industries in Salonika, new factories are being established in the plastics, Construction and paper products industries. A survey carried out by the team in the Industrial Area (attached as Appendix G) indicated that the factories in operation or under consideration were in the following sectors:- rubber and plastics, building and construction, chemicals, metal industries, textiles, paper products, food processing and furniture.

TABLE 6.1.
INDUSTRIAL PRODUCTION
Indices 1959=100.

	1966	1967	1968	1969	1970
Total industrial production index	190	198	214	239	263
Mining and quarrying	142	146	158	183	212
Manufacturing	187	192	206	229	253
Food,beverages & tobacco	153	148	154	152	164
of which:					
Tobacco	165	142	141	135	148
Food	134	137	150	154	160
Other manufacturing	203	213	230	265	294
of which:					
Textiles	177	173	180	201	226
Chemicals	268	312	356	407	445
Petroleum products	175	223	261	275	
Non metallic minerals	188	201	206	245	272
Basic metals	518	576	719	943	1,073
Metal products	227	219	245	270	295
Export industries	166	136	130	122	
Home market industries	192	201	219	247	
Consumer goods industries	177	182	194	209	230
Capital goods industries	227	235	260	313	354

1 January - November.

Sources: Monthly Statistical Bulletin: National Statistical Service. OECD.

Discussion with local industrialists and economists confirmed these as the growth industries in Salonika.

2. Export-oriented industries

Exports of finished manufactured goods from Greece are still at a very low level. According to OECD statistics they accounted for only 4.6% of total exports in 1969 as against 26.6% in other Southern European countries. This lack of export oriented industries highlights the importance of attracting foreign investors who are geared to export markets and in giving greater incentives to local manufacturers to export.

A breakdown of exports in manufactured products (Table 6.2) shows that the largest earners of foreign exchange have been Basic Metals, Chemicals, Textiles, Minerals, Beverages and food products, Petroleum and coal products and Leather and fure. These sectors (except the last one) have, as has been shown above been the major growth areas in Salonika. However according to the HIDB survey of industries in 1967 very few firms in Salonika are engaged in exporting. This analysis shows that firms in Salonika in the following activities were involved in exporting any sizable quantity of their production:-

Field of Activity	Percentage of products exported by firms
Resins	65% to 96%
Chemicals	72%
Cement	20%

Greek Foreign Trade in Manufactured Products TABLE 6.2.

(In thousand US Dollars)

Sector of Industry	Import(payment basis)			Exports(receipts basis)		
	1966	1967	1968	1966	1967	1968
Food Products	58,581	56,895	58,306	6,931	11,078	12,135
Beverages	2,422	2,480	3,650	11,231	13,978	14,661
Tobacco	355	770	1,462	258	272	915
Textiles	44,087	49,086	43,066	14,780	15,243	19,062
Clothing and Footwear	4,212	4,393	6,503	1,883	2,435	3,335
Wood and Cork Products	8,542	6,442	5,999	666	668	982
Furniture	895	839	927	-	-	-
Paper and Paper Products	18,393	17,679	19,011	783	1,774	1,837
Printing and Publishing	7,849	8,451	10,493	1,365	1,229	928
Leather, Furs etc.	3,487	3,592	4,943	8,018	10,203	9,020
Rubber Products	19,202	18,787	18,715	693	2,414	3,314
Chemicals	129,508	128,049	134,285	7,875	11,923	22,277
Petroleum and Coal Products	29,032	26,260	26,096	1,979	2,558	9,716
Non-Metallic Minerals	15,777	15,469	12,453	11,387	11,383	16,737
Basic Metals	68,123	75,970	77,507	9,446	25,360	37,118
Metal Products	44,312	45,605	45,818	5,449	3,549	4,552
Machinery	173,814	180,042	173,836	1,531	1,541	1,135

Sector of Industry	Import(payment basis)			Exports(receipts basis)		
	1966	1967	1968	1966	1967	1968
Electrical Machinery and Appliances	66,508	70,554	82,881	1,674	3,118	2,495
Transport Equipment	88,271	87,369	81,276	1,611	594	552
Miscellaneous	26,805	30,493	34,456	848	1,135	868
TOTAL	810,155	829,225	84,683	88,408	120,455	161,639

Sources: FEI Bulletin, No.161 March 15, 1969, on the basis of Foreign Trade Bulletin, issued by the Bank of Greece.

The goods are sealed (if this is not done beforehand), and travel under bond to the Free-Customs Zone boundary. The carrier presents the bond note - Transhipment Bill - to the Customs Officer at the boundary who satisfies himself that the seals are intact, that there are the stated number of packages etc. and then he allows the goods through.

With regard to goods moved out of the Free-Customs Zone and through the country to a sea-port the same procedure applies. These goods for customs purposes are deemed to be transhipped through the State under bond. The bond in practice is usually a general one taken out by the Shipper to cover all of his consignments.

(iii) <u>Goods going to or coming from the Irish Republic</u>

Every person conveying goods into the Zone from another part of the State must carry with him a Carriers Manifest in duplicate signed by him and giving the particulars required by the form. The Manifest in duplicate must be produced in the first instance with the goods to the preventive officer at the Customs Post at the Zone entrance. The Manifests are signed and stamped by the preventive officer and one copy is returned to the Carrier as a pass for the goods. The Carrier's copy of the Manifest is then presented with the goods and the

Field of Activity	Percentage of products exported by firms
Steel and steel products	18% to 65%
Cotton ginning and thread	78% to 100%
Cotton finished products	28% to 75%
Shoes	80% to 100%
Food processing industries.	10% to 95%
Tobacco	80% to 100%

Of the establishments in the Industrial Area only five are involved in exporting (see Table 6.3). Products exported include:- synthetic curtains, rosin, glue etc., cans, ginned cotton sanitary fittings etc.

With regard to importing raw materials, one-third of the firms interviewed in the HIDB survey of 1968 imported a substantial (20% or more) quantity of their raw materials, but very few of these firms were engaged in exporting at all.

Import-substitution and processing of raw-materials

A third category of industries which may be attracted to the free-customs zone are those which are currently importing raw materials and may be tempted to process these not just for the home market but also for export markets. Imports of major consumer and capital goods are summarised in Table 6.4. Statistics from the Port (shown in Table 6.5) show that raw materials and industrial goods comprised more than 50% of all goods discharged. The following sectors may possibly be attracted to the Free-customs zone:-

TABLE 6.3
EXISTING AND PROPOSED INDUSTRIES IN THE INDUSTRIAL AREA.
BREAKDOWN BY SECTOR

	FACTORY	PHASE AREA	PRODUCT	RAW MATERIALS % imported	PRODUCTS % exported
A.	RUBBER AND PLASTICS				
	Goodyear	I	Tyres	Almost 100%	Nil
	Apko A.B.E.	I	Plastic Containers	(Polyethylene 100% (Others from Athens	Nil
	Vepey	I	Synthetic Curtains	100%	100%(?)
	Chemicon (P.Kavtallis)	I	Rigid PVC pipes	Additives only	Nil
	Efthimiadis	II	Polythene sheeting expanded plastics for mattresses etc.	100%	Nil
	E. Gavoulis	I	Industrial Plastics	N.a.	N.a.
B.	CHEMICALS AND RELATED PRODUCTS				
	Olympos Aeria	II	Bottled gas		
	N. Krallis *	I	Pharmaceuticals	50%	N.a.
	Viofit	I	Vegetal drugs fertilizers, plastic containers	100%(ex. inert)	Nil
	A. E. Victor	III	Rosin, turpenture glue for wood and paper	80%	30%

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FACTORY	PHASE AREA	PRODUCT	RAW MATERIALS % imported	PRODUCTS % exported
C. METAL AND RELATED INDUSTRIES				
Hellas Can	II	Canning	Some	Some
Apostolidis	I	Diesel Engines	100%	Nil
T.E.M.E.	III	Steel tanks, steam boilers, floor disc polishers, Aerosol(proposed)	n.a.	Nil
E. Taboulidis*		Fans ventilators small electric motors	50%	Nil
D. PAPER PRODUCTS				
St. Regis Hellas	I	Paper boxes	Almost 100%	Nil
Varvari	I	Cardboard boxes	Most	Nil
E. TEXTILES AND RELATED INDUSTRIES				
Ilios Ten Cote	I	Cotton thread	Nil	Most
A. Tsantelis*	I	Cotton thread oil cake, cotton ginning	Some M.East Pakistan	-
Karagiorgiou Bros.	III	Cotton ginning Cotton seed & linter	Nil	80%
F. BUILDING AND CONSTRUCTION MATERIALS				
Deukaris	III	Sanitary fittings tiles etc.	70%	25-30%

Page 3

	FACTORY	PHASE AREA	PRODUCT	RAW MATERIALS % imported	PRODUCTS % exported
	Zambouridis	II	Cement products	n.a.	n.a.
	Atlas (Melidis & Co.)	III	Clay blocks	Nil	n.a.
	Touli Bros.	III	Clay drainage pipes	Nil	n.a.
	The two Bros.		Clay blocks	Nil	n.a.
G.	WOOD & WOOD PRODUCTS				
	Th. & N. Nicolaidis*	I	Kitchen cabinets	N.a.	n.a.
H.	FOOD AND RELATED PRODUCTS				
	Flocas Ltd.*	I	Confectionery foodstuffs		
	I. Boutaris*	I	Wine bottling, Ouzo	Nil	n.a.
I.	OTHERS				
	P. Xanthopoulos-Lazaridis *	I	Leather tanning	100%	n.a.
	DEH	II	Storage	-	-

* Proposed or under discussion.

TABLE 6.4.

IMPORTS OF MAJOR MANUFACTURED CONSUMER AND CAPITAL GOODS

CONSUMER GOODS.

CATEGORY A (Intermediate)

- Threads & Yarns.
- Metals
- Plastic, artificial synthetic material

CATEGORY B.

- Motor Vehicles accessories (tyres, tubes, spare parts etc.)
- Paper and Paper articles.
- Metal manufactured products
- Medical/Pharmaceutical products
- Scientific and Medical instruments
- Paints and dyes.

CATEGORY C.

- Cosmetics, perfumes
- Leather articles, furs
- Textiles
- Glassware & pottery
- Electrical appliances
- Motor vehicles
- Household articles
- Photographic equipment, Musical Instruments and Watches.
- Wood Manufactured products
- Articles of Plastic Materials
- Paper cardboard & cellulose articles
- Printed matter.

CAPITAL GOODS

- Agricultural machinery
- Trucks & Buses
- Electrical equipment

Raw Materials

- Hides & Skins
- Paper pulp
- Wool
- Cotton & Fibres
- Fertilizers
- Raw rubber

Construction Materials.

- Iron & Steel
- Timber
- Copper & copper articles

Petroleum products

- Benzine
- Diesel oil
- Lubricating oils
- Crude Oil

Source:- National Statistical Service of Greece.

TABLE 6.5.

GOODS, SUBJECT TO CUSTOM DUTIES, DISCHARGED AT THE PORT OF SALONIKA (EXCEPT LIQUID FUELS) BY CATEGORIES (TRADE CLASSIFICATION) FROM 1964 TO 1968, IN TONS

BASIC CATEGORIES OF GOODS	1964	1965	1966	1967	1968
0. Foodstuffs and Live-stock	57.192	27.717	39.936	46.602	84.274
1. Beverages & Tobacco	21	26	154	50	146
2. Inedible Raw Materials except Fuels	104.612	121.853	184.742	246.417	325.056
3. Mineral Fuels, Lubricants	42.002	41.918	26.475	16.835	16.702
4. Animal & Vegetable fats	3.409	1.695	1.738	1.275	364
5. Chemicals	150.127	130.184	110.370	58.160	53.559
6. Industrial goods	101.394	147.048	170.486	177.279	267.735
7. Machinery and transport equipment	37.669	52.512	44.748	45.358	50.282
8. Miscellaneous manufactured articles	292	284	539	378	338
9. Goods not classified in categories	3.569	12.660	12.835	16.483	5.123
TOTAL	500.287	535.897	592.023	608.837	803.579

Source - Port of Salonika.

Textiles

Chemical products

Plastics

Pharmaceuticals

Paper and paperboard

Metal products

Conclusions

Preliminary conclusions are summarised in Table 6.6. There is a strong possibility that specific industries in the major growth sectors in Salonika will prove attractive to foreign investors and that investment will be made in export-oriented industries in the light to medium range such as those established in the Kaoshiung export processing zone.

An attempt has been made at this stage of the feasibility study to indicate more specifically the types of industries likely to be attracted to the Industrial Area as a whole. This is attached as Appendix H. The list is based on a survey of local industrialists, an examination of all statistics available and surveys of particular industries and sectors.

The following industries from those in the list are likely to be export-orientated:-

Cables	Packaging materials
Electric motors and pumps	Metal industries

Ventilators	Office equipment
Ready made clothing	Thread
Footwear	Ginned Cotton
Leather clothing	Leather clothing (and fure)
Furniture	Food processing
Toys	Pharmaceuticals
Plastics	Electrical components
Chipboard	

However due to lack of sufficient data it has not proved possible to give details on size of production and of those industries which will prove most likely to be established in connection with the Free-customs Zone. This aspect will be examined in greater detail in Part II of the feasibility study.

TABLE 6.6.

POTENTIAL INDUSTRIAL SECTORS FOR DEVELOPMENT IN THE INDUSTRIAL AREA , SALONIKA.

SECTOR	Growth National	Industry Salonika	Export-oriented	Established Shannon	in Kaoshiung.
CHEMICALS	*	*	*	*	*
METAL INDUSTRIES	*	*		*	*
TEXTILES	*	*	*	*	*
FOOD PROCESSING	*	*	*		
ELECTRICAL AND OTHER MACHINERY		*			*
FOOTWEAR & CLOTHING	*	*			*
FURNITURE		*			*
PLASTICS		*		*	*
PAPER & PACKAGING	*				*
HANDICRAFTS	*				*
LEATHER & FUR	*		*		*
ELECTRONICS ETC.				*	*
PRINTING & PUBLISHING				*	*
TOYS					*
PETROLEUM PRODUCTS	*	*	*		
TOBACCO.		*			

CHAPTER VII.

LOCATION AND PLANNING ASPECTS WITHIN THE INDUSTRIAL AREA.

1. LOCATION.

One of the basic requirements of any free-customs area is proximity to good transportation facilities. As noted in Chapter V the Industrial area will be served by good communication facilities with the completion of various infrastructural programmes for road and rail with the improvement of facilities available at the Port of Salonika. It is essential that the Free-Customs Zone should be favourably located within the industrial area to have ready access to good road and rail communications.

Accordingly, the tentative location of the zone is placed adjacent to the railway line at the south boundary of the industrial site (See Appendix I). This is dependant upon the infrastructural plans of the Planning Authorities with regard to the future development of railways in Salonika.

At the same time the location of the Free-Customs Zone in the southern part of the industrial area would give ready access to the new dual carriageway from Athens to Salonika being planned to pass to the south of the area.

2. SIZE.

The size of the free customs zone / compound depends upon many factors, of which the most important would be the rate of development of the area as a whole and the provision of adequate expansion space adjoining the zone. Provisionally, a figure of 60 hectares is proposed - this is the area that has been developed at the Shannon Industrial Estate after twelve years of relatively satisfactory promotion. 60 hectares is also approximately the size of the area which lies between the railway line on the southern boundary and the network of roads tentatively put forward at this stage of the Master Plan. The area has the further advantage of having provision for expansion into one of the plots to the north.

relative export specification or shipping bills to the officer at the proper custom station within the Airport. The officer examines the goods to satisfy himself that they correspond to the particulars shown on the manifest and other export documents and if so satisfied he is to allow the goods to be exported, giving a certificate of exportation on the specification or shipping bills. This applies to goods moving through the Free-Customs Zone and using the facilities of the Airport for export. It would apply to the situation in Salonika only if there is a transport complex within the zone.

If goods are moved temporarily from the Irish Republic for processing in the Free-Customs Zone particular care is taken to ensure that satisfactory identifying particulars of the goods are given on the relative specification, and the exact process or processes for which the goods are being removed into the Free-Customs Zone , stated. Where practicable, samples of the goods are taken and attached to the copy of the specification retained at the customs station for comparison with the goods on their re-importation into the Republic. On re-importation the goods are considered for liability for special duty - the importer is required to make entry on a special form in all cases, outlining the processes which the goods have undergone in the Zone , particulars of

One major qualification to be made at this stage of the Report is that the ultimate size allocated to the zone/compound would depend upon the size and the location of the transportation complex. If this was to be located within the compound and have container facilities a larger area than that envisaged above may be needed. However based on the planning of the industrial estate at Shannon it is expected that the total area would not exeeded 100 ha.

3. Facilities.

The type of free-customs zone envisaged would need certain facilities:-

(i) Warehouses would be provided by the Industrial Area company for leasing or renting. Sizes of warehouses cannot be indicated until details of the type and size of industry expected to use the facilities have been drawn up. However, it is probable that warehouses of different standard sizes with provision for expansion would need to be provided.

(ii) Boundary Posts at entrances and exits. These would be necessary in order to ensure the succesful operation of the compound.

(iii) Customs-office-to house the administration facilities of the customs authorities.

(iv) Industrial area company office- to house the administration and planning offices of the Free-Customs zone department and for maintaining liaison with the Customs authorities.

(v) Facilities for security personnel - These may be either the police or a private security firm.

(vi) Small service - centre - to provide essential services to employees in the zone, in conjunction with the main service centre.

(vii) Transportation network - The facilities required would depend upon when the transportation centre was to be located. The free-customs zone may include the entire operation including a container terminal or it may only include facilities for loading and off - loading goods.

(viii) Vehicle Park - To provide parking facilities for lorries and trucks.

CHAPTER VIII

RECOMMENDATIONS

1. The creation of a Free-Customs zone compound is considered the most appropriate form of zone for the Industrial Area in Salonika.
2. The Free-Customs zone compound should not be located in the Free-Customs Zone presently operating at the Port of Salonika.
3. The Free-Customs zone compound should be located in a site of 60 hectares at the south boundary of the Industrial Area, next to the Salonika-Athens railway which the Master Plan recommends as one of the main communications artery.
4. The operation of a Free-Customs Zone requires the establishment of an Industrial Area Management Company with a special division concerned with Free-Customs Zone compound operations.
5. The establishment of a transportation complex possibly including a container terminal is necessary on a site either within or in close proximity to the Free-Customs Zone Compound.
6. The following conditions are vital to the successful functioning of the zone:-

(i) Attractive incentives and effective promotion to bring in export-oriented industries.

(ii) Legislation appropriate to the functioning of the Zone compound.

(iii) Correct operating procedures.

(iv) Licensing of companies in the area under strict conditions to minimize the risk of smuggling.

(v) Clear-cut management structure with division of reponsibilities between the Area Management Company and Customs Authority.

Positive recommendations will be made on these aspects in Part II of the study.

APPENDIX.A.

FEASIBILITY STUDY FOR A FREE-CUSTOMS ZONE, SALONIKA; VISITS MADE AND INTERVIEWS HELD BY GIBB-EWBANK INDUSTRIAL CONSULTANTS.

I. Athens.

1. Hellenic Industrial Development Bank.

Mr.P.Totomis, Governor.

Messrs. Mikos
Gerakis
Iacchos
Koneolas
Gorgias
Demetriou
Logothetis
) H.I.D.B. Athens.

2. Ministry of Co-ordination.

Mr. Zegarelos - Balance of Payments Section.

3. Ministry of Industry.

Mr.Dokas.

4. National Bank of Greece.

Mr. Papachrisanthou - Chief, Balance - of - payment Section.

5. Centre for Planning and Economic Research.

II. SALONIKA.

1. Hellenic Industrial Development Bank.

Mr.Dendrinos - Area Manager.

2. Chamber of Commerce, Salonika.

Mr.Diamantis- President.

Mr.Tzaligopoulos - Vice President.

Mr.Dallas.

3. Association of manufacturers of Northern Greece.

Mr. Ladas - President.

Mr. Bokovos - Economist.

4. Regional Development Service for Northern Greece.

Mr. Rigas Tzelepoglou, Head, Planning Office.

6. Miscellaneous factories.

A. In the Industrial Area.

PHASE I AREA

Goodyear Hellas.
Hellas Can.
St.Regis Hellas.
Illios Ten Cote..
Varhart Ltd.
Apostolidis.
A.P.K.O.
Vapsy.
Viafit.

PHASE II AREA

Olympos Aeria.
Zembouridis.
Efthiniades.

PHASE III AREA

Victor A.E.
T.E.M.E.
Davkakis.
Karagiorgou.
Toula Bros.
Atlas.
"The Two Brothers".
Agrotiki.

UNDER DISCUSSION.

N.Krelli's.
E.Tompoulidis.
Tsantellis.
I.Bovtaris.
Flocas Ltd.
Ganoulis.
Kontellis (Chemicon).
Kesselwerke.

B. Others in Salonika.

Esso-Pappas Chemical Co.
Ethyl Hellas Chemical Co.
Hellenic Steel.
Siemens.

III. SHANNON FREE AIRPORT DEVELOPMENT CO.

APPENDIX. B.

MOTIVES FOR THE ESTABLISHMENT OF INDUSTRIAL AREAS, ESTATE'S AND ZONES

A. Contribution to goals of economic and industrial development

1. Promote more rapid industrialization of the country.
2. Increase industrial employment nationally and locally, in specific communities.
3. Achieve a more balanced regional distribution of employment and production, and consequently, a more balanced regional growth.
4. Attract private industrial investment, both internal and external.
5. Promote the development of small national industries.
6. Bring industries and industrial employment to rural areas.
7. Induce structural changes in production and employment, especially diversification.
8. Encourage more effective use of resources through the development of large-scale industrial complexes, including diversified industries of all sizes , centred on major projects such as ports and airports, railroad and highway junction points, power plants, oil refineries, steel mills, chemical plants.
9. Improve product quality and increase productivity.
10. Train labour and increase its productivity.
11. Achieve economies in public infrastructure investment (minimize cost).
12. Reduce cost or capital investment to the industrialist.
13. Eliminate delays for the industrialist in obtaining suitable site, utilities and buildings.

B. Contribution to goals of urban and regional development planning.

1. Promote decentralization; prevent or check excessive concentration or growth of signal urban areas, especially large metropolitan areas.
2. Increase the economic, productive and employment base of urban communities.

3. Regulate the inflow of industry and guide its orderly location within the metropolitan area.
4. Strengthen the economic base of small and medium-sized towns.
5. Provide an industrial base for New Towns.
6. Preserve the most suitable urban land for industrial use.
7. Provide a more healthful and attractive urban environment.
8. Minimize journey to work and reduce load on transport systems.
9. Maximize efficient land use and land utilization.
10. Integrate urban marginal population into productive industrial systems.
11. Reduce costs of land and land development.
12. Provide sites to relocate industries displaced by urban renewal projects.
13. Protect residential and other non-industrial uses from nuisances created by industry.
14. Achieve economies in the provision of urban services and utilities.

APPENDIX C.

C O P Y.

DEPARTMENT OF INDUSTRY AND COMMERCE
Customs-free Airport (Amendment) Act, 1958,
Licence under Section 2 (1).

The Minister for Industry and Commerce, in exercise of the powers conferred on him by sections 2 and 4 of the Customs-free Airport (Amendment) Act, 1958 (No.29 of 1958), and after consultation with the Minister for Finance, hereby by this licence authorises, subject to the conditions act out in the Schedule to this licence,

(Name of licensee)

to carry on within the Customs-free Airport (within the meaning of section 2 of the Customs-free Airport Act, 1947 (No.5 of 1947)

SCHEDULE.

Conditions subject to which this license is granted.

1. The licensee shall begin to carry on within the said airport the trade business or manufacture hereby licensed on or before the _____ day of _____ 1971.

2. Any trade, business or manufacture commenced by the licensee within the said airport after the grant of this licence and not authorised thereby shall by discontinued at the request of the Minister for Industry and Commerce.

P.T.O.

3. If the licensee shall cease to carry on within the said airport the trade, business or manufacture by this licence authorised this licence shall thereupon cease.

4. All goods or materials liable to a duty of Customs or Excise which are received without payment of duty shall be deposited immediately on receipt in a secure store in the Customs-free Airport and shall be kept under the control of a responsible official of the licensee pending use.

5. In respect of all consignments (whether free or dutiable) received by air at, or from a licenced manufacturer in, Shannon Airport, copies of the relative invoice and, where appropriate, the air waybills shall be furnished immediately to the Officer, Customs and Excise, Shannon Airport.

6. All dutiable goods or materials received without payment of duty (other than factory and Office equipment) shall be used solely in the trade, business or manufacture specified in this licence.

7. Stock Accounts of all dutiable goods received without payment of duty shall be kept in such form as to show clearly at any time the particulars of quantities received, quantities on hand and quantities delivered; and such accounts shall be balanced and stock taken whenever the proper Officer of Customs and Excise so requies, and the proper duty shall be paid on demand on any deficiency found which is not accounted for to the satisfaction of the Revenue Commissioners.

8. All stock accounts and relative documents shall be preserved for a period of at least two years after the date of the last entry therein.

9. Any Officer of Customs and Excise shall be allowed, at all reasonable times, to examine the said accounts and all trade, books, records, and

P.T.O.

documents which he may require to inspect in order to satisfy himself as to the accuracy of the accounts, and he shall be allowed access to the goods and materials and shall be given any necessary assistance in taking account of goods or materials in stock.

10. Wherever required by an Officer of Customs and Excise, evidence to his satisfaction of the delivery abroad of goods shown in the stock accounts as exported abroad shall be produced to him within a reasonable time.

11. In respect of each consignment of manufactured products delivered, which are not directly exported abroad by the licensee, a copy of the relative invoice shall be furnished immediately to the Officer, Customs and Excise, Shannon Airport, showing particulars of any dutiable materials received without payment of duty which were used in the manufacture of the goods to which the invoice relates.

By Order of the Minister for Industry and Commerce.

Dated this day of 1971.

Assistant Secretary,

Department of Industry and Commerce.

the various materials in the processing and an estimate of the special airport duty chargeable in respect of each material used. This is to cover a situation where duty free materials are used in the processing of these goods.

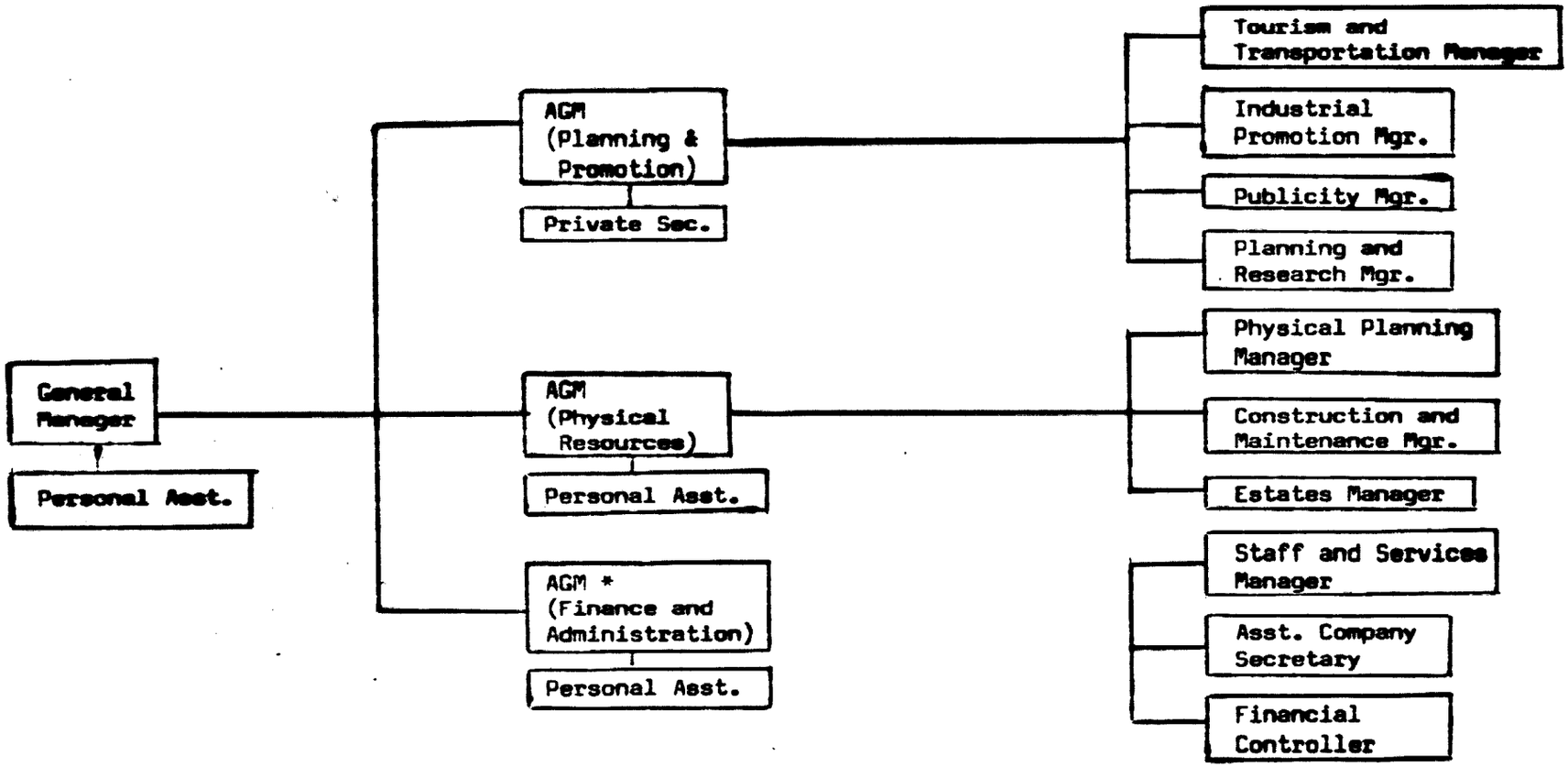
Every person conveying goods from the Free-Customs Airport by road into another part of the state must carry with him a Carrier's report in duplicate signed by him and giving the details of the goods required by the form which in fact is used for both incoming and outgoing goods. The Report must be presented by the Carrier with the goods to the officers at the Customs Station on leaving the Free-Customs Zone. The Report is then stamped and signed by the officer. Since the companies which set up within the Free-Customs Zone are required by law to export all or practically all of their product, this procedure has been created mainly to cater for goods arriving by air at the free customs airport and destined for areas within the state but outside the Customs Zone.

With regard to goods which are moved temporarily into the state from the Free Customs Zone for exhibition, further processing, sub-contract work etc. a special form is used. This form is self

APPENDIX D.(i)

SHANNON FREE AIRPORT DEVELOPMENT CO.

GENERAL MANAGEMENT AND DIVISIONAL STRUCTURE



* Also Company Secretary

APPENDIX D.(ii)

SHANNON FREE AIRPORT DEVELOPMENT CO.

OUTLINE OF DIVISIONAL ACTIVITIES.

Administration Division.

Performs all the statutory and accepted functions of Company Secretary. Forecasts financial requirements; determines sources of finance; and arranges for securing finance.

Determines accounting requirements and ensures that accounting information and services are of adequate standard. Prepares all financial statements for the Company and operates an overall system of budgetary control.

Provides and operates a system of internal audit of all the Company's financial affairs.

Completes all formal grant and legal arrangements. Drafts proposals for new legislation.

Deals with all official correspondance with, and prepares submissions and reports to,the Departments of Transport and Power and Industry and Commerce.

Performs all the accepted functions of Personnel Management.

Operates general services (typing,copying,telephone,postal,) on behalf of the Company as a whole.

CENTRAL PLANNING DIVISION

Obtains and interprets required statistical information; Provides an intelligence service by collecting published information on all matters relative to the Company's operations, assessing it, and bringing it to the attention of appropriate executives.

Prepares economic benefit analyses and economic feasibility studies. Prepares recommendations on specific industries; on community development; on tourism projects; and as indicated.

Prepares forecasts of labour supply and requirements;of housing and service requirements; of airport traffic;of hotel and amenity requirements; and as directed.

Carries out research into: markets for tourism and industrial development; commuting patterns and traffic densities; suitability of factory and house types.

Co-ordinates all research projects relating to the Codpany's activities commissioned outside of the organisation.

Maintains comparisons with other locations in relation to building costs, rent levels, facilities.

Carries out organisational reviews as directed.

In general, provides a statistical, informational,and economic and social research service to all Divisions and to the Company as a whole.

DEVELOPMENTS DIVISION

Is responsible for the planning,construction,operation and successful development of factories, industrial estates and the Shannon community, and for the provision of advisory and social services (including advice and assistance to industrialists relating to recruitment and training of staff, labour legislation and industrial relations practices and procedures).

Arranges for all technical planning, supervision and control, and ensures that this is properly executed. Ensures that physical planning is in accordance with the Company's objectives and that the environment for development is conducive to the success of industries and to the satisfaction of the work force and (in the case of Shannon) of the resident population.

Prepares the case for financial and other authority needed for individual projects, draws up capital and operating budgets and forecasts and controls all expenditures.

Deals with industrialists, tenants, commercial interests, contractors, consultants and others concerned with physical environment.

INDUSTRIAL PROMOTION DIVISION

Studies and selects markets for industrial promotion; designs promotional campaigns; prepares copy for advertisements, leaflets and booklets.

Meets industrialists (including abroad) and informs them on all aspects of the Mid-West (including Shannon) as a factory, warehouses or office location. Keeps informed on attractions being offered by competitive locations.

Conducts negotiations and investigates proposals (including with existing industrialists) preparing recommendations on facilities to be offered. Maintains close contract with the Industrial Development Authority, ensuring that they are kept fully informed on all promotional activities and particularly of negotiations in progress.

Ensures that the I.D.A.is kept informed of any changes (e.g. labour supply) which might affect their promotion, and that their field officers- as well as diplomatic representatives abroad - have informational literature on the Mid-West.

Advises the Developments Division Manager in regard to demand for factories, including sizes and types and any modifications that may be indicated; recommends allocations of factories, warehouses and offices to incoming tenants.

PUBLICITY DIVISION

Obtains favourable publicity on all aspects of Shannon and the Mid-West. Directs public relations activities including the issue of press statements, the organising of functions, and the reception of visiting groups and VIPs.

Advises all Divisons on promotional activities. Plans and controls advertising expenditure.

Provides and operates publicity services on behalf of other Divisions (including photographic, commercial art and printing).

APPENDIX E

COMPANIES ESTABLISHED ON THE SHANNON INDUSTRIAL ESTATE.

COMPANY	PARENT COUNTRY	TYPE OF PRODUCT
AFFILIATED INDUSTRIES LTD.	U.S.A.	Precision Components for Electronic & other industries.
B.L.C. LTD.	U.S.A.	Pumps for Lubrication and Cooland Systems.
BUNRATTY HANDCRAFTS.	Republic of Ireland.	Handcraft Products.
BUTTE KNIT OF IRELAND LTD.	U.K./U.S.A.	Ladies Jerseywear.
CALLINS INTERNATIONAL LTD.	U.S.A.	Miniature Capacitors.
CHEMICAL EXPORT CO. LTD.	Switzerland.	Chemicals.
C.& W TEXTILES LTD.	Republic of Ireland.	Wool & Rayon Fabrics.
E.I.COMPANY LIMITED.	U.S.A.	Components for Radios & other Electronic Equipment.
GOW-MAC INSTRUMENT COMPANY.	U.S.A.	Scientific Measuring Instruments, Gas Analysis Apparatus, etc.
HAMILTON INTERNATIONAL.	U.S.A.	Collators, Presses & Accessories.
INFOTRONICS LTD.	U.S.A.	Analytical Data Processing Equipment.
INTERNATIONAL TEXTURED YARNS LTD.	U.K.	Continuous Filament Yarn Processir
IRISH UNIVERSITY PRESS LTD.	Republic of Ireland.	Printing and Publishing.
LANA-KNIT(IRELAND) LTD.	U.S.A.	Knitted Jersey Fabrics, Spinning Worsted Yarn, Dyeing.
MOHAWK EUROPA LIMITED.	U.S.A.	Steel Cutting Tools.
NITINE LTD.	U.S.A.	Electronic Grade Chemicals.
OXY-DRY INTERNATIONAL LTD.	U.S.A.	Printing Equipment Accessories.
PROGRESS INTERNATIONAL LTD.	U.K.	Floor Maintenance Equipment & Polishes.
RIPPEN LIMITED.	Holland.	Pianos and Piano Actions.
SCRIPTO INDUSTRIES (SHANNON) LTD.	U.S.A.	Fibre Point Pens.
SHANNON DIAMOND & CARBIDE LTD & ASSOCIATED COMPANIES.	U.S.A./South Africa.	Industrial Diamonds & Carbides, Drilling Equipment, Synthetic Diamond Grit, etc.
SHANNON LAPIDARY/MARKETING COMPANY LTD.	Republic of Ireland.	Precious Stone Processing.
SHANNON WIRE WEAVERS LTD.	U.K.	Fine Wire Gauze & Wire Mesh.
S.P.S. INTERNATIONAL LTD.	U.S.A.	Precious Fasteners & Tools.
UNION WIRE DIE(IRELAND)LTD.	U.S.A.	Wire Drawing Dies.

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COMPANY	PARENT COUNTRY	TYPE OF PRODUCT
AERLOD TEORANTA (SUBSIDIARY OF C.I.E.)	Republic of Ireland.	Warehousing,Freight Handlings & Consolidation.
AN COMHAIRLE OILIUNA.	Republic of Ireland.	Industrial Training Centre.
CASSIN AIR TRANSPORT LTD.	Republic of Ireland.	Warehousing,Freight Handling & Consolidation,Import & Export Treding.
COMPUTER BUREAU(SHANNON)LTD.	U.S.A.	Complete Data Proceseing.
DEVCON LIMITED.	U.S.A.	Plastic Metals.
ENGINEERING SERVICES SHANNON LTD.	Republic of Ireland.	Machine Ship Facilities.
HARDING & MESSENGER,SANG LTD.	U.K.	Woollen Merchants.
JAMES P.JONES & SON LTD.	Republic of Ireland.	Warehousing,Freight Forwarding & Consolidation.
LEP (SHANNON) LTD.	U.K.	Warehousing,Freight Handling & Consolidation.
LINSON LIMITED.	U.S.A.	Pharmaceutical Products.
MOLONY AND HUMPHREYS.	U.K.	Consulting Engineers.
RETOS LTD.	Republic of Ireland.	Sub-contract Work.
SHANNON REPAIR SERVICES LTD.	Republic of Ireland.	Overhaul & Maintenance of Aircraft
STOKES & McKIERNAN (SHANNON) LTD.	Republic of Ireland.	Wholesale Distribution & Servicing to Shannon Companies.
TRANS WORLD HELICOPTERS LTD.	Republic of Ireland.	Sales & Distribution of Helicopter Helicopter spare Parts & Equipment
T.W.H.(MAINTENANCE) LTD.	Republic of Ireland.	Maintenance & Overhaul of Mechanically Propelled Vehicles.
WELLTRADE LTD.	U.K.	Consulting Engineers & Contract Labour Services: Factoring & Investment Services:

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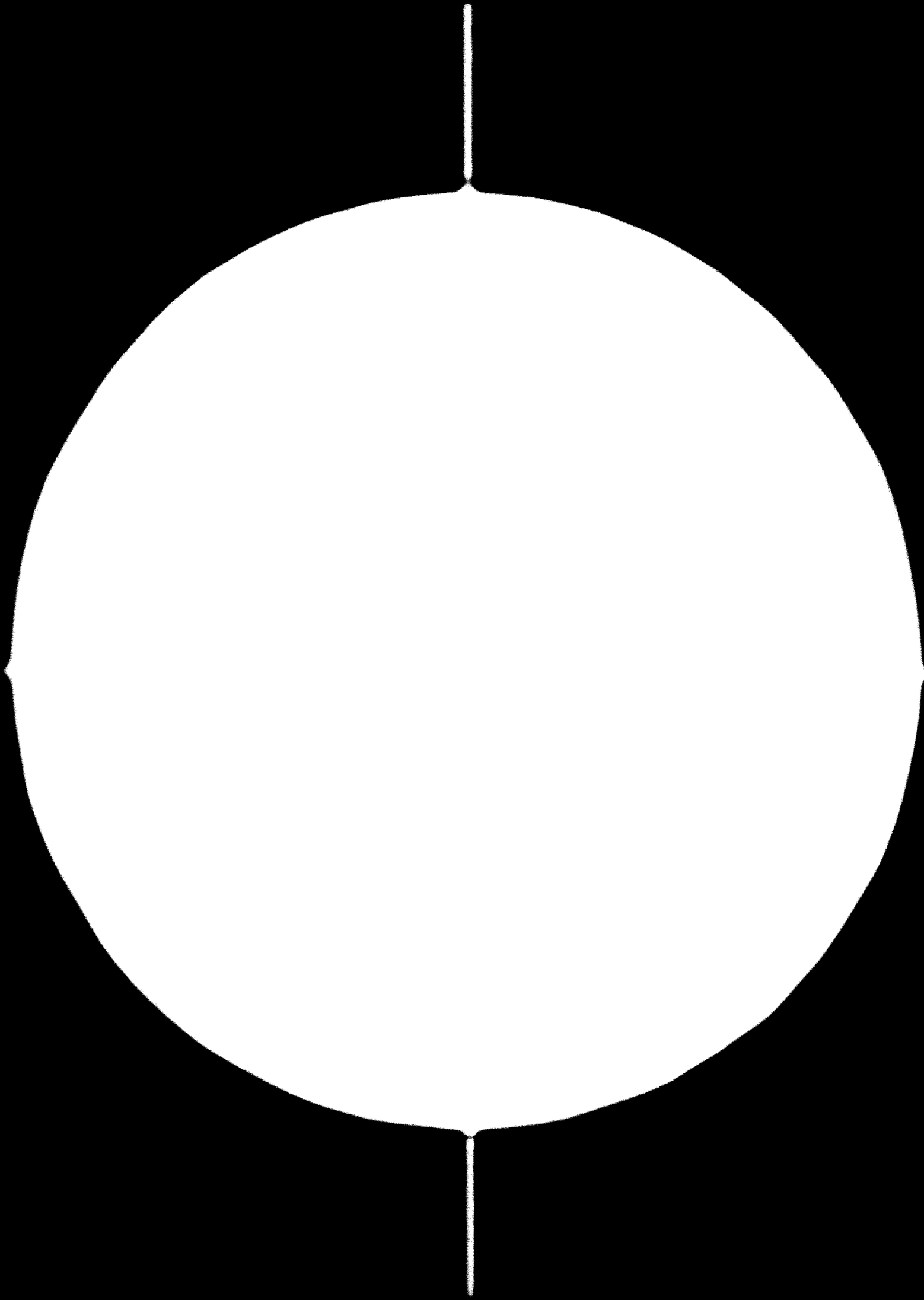

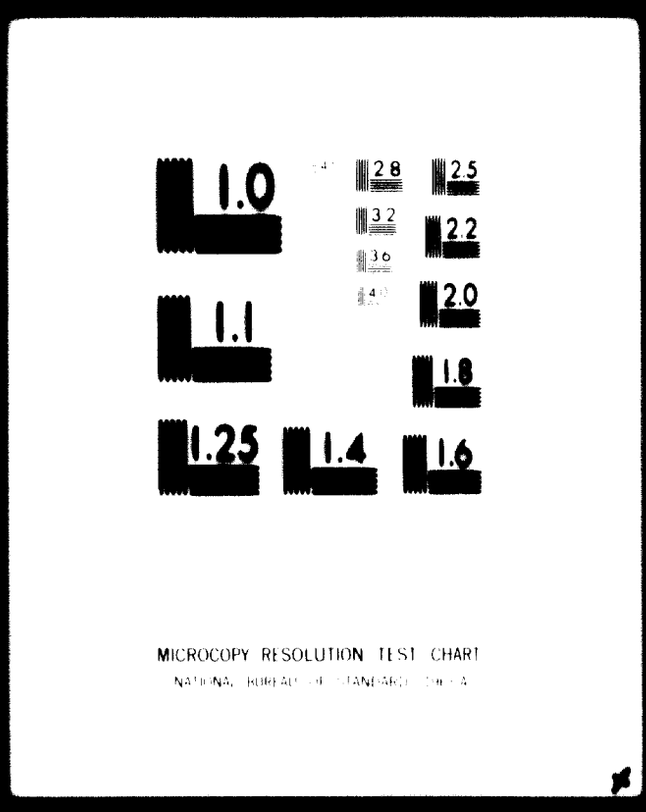

APPENDIX F

NEWLY-ESTABLISHED MANUFACTURING ENTERPRISES EMPLOYING 20 PERSONS AND OVER 1967-1969.

AREAS OF SALONIKA

S.T.Petropoulos & Co	* EMVEP *	Chemical products.
Hellenic Steel Co.,S.A.		Steelworks.
Lithoxopoulos & Co.		Ready-made clothing.
P.Stathakis & Co.		Wooden constructions.
PHOENIX Ltd.		Motor-car repairs.
I.Pantofis & Co.		Confectioners.
Hellia-Stathakis Ltd.		Aluminium door and window frames.
ELLENIT, Building Materials Industry.		Asbestos-cement products.
M.Pavlides & C. Ioannides.		Manufacture of chairs.
Kalaitzides Bros & Co.ERMIS.		Footwear manufacture.
Stylianides Bros & Co.		Children's Clothing.
TROFIMA HELLADOS,LTD.		Food Canning factory.
A.Limanis.E.Patisti.		Women's underwear.
Organtzis O.E.		Metal Furniture.
GOODYEAR-HELLAS.		Motor tyres manufacture.
Tobacco Export Co.,Ltd.		Tobacco industry.
Tobacco Organisation.		" "
General Greek Tobacco Co.,SA.		" "
M.Voyatzoglou, S.A.		" "
Simka Alvertos, EPE.		" "
Triarchou Bros O.E.		Feedstuffs Industry.
A.Loumides & Sons O.E.		" "
N.Perifanos & Co.		Weaving Industry.
Gougaris & Co.,Ltd.		" "
Gougaris F.Panagiotides.		" "
Mavrakis D.Terapsidas, Ltd.		" "
I & B Ladenon Bros O.E.		" "
V.Tsakonas.N.Kanidas.O.E.,		Footwear and clothing.
P.Piastopouloi Bros O.E.		" "
T.Savvides & K.Filopoulou O.E.		" "
Viomichaniki Thessaloniki S.A.		" "
Nikolaos I.Lazarides.		" "
Nikolaos X.Constantinides.		" "
Christos Koutsoumbakis.		Furniture & furnishings.
C.Themistocles Papantonlou O.E.		" "
D.Pappas & H.Patatis O.E.		Chemical products.
Chrometourghia Athinon,S.A.		" "

Con't/.....

'PETROBAS' S.A.	Coal & oil by-products.
'GAS-HELLAS' S.A.	Metal products.
SIEMENS TELE-INDUSTRY,S.A.	Electric motors & apparatus.
E.T.E.I.,Ltd.	Transport means.
Giannopoulos & Sons.S.E.,	Other Industries.

Source: Ministry of Co-ordination.

APPENDIX M.
LIST OF POTENTIAL INDUSTRIES.

A. POTENTIAL INDUSTRIES OVER THE SHORT-TERM.

1. Mechanical and Metallurgical Industries.

Agricultural machinery.

- ploughs.
- Harvester, threshers.
- Hay pickers.
- Trailers.

Can cases.

Tanks and Containers.

Chassis for trucks.-

Elevator cabins.

Lamps-decorative and technical.

Starters.

Cables.

Car components.

- exhaust pipes.
- Fuel tanks.
- Silencers.
- Screws, gaskets, wires.

Office furniture.

Electric motors and pumps.

Ventilators.

2. TEXTILES.

Cotton ginning.

Thread manufacture.

Ready made clothing.

- womens.
- childrens.
- furnishings.

knitting.

Bleaching and dyeing.

P.T.O.

Acrylic and man-made fibres.

3. OTHER CLOTHING AND FOOTWEAR.

Footwear.

- childrens.

- Adult.

Leather clothing.

Small skins processing.

4. WOOD AND CORK INDUSTRIES.

Furniture.

Chipboard and particle board.

Toys.

5. PLASTICS INDUSTRIES.

Moulding and fabricating.

Containers.

For household equipment.

Toys.

6. PAPER AND PAPERBOARD.

Newsprint.

Packaging.

7. FOOD PROCESSING.

Tomato pulp and juice.

Vegetable bottling.

Soft drinks.

Bottling of alcoholic drinks.

8. CONSTRUCTION MATERIALS.

Bricks.

Asbestos-cement products.

Aluminium door and window frames.

Pipe manufacture.

9. CHEMICALS

Insecticides and pesticides.

B. POTENTIAL INDUSTRIES OVER THE LONG-TERM.

1. Mechanical and Metallurgical.

Truck manufacture.

Car components.

- Batteries.

Air conditioners.

Refrigerators.

Office equipment (e.g. typewriters)

Domestic appliances (cleaners)

Childrens bicycles.

2. Food Processing.

Tobacco.

Confectionery.

Sugar manufacture.

3. Wooden Materials.

Floor tiles/parquet.

4. Glass Industry.

Bottles and containers.

5. Pharmaceuticals.

6. Paint Industry.

Soap and detergents.

7. Electrical products.

Television sets.

Record players.

Generators.

Accumulators.

Transformers.

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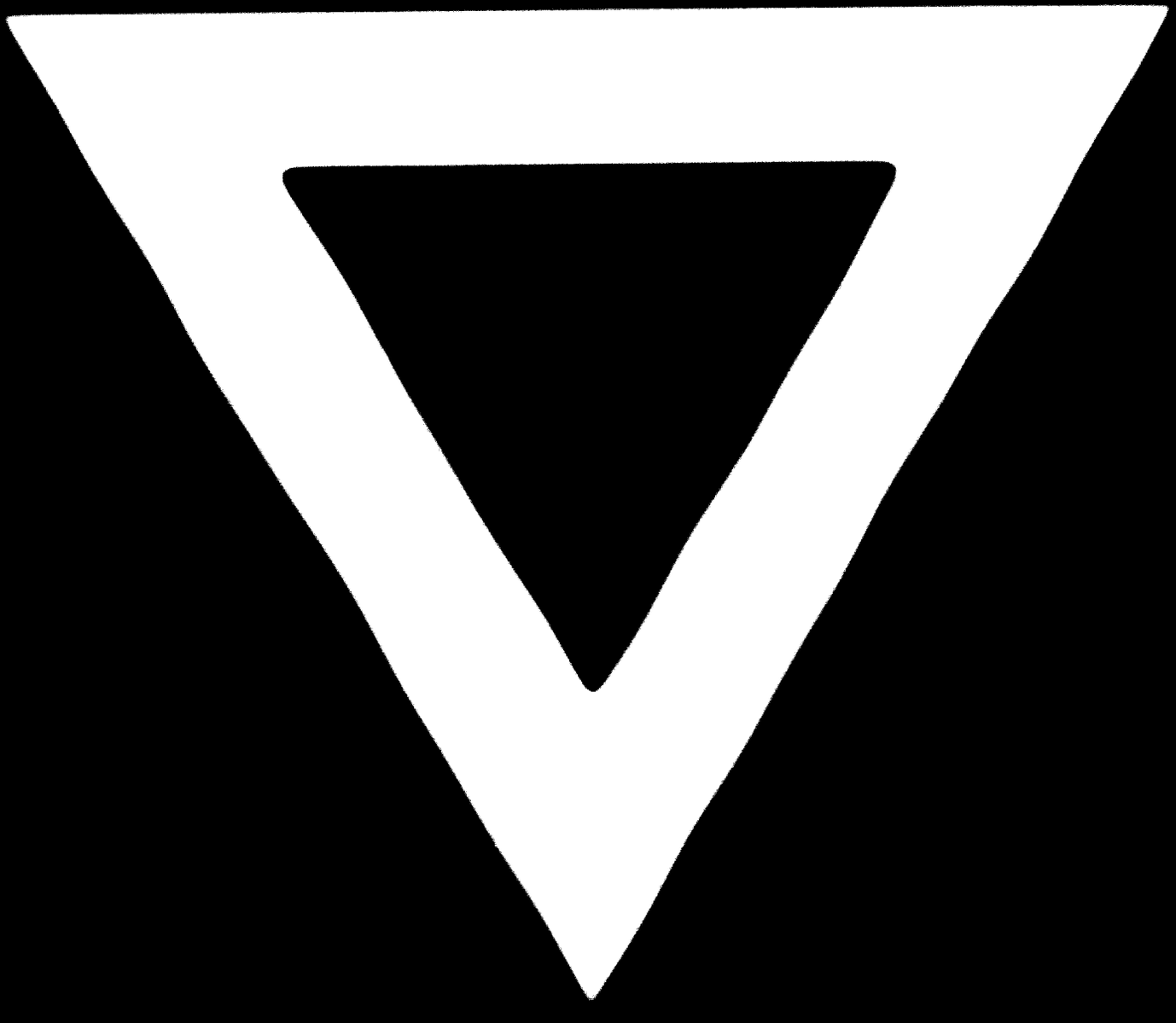

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