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GENERAL DOCUMENTATION FOR THE
INTER-REGIONAL SYMPOSIUM ON
INDUSTRIAL PROJECT EVALUATION

- A. Preliminary step in setting up Industrial Projects
- B. Considerations in Evaluation of Industrial Projects
- C. Follow-up and supervision of Industrial Projects
- D. Survey of Country Experience (including Case Studies)
- .. Miscellaneous Documents

A. PRELIMINARY STEP IN SETTING UP INDUSTRIAL PROJECTS

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105.	CID/IPE/D.41	Summary Analysis of Country Experience in Industrial Project Evaluation	Gordian O. Nworah and Harrison Akpan

* Title is tentative

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CID/IFE/Misc.1	Summaries of Documents Submitted to the Symposium on Industrial Project Evaluation	Centre for Industrial Development, United Nations
CID/IPE/Misc.2	Definitions and explanations of Selected Terms used in Industrial Project Evaluation	Jacob Sonny

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CONVERSION OF MALTA DOCKYARD

Prepared by: A.H. CAMILLERI
Department of Industry
MALTA

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INTRODUCTION

For over a century and a half Malta was first and foremost a naval base. Industries existed but these were few in number and of no major importance. Tourism was not developed at all although the potential existed in no small measure. The only sector which was fairly well developed was agriculture but, the methods used were not modern and farming was not organised.

2. Perhaps it is apposite to say that in 1959 about 20% of the local labour force was employed with the Military Services (Appendix E) and around 18% of the gross domestic product came directly from Services expenditure.

3. The foreign exchange earnings figures were even more impressive: about 66% of Malta's total foreign exchange earnings came from British military expenditure. The figures for 1959 were just over £20 million spent by the Services as compared with just under £30 million of total foreign exchange earnings.

4. Till 1959 Malta was fairly prosperous and did not feel the pinch for any drastic change. In 1959, however, the British Government decided on a radical revision of their defence policies and these hit the economy of Malta with telling effects. It was decided to contract severely the military services expenditure on the Island and to turn the naval dockyard into a commercial yard. From a major naval base Malta became just an outpost.

5. The need was immediately felt for the diversification of the production sectors and to concentrate mainly on a rapid intensification of industrialisation and the promotion of a tourist industry.

HISTORY OF THE MALTESE ECONOMY SINCE WORLD WAR II

Postwar Malta.

6. To understand the role of new industries in Malta it is apposite to draw up a general picture of the economic development of Malta since World War II.

7. When peace returned to Europe it brought along those problems that, from times immemorial, the end of hostilities in the Mediterranean basin have always entailed for Malta. With demobilization, the need for creating alternative sources of employment became manifest. Nevertheless, it was an ignored need.

8. It is true that the first Annual Abstract of Statistics of Malta enumerated a number of small industries which the Abstract hopefully suggested were to be set up soon. But hardly any of the projects mentioned in that publication ever matured. Two reasons may perhaps be adduced to explain this

failure: Britain's official economic adviser to Malta, Sir Wilfred Woods, dismissed industry as a paramount source of wealth for the Maltese Islands. For him, industrial growth in Malta could only be a 'minor accretion to the national wealth, which it is important to encourage, but from which much cannot be expected'.

9. In the second place, between 1946 and 1950, the Maltese Islands were engaged in an intensive phase of reconstruction. Funds were ample for that period; added to the British grant of £32½ million, including interest, towards the War Damage Fund, the Maltese had themselves saved substantial sums of money during the War. The 1946/50 reconstruction period consequently saw an unparalleled building boom.

10. Evidently, if industry had been given that impetus between 1946 and 1950 that it has been given in the last few years, the lot of the Islanders would have been happier to-day. But this is perhaps being wise after the event.

1950-55 Period

11. In fact, circumstances in 1950 were not altogether void of promise. It is true that the rate of disbursements from the War Damage Fund brought to their attention the need for diversifying their sources of wealth once the Fund was exhausted. But they had no overwhelming employment pressure. The successful emigration drive quietened their minds concerning a problem of overpopulation.

12. And though Britain had already signified her intention in 1949 of reducing her commitments in Malta, yet hardly anyone believed at that time that Britain could ever really leave Malta. Moreover, fate played its usual trick on Malta by diverting her attention to other prospects just when she nearly came to feel the pinch of her reduced circumstances.

13. The Korean War was on. Although Malta was not directly involved in hostilities, yet a new assessment was made of her military value. And for a time it was felt that Malta could yet continue shaping her economic destiny on its curious relationship with the periodic occurrence of men waging war on other men.

14. The hopes raised by Korea were short-lived. Employment pressures continued to mount, and no easy solution was in sight. In the early 1950's Malta was groping towards a new economic set-up. Some started to discuss the possibility of framing some sort of structure for their livelihood that would not necessarily have the presence of the British Services in Malta as its bulwark.

15. By 1955, however, Malta's economic prospects had taken a turn for the worse with growing signs of Britain's reappraisal of her defence requirements and the consequent need to curtail her defence expenditure in the Maltese Islands.

First Steps Towards Development. 1955-59

16. The Government of the time commissioned Dr T. Balogh and Mr D. Seers to draw up an interim report on the economic conditions prevailing in the Maltese Islands. Dr Balogh's report was a landmark in their economic development in that it outlined to the Malta Government in stark contours the possibility of basing their economic life on sources other than the Services.

17. But four years were to elapse before the First Plan saw the light of day. Political upheavals retarded the date, while the fates of war were teasing them again when Malta seemed to reacquire some of her pristine military prowess during the Suez crisis.

18. This time, however, the play of war was rapidly over. Withdrawing from Egypt, Britain realised that her Mediterranean commitments had to be contracted even further. A White Paper indicated that the Dockyard, hitherto Malta's main source of employment, was no longer an economic proposition for the Admiralty.

19. That sounded like Malta's death-knell. The Dockyard and its ancillary industries had at one time accounted for one-third of the Maltese labour force. Dockyard work, moreover, was not merely the primary occupation of the Maltese; it was an institution fully integrated into the economic, educational and social structure of the country. What skills they had were largely Dockyard skills; what wages and salaries they derived, originated mainly, directly or indirectly, from the Dockyard.

20. The year 1959 drew near. This time the fates of war were conspicuous by their absence. The end of every quinquennium since the return of peace had been marked by a minor war or crisis in which somehow or other Malta had been involved. This time the Mediterranean was relatively quiet, and the rumblings at Cyprus affected Malta only marginally.

21. By now the British Government had the reins of the local administration in its hands. The decision to end the Dockyard's life as an Admiralty responsibility was implemented; and the age-old institution now became a commercial concern - a proposition that for the first few years was more concerning than commercial.

The Infrastructure of Development. 1959-64

22. The First Development Plan coincided with this change-over. Not unnaturally, it had to cater for the financing of the conversion of a dockyard geared to the repair of naval vessels to one specialising in the overhaul of merchant ships. From a government department, the dockyard had to become a commercial enterprise.

23. It could not have been an overnight task. And it was not. Notwithstanding the £6 million earmarked for its conversion, the dockyard proved a hard-headed candidate for the baptism of commerce. Many days and nights were passed in protracted negotiations. The upshot of the delays was the necessity of revising the original Plan of 1961.

24. The principal aim of that Plan was to give full employment to the people of these Islands. Accordingly, allocations were made for three principal productive sectors: namely Industry, Tourism and the modernisation of the Grand Harbour.

25. The last major physical investment was the allocation of £2½ million for the modernization of the Grand Harbour, and particularly for the construction of a New Quay complete with a grain silo with a capacity of 12,500 tons. Agriculture received no special treatment, and the rise of industries connected with that sector in recent years is therefore all the more remarkable.

The Second Five-Year Development Plan, 1964-69

26. The industrial emphasis of the new Plan covering the years 1964-69 is on capital grants and loans for the purchase of machinery and for the building of factories. Tourism has received an allocation of over £3½ million (more than seven times the 1959 figure), while agriculture now benefits by over £1½ million (twice the 1959 figure).

27. On this basis, the ratio of investment between the three sectors - industry, tourism and agriculture - is 24 : 14 : 5 respectively. Since unemployment is Malta's main headache at the moment, it is useful to point out the forecasts of new jobs in these sectors between this year and 1969. Industry is expected to create 2,600 new jobs, and tourism 1,400. Agricultural employment should remain at a constant level.

28. At the same time, the Dockyard would be reducing its labour force by 1,000 and the Service Departments by 3,000. These calculations lead the Planners to think that, if all goes well and if the Plan carries out its forecasts with 100% success, Malta's unemployment level in 1969 will be the same as it was in 1962, namely about 6,300. Meanwhile, the National Income will have declined by 3.5%.

Future Developments

29. This state of affairs was obviously far from satisfactory to the Government of Malta and it was only natural to start seeking immediately for other sources of income and employment.

30. Since Malta has always existed on services rendered rather than on its own production, the idea suggested itself of tapping fresh sources of revenue through the creation of a Free Port (vide map at Appendix 'O'). The United Nations helped by providing experts to study the possibility of a Free Port at Marsaxlokk Bay on the south-east coast of the Island and to assess its technical practicability.

31. Another possible source of revenue is the prospecting for oil. Two companies will start prospecting shortly both on the Island itself and offshore. The hopes of the people of Malta are that through proper planning and sheer hard work, far from suffering a decline in their standard of living, they will achieve full employment, economic viability and a rise in their national income.

SOME ECONOMIC AND INDUSTRIAL FACTS

32. For several years there has been a rapid expansion of income, consumption, savings and investment in Malta. The gross national product rose from £32.2 million in 1954 to £48 million in 1961 but fell again to £46 million in 1963 (Appendix D). The per capita gross national product of £143 in 1963 (Appendix A) compares well with that of surrounding Mediterranean countries.

33. Unfortunately, a disproportionate share of the national product is generated by services as opposed to manufacturing industry and agriculture. These are not services of a fairly permanent nature, as are found in mature industrial economies, but ones that are going to suffer reduced demand due to the run-down of United Kingdom military expenditure.

34. The table in Appendix D shows the proportion of the national product generated by different sectors. This demonstrates the importance of the wholesale and retail trades, military services and public administration and other Government services, which together generate about 45% of the total gross national product.

35. The weakness of the industrial and agricultural sectors is seen in the visible balance-of-payments position, which in 1963, was as shown in Appendix B. In that year imports cost £30.2 million, while exports and re-exports were valued at only £4.6 million. This large deficit is financed mainly by British military expenditure (Appendix C) and interest paid on Government and other investments in the United Kingdom.

36. The gradual reduction in the number of Service personnel in Malta (Appendix F) and in the labour force at the Dockyard (Appendix G) presents grave problems of unemployment, reduction of national income and loss of Government revenue.

37. It is against this serious background that the Malta Government has laid its plans for industrialisation and economic growth.

INCENTIVES TO INDUSTRIES

38. Malta offers these basic advantages to industrialists seeking a new field for development:-

- (i) Fine harbours in a strategic position at the cross-roads of the Mediterranean;
- (ii) a workshop within easy reach of the U.K. and Continental markets and the markets in the Mediterranean, Northern Africa and the Middle East;
- (iii) a ready supply of labour, male and female, available at just over half the United Kingdom cost;
- (iv) a healthy, sunny climate.

Malta is in the sterling area and benefits from Commonwealth preference.

39. These natural advantages have been supplemented by a first Development Plan costing £29½ million, while a second 5-year Development Plan started in April 1964, and involves a Government investment programme of £38.4 million. A new structure of grants to manufacturers setting up factories in Malta, coupled with tax reliefs and exemptions, makes the Island an attractive territory for investment.

40. The 1959 Aids to Industries Ordinance and other measures are aimed at encouraging the expansion of existing concerns and establishment of new industries. The main features are:-

Plentiful Labour

41. Malta is one of the few areas in Western Europe with no labour shortages.

Tax-Free Holiday

42. New Industrial undertakings may be wholly exempted from paying income tax for a period of up to ten years.

Grants

43. Grants of up to 33 1/3% and in certain cases up to 50% of the cost of fixed capital assets (including new plant and machinery and buildings) may be made. These grants are not repayable and do not exclude the undertaking from income tax relief. Grants for training Maltese labour are also available. These grants cover part of the cost of training Maltese labour abroad or part of the cost of sending trained instructors to Malta. Interest free loans are also available.

Customs Duty Reliefs

44. Undertakings may be granted exemption from Customs Duty, where this would otherwise be payable, on plant and machinery and on building materials for the construction of factories. Wherever possible exemption or reduction in Customs Duty will also be granted on raw materials and in special cases on component parts.

Customs Drawback Scheme

45. Under the drawback scheme, import duties on certain raw materials and components used in production, on which outright exemption cannot be granted, may be refunded on the exportation of the product embodying the imported material. Alternatively, items meant to be incorporated in products intended for export markets may be allowed to enter on temporary importation against some security.

Imperial Preference

46. Malta-made goods are admitted into the U.K. either duty-free or at preferential rates. Exports to other parts of the Commonwealth also benefit from preferential treatment in many cases.

Customs Tariff

47. A new customs tariff drawn on the Brussels Nomenclature and aimed at providing favourable conditions for industry has been in force since August 1964. Anti-dumping and countervailing duties may be imposed.

No Local Taxes

48. There are no local government rates or property taxes in Malta. There is a Police licence fee of 5% on the rent of the factory with a maximum of £50 per annum.

Apprenticeship Scheme

49. An apprenticeship scheme exists under which Government pays a subsidy to employers of apprentices.

Industrial Estates

50. Sites connected to all mains are provided at extremely low rents starting from 10/- per 1,000 sq. ft. Standard, ready-built factories are available at a rent of 9d. per square foot or 2.18% of construction costs, whichever is higher, for an initial period of 16 years.

51. Under special conditions, factories can be built to applicants' specifications.

Conditions for Granting Aid

52. An undertaking qualifies for assistance under the Aids to Industries Ordinance if:

- (a) it is likely to create employment or increase the national product;
- (b) aid is needed to establish the business;
- (c) it will be able to carry on without further help.

Official Organisations

53. Three bodies are involved in the promotion and assistance of new industries:

1. The Department of Industry of the Malta Government.
2. The Aids to Industries Board.
3. The Industrial Development Board in London.

54. Initially a project is studied by the Department of Industry on the basis of a detailed questionnaire completed by the applicant for aid.

55. Following a preliminary appraisal, the application goes before the Aids to Industries Board, which consists of the Director of Industry, three heads of Government Departments and three representatives, one each from the commercial, industrial and banking sectors.

56. The Aids to Industries Board then consults the Industrial Development Board in London on matters of general policy and on other specific details concerning the nature of the industry. The members of the Board, who are drawn from various fields of activity in the United Kingdom, are residents of that country. As such their contribution is mainly to give those responsible for industrial development in Malta the benefit of their experience in the industrial field. It would seem that another purpose is to ensure that the disbursement of essentially British taxpayers' money is to some extent vetted and supervised by a United Kingdom based organisation.

57. The final authority to grant aid is the Minister of Industrial Development and Tourism.

58. The Department of Industry, which has among its staff an Industrial Chemist, a Mechanical and Civil Engineer and a Cost Consultant, performs the following functions:-

- (a) Keeping in touch with commercial and industrial concerns in Malta and abroad;
- (b) Keeping in touch with business representatives and prospective investors;
- (c) Advising the Government on Trade policy and in particular on tariff adjustments affecting local industry;
- (d) Encouraging industrial expansion and other forms of business enterprise in the Maltese Islands;
- (e) Promoting the exportation of Maltese products directly by advertisements or the procurement of quotas where there are restrictive controls and indirectly by maintaining standards through laboratory and inspection controls;
- (f) Maintaining touch with British commercial representatives in foreign and Commonwealth countries;
- (g) Participating in Trade Fairs;
- (h) Providing the executive organisation for the Aids to Industries Board.

Measures for Improvement of Existing Machinery

59. Government is seriously considering the establishment of a Development Corporation to improve the existing machinery for the promotion of new industries as the industrialisation process has been slow. An inherent weakness of the system now in force lies in the fact that there is no pattern for industrialisation. Incentives are offered and each application for aid is dealt with on its own merits, rather than on an assessment as to whether it fits into the general aims of creating a lasting industrial structure. The Corporation would fulfil two principal functions viz.: development and finance.

60. Essentially, the development function would be concerned with the promotion of new industries and with the giving of technical advisory services in the widest sense. Part of the promotional work would involve studies to establish the types of industry suitable for Malta taking into consideration the present stage of growth, geographical position, resources, facilities, etc. The studies would be used to interest the entrepreneur to take up an industry and would aim at fostering the development of the type of industrial activity best suited to the optimum economic expansion of the Islands.

61. Another aspect of promotion would comprise detailed studies of specific products which could be manufactured in Malta. These studies would cover market surveys, technical production conditions, the potential profitability of an industry and all matters pertaining to a decision to carry out an investment.

62. The entrepreneur would also be given guidance on matters connected with the organisation of the enterprise, including administration, finance, production and commercial policy. Once an industry is sponsored by the Development Corporation, this institution would guide the entrepreneur in the application of proper management and accounting methods and in following modern marketing systems, including the whole range of high powered selling, advertising and packaging techniques which are so important in the highly competitive conditions of to-day's markets.

63. In this manner the Corporation will not only be providing the leadership needed, but also the know-how for the successful operation of an industry.

64. The Development Corporation would help new industries by furnishing medium and long-term capital. In making finance available, the Corporation would participate both by way of loans and of equity. This would necessitate direct supervision and close control of progress on the part of the Corporation which would thereby maintain a watching brief on investments to ensure their ultimate success.

HISTORY OF DOCKYARD CONVERSION

65. From the beginning of the nineteenth century until 1959, the Malta Dockyard had been an H.M. Naval Base and for well over a century the facilities available have consistently maintained in full trim one of Britain's biggest fighting fleets - the powerful Mediterranean fleet.

Take Over by C.H. Bailey

66. However in 1959 it was felt that the need for a powerful naval base in the centre of the Mediterranean was no longer justifiable. Fortunately for Malta, it happens to be situated on one of the busiest sea-routes of the world. From investigations made it was found that an average number of 40 commercial ships pass through near the Islands every day, mainly on the sea-route Gibraltar-Malta-Suez-Middle East and vice versa. This, added to the fact that a dockyard existed already complete with skilled workers, suggested the idea that the naval yard could be converted into a commercial concern. After months of negotiations with some leading United Kingdom Ship Repairers, the British Government entered into a commercial transaction with the Welsh firm of C.H. Bailey Ltd. The transaction was pretty straightforward and fell into two separate parts:-

(i) The Admiralty granted the Company a lease of 99 years on the Dockyard. For this lease the Company had to pay an annual rent of £30,000, half of which had to be passed on to the Malta Government. At the end of the 99 years the ownership of the Yard would revert to the Malta Government.

(ii) To assist in the development of the Dockyard, the British Government made a loan to the Company which it had, under terms and conditions, to repay over a period of years.

67. The Welsh firm of C.H. Bailey Ltd. took over a dockyard complete with docks, wharves and workshops together with a highly trained labour force. On the other hand it undertook an extensive programme of development and modernization with a view to repairing tankers and cargo vessels with a displacement of up to 80,000 tons. The Company did its best to adapt to the needs of the commercial world those facilities which when coupled to the inherent skill of the Maltese workmen would make a formidable combination, offering the most comprehensive repair service in the Mediterranean for commercial shipping (Appendix "N").

68. Unfortunately the labour force existing at the time was more than enough for the repair work which could be undertaken by the existing facilities. However for political and humanitarian reasons it was decided to keep in employment the whole of the labour force and to reduce its strength by natural wastages, eg. superannuation, deaths, emigration and transfers to other industries.

Development Programme

69. Detailed studies were made to effect a comprehensive "Dockyard Development Scheme". To this end the British Government agreed to grant loans to the new Company, to the tune of £6 million. These plans however needed time to materialise. Meanwhile use was made of

part of the redundant labour force to effect structural alterations in the yard. On the development side, the following alterations which were planned to be part of the "Dockyard Development Scheme" were made: resiting of the main gate; erection of a Goliath crane at Burmola Wharf; erection of two Portal cranes at Boiler Wharf; conversion of a store into a Personnel Department; conversion of a store into a Chapel; conversion of workshops into payroom and strong room and Ship Repair Managers' Offices; construction of two additional wings for Ship Repair Managers and Ancillary Industries; additional two floors above Production Control Offices for the Comptroller's Department; conversion of Constructive Shipwrights Shop into new Stores; clearance of Gun Mounting Wharf in readiness for the extension of Boiler Wharf; clearance of Burmola Wharf for the erection of a New Plate Shop.

Ship Repairing

70. During the first two or three years of the Dockyard conversion much of the ship-repairing was done on naval vessels (Appendix I). Gradually work on naval ships diminished and ship repairing shifted to commercial ships. Of 258 ships handled during 1964, 144 were tankers, 76 cargo vessels, 3 passenger ships and the rest miscellaneous.

71. The preponderance of tankers for which Malta is ideally situated being on the route Gibraltar-Suez-Middle East, inevitably results in the Drydocks being busier during the summer rather than the winter months, when the larger part of the tanker fleet in the northern hemisphere is at sea. However winter refits on passenger ships help to maintain a steady volume of work, and the Management is planning to attract more passenger ships for winter refitting.

Other Work

72. Apart from ship repairing, the Company carried out other commercial work, among which was the repair of an oil derrick for Libya; the manufacture of the 20-ton Lottery drum for the Malta Government; repair and retubing of all kinds of boilers; installation of overhead travelling cranes; manufacture of fuel storage tanks; rewinding and repairs of all kinds of electrical motors and other electrical equipment; grinding of crank shafts; construction of motor launches and fibre glass boats; casting of large discs and grate bars; fabrication and erection of steel work for new factories and the new combined power/water distillation plant; manufacture of concrete mould blocks and furniture of all types and styles.

Shipbreaking and Shipbuilding

73. The Company intended going, in a small way, into shipbuilding and shipbreaking.

74. In the shipbreaking line, the first ship which was scrapped was the Maltese vessel 'La Vallette' which for a long time had lain at anchor at Malta's Grand Harbour.

75. As for shipbuilding, it was intended initially to concentrate on tugs and similar crafts. Arrangements have now been made with an American Company to start on the building of dredgers.

Reorganisation of Management

76. Management in the Yard has been reorganised on commercial lines and the modern techniques of work study, production engineering, production control, personnel management, education and training in all its phases and welfare schemes have been put into operation. Following the new policy of the Company, Maltese employees were promoted to responsible positions, and among senior staff appointments filled by Maltese were those of Medical Officer, Welfare Officer, Cashier, Scientific Assistant, Publicity Officer, Civil Engineer and Secretary to Personnel Manager.

77. A Maltese Director was appointed to the Board and also an Agency Sales Manager for Malta and North Africa.

Training of Personnel

78. Members of the Senior Staff attended courses in Liferrafts, International Computers Tabulators, Gyro Compasses (Sperry's), Sales Courses, and Personnel Management.

79. Besides these oversea courses, Management Training Courses for foremen and chargemen were held in the Dockyard, tutored by an Education Officer. The Courses ran for sixteen weeks each and were attended by foremen and chargemen and contributed to by all senior executives. More intensive courses were given to equip selected employees for more senior posts in management.

Welfare Schemes

80. The production, management and educational activities were not the only activities to be considered. Much was done in the welfare field: e.g. the enrolment by the Company of all the Dockyard employees in the Malta Memorial District Nursing Association (M.M.D.N.A.) entitling the employees and their families to skilled nursing treatment, the Gratuity Scheme introduced for all employees and the Pension Scheme which to-day embraces most of the employees. A thriving Sports and Social Club was organised and this includes among its many activities a 40-piece band.

81. But one of the most important among the welfare services of the Company was the presence of a Surgery with a full time Medical Officer and Ambulance Section. This is staffed by Drydocks employee volunteers who look after First Aid in the Yard. These volunteers attend lectures twice a month and look after the first aid kits which are placed in various shops in the Dockyard.

82. Another important aspect of welfare work in the Drydocks is the Pension and the Gratuity Scheme for retiring employees and for the next of kin of those employees who may die before their retirement. Under this scheme large sums have already been paid including single sums of up to £800.

83. A scheme for sick pay is in operation, and at Christmas time those employees on the sick list receive cash presents from the Company.

Apprenticeship Scheme

84. An apprenticeship scheme (Appendix M) was designed to give those who pass through it the chance to acquire all the skill and knowledge needed for success in their chosen trade or profession, to develop their latent ability and to reap the full rewards of diligent, practical and theoretical studies. The scheme was launched in June 1964. A total of about 900 applications for apprenticeship was received. There are now about 200 apprentices in the Yard.

Litigation

85. Unfortunately the re-organisations and developments did not proceed as smoothly as desired. Indeed as early as 1962 the British Government felt the need to appoint an investigator to report on the workings in the Yard. In 1963 the connections between C.H. Bailey and the Malta Dockyard were severed because of the litigation with the British Government. The litigation is still sub judice in the United Kingdom courts.

Swan, Hunter Ltd., Managing Agents

86. Meanwhile in the same year the British Government, with the approval of the Maltese Government, appointed a Council of Administration to direct the Malta Drydocks. The Malta Government appointed one representative on the Council.

87. On May 1, 1963, Messrs Swan, Hunter & Wigham Richardson Ltd - the well known United Kingdom Shipbuilders - were appointed Managing Agents by the Council of Administration.

88. On Monday 29th April, 1963, the Prime Minister of Malta, made the following statement in the House of Representatives:-

"I am pleased to inform the House that the firm of Swan, Hunter & Wigham Richardson Ltd has been nominated, with my prior approval, by the Council of Administration as 'Managing Agents', to run the Dockyard.

I feel that I can assure the House that this well known firm of shipbuilders and ship repairers has been fully informed of the

position of the Dockyard, including the views of the Government, especially as regards the level of employment and the continuation of the conversion work.

I have no doubt that this House would wish the best of luck to these Managing Agents for the welfare of all Dockyard employees and for the economy of the country."

89. The new Managing Agents carried on with the development projects and other schemes started under C.H. Bailey Ltd., but work proved smoother and faster. Before very long the number of commercial ships seeking repairs in the Malta Drydocks was increasing rapidly. (Appendix H)

Future Plans

90. Most of the management re-organisations and development projects have now been completed and already the need is felt for more docks and berths, especially for one giant drydock to take in tankers of 150,000 tons deadweight or over. The tendency now all over the world is to build bigger and bigger tankers and the present Managing Agents already have advanced plans for the construction of such a dock and for the lengthening and widening of more berths. One difficulty is the procuring of funds. The World Bank may be asked to finance the projects.

91. Another difficulty is the long standing litigation between C.H. Bailey Ltd. and the British Government which is still sub judice in the United Kingdom courts. This is hampering future developments and the final settlement of the dockyard problem. When this is settled it is hoped that Malta Drydocks would be managed by a consortium of Ship Repairers and Ship Owners. This combination would provide the managing know-how on the part of the Ship Repairers and a steady supply of ships for repairs by the Ship Owners. The problem may be settled by the end of this year, when it is hoped, the Yard would be completely commercialised and rendered a viable enterprise.

MANAGEMENT DEVELOPMENT PLAN

92. In order to ensure that the quality of the management will be of the highest calibre, consistent with the requirements of a modern ship-repairing industry, Malta Drydocks launched a planned management development scheme aimed at preparing Maltese personnel to fill future vacancies at managerial level.

PROMOTION OF MALTESE PERSONNEL

93. It is the declared policy of Malta Drydocks to promote capable Maltese personnel to senior positions but it was not simply a matter of placing people in higher positions and expecting them to carry out their duties efficiently. They had also to safeguard the reputation that they have painstakingly built up for quality and speed.

94. No man comes trained for any job and men cannot be trained overnight; also the amount of advancement that a man can take through training is dependent on his intellectual capabilities, educational background, experience and personality.

95. When a reputation as a first-class commercial shiprepairer was achieved by Malta Drydocks it was felt that the time was opportune to introduce a scheme for planned management development and at the same time to make effective the declared policy. For these reasons the plan was launched; its success depended upon the combination of two factors:-

The Individual : His Superior

96. The individual who wishes to progress in management must of necessity have a sufficiently comprehensive knowledge of the various functions of management within and outside the context of Malta Drydocks; his superior must give the individual opportunities for taking responsibility and all sympathetic support and help.

97. The manager of to-day needs different knowledge and different skills from his predecessor, who was more schooled in his particular function, and it is the aim of the present management to endeavour to equip their potential managers with the kind of skill and knowledge they will need.

98. The framework of the scheme launched showed that provision by training for future managers was to be undertaken by two methods both of which were directed towards providing as practical a training as possible. The two methods were:

- (a) 'The Accelerated Training Plan'.
- (b) 'The Three-Part Training Plan' through both of which it was considered that they would meet their two main objectives in the scheme, namely:-

- i. To raise the general level of managerial competence and
- ii. To provide a continuous supply of trained and competent managers to fill future vacancies.

The Accelerated Training Plan

99. This was designed to suit the individual, who was at the time in either junior or middle management firstly to carry out his functions better and secondly to suit any employee who had the potential for future development. Each training plan was tailored to suit the individual's needs; it had to be discussed between the Education Officer and the individual concerned and a personal plan drawn up for each participant.

100. Generally the Accelerated Training Plan was implemented by means of Job Rotation over a period of about nine months for those employees who were already in junior management, e.g. foreman level, or in middle management, e.g. on ship repair manager level.

101. Job Rotation is used as a means of training, the aims of which are to improve the individual's understanding of management jobs other than his own, and so increase his understanding of the ship-repairing industry, and to provide him with a specific experience which he has not hitherto had and which is essential to equip him better for his own position or for promotion.

102. It takes the form of either an attachment on a short term basis for some weeks or months, as assistant to the substantive holders of posts and for longer periods with full responsibility for the job, or, in some cases, an attachment to a section to absorb its function and scope.

The Three-Part Training Plan

103. Essentially this was designed to provide a continuous supply of trained, competent managers and comprised:

1. Job Rotation;
2. Project Assignments;
3. Formal Training Courses.

104. This plan had to extend over a period of two to three years depending upon the needs of the individual.

I. Job Rotation

105. This is as outlined in the Accelerated Training Plan and tailored to suit the background of the individual.

II. Project Assignments

106. It was felt that giving an individual an assignment to execute was a valuable type of training activity for potential managers. A well-chosen assignment involves the individual in investigations

in several different departments, provides excellent experience, develops talents and skills and reveals a man's capabilities. In addition it enables a potential manager to appreciate problems of departments other than his own, makes him take a management view and allows him to see the enterprise as an integrated whole.

III. Formal Training Courses

107. A man's development should be planned with care so that his needs may be accurately diagnosed and the most suitable training courses selected for him. Such courses can be either internal or external and it was the intention to utilize both methods. External courses at the Polytechnic and other Technical Colleges in Malta or overseas, although more expensive, were preferred as being a very good bulwark against the ingrowing parochial outlook which development within one firm inevitably brings. The sole criteria for using training courses was to be the individual's strength, weaknesses and potential, for a good course can make a direct contribution to a man's development. On the extent of this contribution which the Company expected, the individual had to be carefully briefed prior to his departure and an indication given of the benefit it was hoped he would receive from attending. In addition, or as an alternative, the individual might be seconded to a firm abroad for a specific period.

Assessments

108. The task of assessment of an individual's progress through his training is of vital importance. As experience has shown that the judgement of one person by another has a wide margin of error and as this is greatly diminished whenever two people discuss and agree upon a common judgement of a third person all assessments will be made upon discussions between the respective Head of Department of the individual during his training and the Education Officer.

109. The assessments had also to take into account results obtained on practical and theoretical tests relative to the work covered in each part of the training by the individual.

110. They had to distinguish firstly, an individual's intrinsic qualities, secondly, his performance in the job and thirdly, the job and the factors affecting it, for all these three aspects overlap. In addition they had to be used to consider what could be done to develop a potential strength or to minimise a weakness. The results of the assessments and tests had to be discussed openly and frankly by the Education Officer with the individual.

111. Upon conclusion of training either by the Accelerated Training Plan or by the Three-Part Training Plan individuals would be posted wherever they are most suited and most needed, and in keeping with the amalgamated organizational structure in the Drydocks.

DOCKYARD DEVELOPMENT

112. From the outset, it was obvious that costly alterations would have to be made to the existing Dockyard to enable large commercial ships to be docked and berthed for repairs, and that larger cranes and machine tools capable of dealing with the heaviest commercial ship work would be necessary.

Original Plan

113. After discussions between the Company and the British Government, an original plan of improvements was agreed upon, its main features being the straightening and lengthening of Boiler Wharf to a total length of about 1,500 feet, the enlargement of Number 2 Dock to take tankers of up to about 43,000 tons deadweight, of Number 4 Dock to take tankers of up to 50,000 tons deadweight and of Number 5 Dock to take tankers of up to about 35,000 tons deadweight. New cranes were to be provided for the wharf and these docks, and some allowance for buying and installing new machine tools. The new sawmills building, the structure of which had already been provided for the Naval Yard, was to be erected, a steel stockyard provided, some existing buildings were to be improved or adapted to other purposes and minor improvements were to be made to electrical, compressed air, water and other services. In addition, a tank cleaning installation was to be built, and some improvement made to one of the Manoel Island slipways for the repair of yachts.

Loans Provided

114. On this basis, the British Government agreed to provide a loan of £3,620,000 which, however, did not cover the full estimated cost of alterations to No. 2 Dock and the slipways of Manoel Island. The total loan agreed was £6,000,000 but the remainder was allocated for the purchase of the existing machinery in the Yard, the setting up of ancillary industries and the provision of working stocks and capital.

115. A scheme estimated to cost £3,620,000 could not be started as soon as it was envisaged in broad outline. Up to September 1959, the Company's civil engineering consultants were busy visiting the Yard to get full particulars of buildings, services, rock formation, depth of water and so on and designing the major improvements to docks and Boiler Wharf; specialists were studying detailed requirements for improvements to services, and the Yard's own drawing offices were preparing details of minor work as well as producing outline requirements for the tank cleaning installation. There was, however, a possibility that some of the major work could be started by the end of 1959.

116. In the meantime, as experience of commercial ship requirements in the Yard increased and the vital requirement of combining Yard activities was fully realised, it became apparent that the allocation of the loaned money would have to be changed. More had to be spent on improvement of shops, on heavier machine tools, and on electrical services. Equally important was the fact that tanker sizes were increasing rapidly and that, unless there was at least one very large dock, there should be difficulty in competing commercially with other shipyards.

Alternative Plans

117. In an attempt to reduce expenditure on one item to provide additional funds from the loan for other items, the Company proposed a revised scheme for Boiler Wharf.

118. Apart from the changes in the Boiler Wharf project and to the site for the tank cleaning installation, the main changes proposed by the Company were the enlargement of No. 4 dock to take tankers of up to 85,000 tons deadweight, a slightly smaller enlargement of No. 5 dock so that it would take tankers of 38,000 tons deadweight, the building of a large plate and welding shop complete and far reaching improvements to the machine shop and to electrical services. Much greater expenditure than previously envisaged was necessary on the re-allocation and improvement of existing buildings and on the provision of heavy machine tools. The total cost of this scheme was agreed in February 1960 to be about £6,600,000 or about £3,00,000 more than that allocated in the negotiated loan. (Appendix J)

Other Developments

119. Other developments were the planning, drawing office work and estimating on the tank cleaning installation project which involved much research, on the new plate shop, improvements to the machine shop, the new canteen and welfare centre, a combined joiners' and patternmakers' shop and many other improvements, all of which had to contribute to the efficiency of the Yard and the well being of its personnel.

PROGRESS ON DOCKYARD DEVELOPMENT

120. On the 7th February 1962, Malta Drydocks entered one of the most important phases when the Chairman signed the letter accepting the tender jointly submitted by George Wimpey & Co. Ltd. of the United Kingdom and the Royal Netherlands Harbour Works Co. Ltd., for the major alterations to the Dockyard.

121. The development work envisaged in the tender included the extension of Boiler Wharf, the enlargement of No. 4 Dock to take tankers of up to 85,000 tons deadweight, the enlargement of No. 5 Dock to enable it to take tankers of up to 38,000 tons deadweight, and the construction of the Tank Cleaning Jett, at Ricasoli.

Work Carried out by Redundant Yard Workers

122. Pending the placing of this contract, Malta Drydocks have themselves carried out a great deal of development work in the Yard by their redundant labour. In the No. 4 and No. 5 dock areas the Company cleared and enlarged the area at the Main Gate and manufactured and assembled two cranes to serve those two docks when enlarged.

Boiler Wharf

123. The area at Boiler Wharf was cleared for the development work to be carried out by the Contractors. Two 25-ton cranes were erected at Boiler Wharf. A new stockyard was provided, and a new large Goliath Crane was erected there for efficient plate handling.

Offices

124. The main administration offices were improved and centralised and a new main store provided. A considerable number of new heavy machine tools were provided and installed.

125. All these improvements, some of them unspectacular individually, were taking place continuously during the first two years and formed part of the overall pattern of yard development.

Manoel Island Shipyard

126. Manoel Island shipyard is ideally situated for carrying out winter refits, overhauls and conversions to yachts of all types and sizes. Facilities are available for timber, steel and fibre glass hull repairs. Many yachts and motor vessels have in fact been repaired and converted and considerable experience has been gained.

127. The yard is provided with five slipways capable of slipping vessels up to 180 feet in length and of 500 tons displacement. The construction of a sixth slipway together with other further developments such as the building of breakwaters and additional jetty capacity and berthing facilities have been planned and some already carried out.

128. Services such as welding, lighting, compressed air, locker rooms and locker stores as well as a Service Department are available.

Docks Development

129. No. 4 Dock, which can now accommodate tankers of up to 92,000 tons deadweight, was completed in March 1964 and then it became possible to complete the extension and modernisation of No. 5 Dock. The west side of this dock was strengthened to take the new 50-ton crane, a new service gallery was constructed and a new floor laid. An additional 5-ton crane was also installed on this side.

130. No. 5 Dock now has an effective length of 710 feet and is capable of taking tankers of up to 38,000 tons deadweight. The reconstruction work on this dock was completed and it became operational on 17th September 1964.

The Plate Shop

131. When Swan, Hunter and Wigham Richardson undertook their appointment as Managing Agents for Malta Drydocks the planning of the Plate Shop was immediately tackled as a matter of urgency.

132. The existing machinery in this shop was

completely reconditioned and new machines comprising one 40-foot 1500 combined plate rolling and flanging machine, one 500-ton gap press and a plate and bar furnace with hydraulic frame-setting equipment were installed. These machines, together with the two 15-ton overhead cranes and other miscellaneous small machines in the plate shop, were estimated to cost about £200,000.

133. Work proceeded satisfactorily and every effort was made to make the new plate shop operational before the end of 1963 and to install the plate flanging and rolling machines by 1964. The finished new shop, which is now one of the most modern plate shops in the Mediterranean, enables the Management to offer competitive prices and ensures the rapid completion of jobs.

Ricasoli Tank Cleaning Farm

134. Work on the Ricasoli Tank Cleaning Farm has now reached an advanced stage of construction and it is expected to become fully operational later this year (1965).

135. The jetty's pneumatically-operated hose handling rig has already been erected and the piping system on the jetty is being installed. Two 3,000-ton reception tanks, two 200-ton treatment tanks and one 600-ton water wash tank have already been erected and work on the piping systems is proceeding apace.

136. A 200-ton/hour wash pump, a 200-ton/hour fire pump, a 200-ton/hour standby pump and two 185-ton/hour oil transfer pumps are in the process of being installed on the site. The three Scotch Boilers, each of 15,000 lb./hour capacity, have already been received and the boiler house is being built around them. Three 600 cu.ft./min. air compressors are in hand and will be installed as the boiler house progresses. A sludge incinerator is also being installed.

137. When the Tank Cleaning Farm becomes operational, it would be able to deal with a maximum of 2,000 tons of ballast per hour, while 200 tons of water per hour at 180°F. can be supplied to the ship at 200 lbs. per square inch for Butterworthing, ensuring that the essential speedy turnaround is achieved.

138. Standards and codes laid down by the British Standards Institute and the Institute of Petroleum for installations storing Class A petroleum products have been rigidly adhered to throughout, thus ensuring a high degree of safety.

139. When this tank cleaning farm is completed, Malta Drydocks will possess a facility which, when taken with the other aspects of the dockyard development programme, will offer a comprehensive service to shipowners at very competitive prices.

ACKNOWLEDGEMENTS

I wish to thank the following gentlemen who have provided me with valuable information:

1. Mr W. Podesta' - Director of Industry, Malta.
 2. Mr M.S. Thompson - General Manager, Malta Drydocks.
 3. Mr M. Abela - Principal Government Statistician,
Malta.
 4. Prof. S. Busuttii - Lecturer in Economics,
Royal University of Malta.
 5. Mr E. Ellul - Research Officer, General Workers
Union.
-

APPENDIX A.NATIONAL INCOME PER CAPITA OF SOME
MEDITERRANEAN COUNTRIES
1962

<u>Country</u>	<u>£ per head of population</u>
Algeria	76
Cyprus	138
France	421
Greece	132
Israel	254
Italy	222
<u>Malta</u>	<u>143</u>
Morocco	51
Spain	129
Syria	N.A.
Tunisia	N.A.
Turkey	77
U.A.R.	N.A.
Yugoslavia	88

Source: National Accounts of the Maltese Islands
1954 - 62.

APPENDIX BMALTA VISIBLE BALANCE OF PAYMENTS IN 1963£ Million

Total imports	30.2
Exports plus re-exports	<u>4.6</u>
Adverse trade balance	25.6
	—

SOURCE: National Accounts of the Maltese Islands
1954 - 63 Table 33.

APPENDIX CFOREIGN MILITARY EXPENDITURE IN MALTA IN 1963£ Million

Sales to non-Maltese servicemen	5.5
Materials, contracts, etc.	5.5
Payments to Maltese civilians and servicemen	5.8
Pensions and other receipts	<u>0.9</u>
	16.7
	—

SOURCE: National Accounts of the Maltese Islands
1954 - 63.

APPENDIX DMALTAGROSS NATIONAL PRODUCT BY INDUSTRY 1963

	<u>£ Million</u>	<u>% of total</u>
Wholesale and retail trades	8.9	19
Manufacturing	7.1	15
Military Services	6.5	14
Public administration and other Government services	5.3	12
Net income from abroad	4.0	9
Agriculture and fishing	3.3	7
Construction and quarrying	2.6	5
Ownership of dwellings	2.2	5
Gas, electricity, water	1.6	4
Transport and communication	1.9	4
Private services	1.9	4
Banking, insurance, etc.	0.7	2
	<u>46.0</u>	<u>100%</u>

Source: Annual Abstract of Statistics (MALTA) 1963.

APPENDIX BMALTALABOUR FORCE BY INDUSTRY

<u>Industry</u>	<u>1959</u> <u>No.</u>	<u>1963</u> <u>No.</u>
Agriculture & Fishing	8,110	7,920
Quarrying & Mining	590	580
Manufacturing	13,540	16,570
Construction	5,550	6,450
Gas	125	130
Commerce & Finance	11,900	12,100
Transport & Communications	6,720	6,340
Personal Services	8,300	8,500
Malta Government	17,190	16,920
Services Departments	15,910	13,070
TOTAL	<u>87,935</u>	<u>88,580</u>

Source: Annual Abstract of Statistics (MALTA) 1963.

APPENDIX FLABOUR FORCE EMPLOYED WITH BRITISH MILITARY SERVICES

<u>Year</u>	<u>Number</u>
1959	15910
1960	15930
1961	15710
1962	14700
1963	13070
1964	12100

Source: Annual Abstract of Statistics (MALTA).

APPENDIX GMALTA DRYDOCKSTotal Labour Force

<u>Year</u>	<u>Number</u>
1959-60	5940
1960-61	5840
1961-62	5190
1962-63	4950
1963-64	4810
1964-65	4730

Source: Management, Malta Drydocks.

APPENDIX HMALTA DRYDOCKSCommercial Ships Drydocked and Repaired

<u>Year</u>	<u>Drydocked</u>	<u>Afloat Repairs</u>	
		<u>Major</u>	<u>Minor</u>
1959-60	77	22	-
1960-61	72	24	-
1961-62	87	55	-
1962-63	122	48	-
1963-64	195	49	103
1964-65	200	58	110

Source: Management, Malta Drydocks.

APPENDIX IMALTA DRYDOCKS% of Repair Work on Naval Ships and Commercial Ships

<u>Year</u>	<u>Naval</u> (Including Industrial and Development Work)	<u>Commercial</u>
1959-60	82	18
1960-61	73	27
1961-62	59	41
1962-63	42	58
1963-64	33	67
1964-65	12	88

Source: Management, Malta Drydocks.

APPENDIX JMALTA DRYDOCKSCosts of Development Projects

	<u>£ Million</u>
Widening & Lengthening of Nos. 4 & 5 Docks)	1.75
Lengthening of Wharves)	
Tank Cleaning Fund	0.60
Building of Workshops	3.14
Other Development Works including Services)	
Purchasing of Machinery)	
TOTAL	<u>£5.49</u>

Source: Management, Malta Drydocks.

APPENDIX KMALTA DRYDOCKSYearly Income from Repair Work on Commercial Ships

<u>Year</u>	<u>£ Million</u>
1959-60	N.A.
1960-61	N.A.
1961-62	N.A.
1962-63	.9
1963-64	1.8
1964-65	3.8

Source: Management, Malta Drydocks.

APPENDIX IMALTA DRYDOCKSAverage Wage Rates - 1965

<u>Trade</u>	<u>Weekly Rate</u>		
	£	s.	d.
Chargeman	10	6	0
Skilled Workers	8	7	0
Assistant Skilled Workers (Electrical Fitters, Mechanical Fitters, Fitters Examiners, Shipwrights, Joiners, Pattern- makers, Boilermakers, Plumbers, Pipeworkers, Coppersmiths, Smiths, Sailmakers, Hosemakers, Upholsterers, Painters, Brick- layers, Drillers, Riveters, Welders, Riggers, Founders, Structural Workers)	7	7	0
Machinists, Hammerman, Coxswains, Deckhands	7	10	0
Recorders	10	6	0
Stonedressers, Plasterers, Masons, Miners, Pickmen	7	10	0
Masters	13	10	0
Engineers	11	0	0
Labourers	6	12	0
Apprentices	From 64/- to 120/- p.w.		

- Overtime: Time and a half on working days.
Double time on Sundays and Public
Holidays.

Source: Management, Malta Drydocks.

APPENDIX MMALTA DRYDOCKS APPRENTICESHIP SCHEME

This scheme is designed to give those who pass through it the chance to acquire all the skill and knowledge needed for success in their chosen trade or profession, to develop their latent ability and to reap the full rewards of diligent practical and theoretical study. Within the scheme every boy who enters, no matter what his previous background, is given every opportunity of advancement.

2. For this reason apprentices are placed initially in a "prospective" grade of apprenticeship for an initial period of 24 months, and boys entering the scheme have the prospect of qualifying for one of three grades of apprenticeship. The three grades are:-

CRAFT : TECHNICIAN : STUDENT

3. The boy is selected for "prospective" grade on his educational attainment prior to entry and on his showing during the selection procedure. Following his entry into the scheme in a prospective capacity the apprentice will have to prove himself over the initial 24 months period when he will be brought before a Selection Board and either confirmed or rejected for the grade.

4. If the apprentice does extremely well - and this will be determined from the Company's and the College's or Technical Institute's records - he may be promoted to a higher grade than he was offered originally. Although the Training Staff will make sure that an apprentice is not put into too high a prospective grade, it is possible that, if an apprentice, placed in a prospective grade, does not reach the required standard, then he may be placed in another more suitable grade.

TYPES AND GRADES OF APPRENTICESHIPThe Craft Apprenticeship

5. This apprenticeship is designed to teach boys to become highly skilled craftsmen within the firm and each boy has the opportunity of training in one of the trades such as: Boilermaker, Founder, Fitter, Plant Fitter, Electrical Fitter, Shipwright, Smith or Pipeworker.

The Technician Apprenticeship

6. This grade of apprenticeship covers a wide field of engineering techniques, and provides an opportunity for boys to obtain a sound practical and theoretical training. There is an urgent need in Malta Drydocks for the technician type of craftsman who will have had the benefit of this broad training and many opportunities will be open to him. The necessary qualities of a technician are that he should be able to combine the high practical skill of the craftsman with quite a reasonable knowledge of the theory. He should also be able to show a certain amount of initiative

and leadership and the ability to work without supervision. Vacancies in foremen and supervisory positions are likely to be filled from those who have completed a technician apprenticeship.

The Student Apprenticeship

7. To fulfil the Company's future requirements for higher positions the student grade of apprenticeship is introduced. This apprenticeship is suitable for boys who have achieved a high level of general education and possess, along with a sense of discipline, the type of questioning attitude of mind which is essential for success in positions requiring leadership and where the ability to make decisions is vital. It is from the ranks of the Company's student apprentices that future positions in management can be filled.

TRAINING PROGRAMME

8. All apprentices are responsible to the Education Officer who plans and controls their movements in consultation with Divisional Managers.

Basic Training Period

9. All apprentices spend an initial period of nine months in the Training Centre where instruction in the basic hand and machine skills employed in the various trades is given. Here they also receive theoretical training in the Lecture Rooms and at least four hours each week are laid aside for this purpose. The Training Centre has its own well-equipped section, appropriate to the trade, run under the close supervision of the practical training instructors who instruct the apprentices in basic exercises designed to show the technique of the craftsman with special emphasis placed on such aspects which will be useful to the boys when they begin their development training. Each boy's progress is reviewed at various stages during the nine months and a careful check of this progress is made by means of tests and practical projects.

Development Training

10. This period, lasting 15 months, follows directly after the successful completion of basic training and is designed to fulfil the following objects:-

- a) to give an apprentice a brief survey of the scope available in his selected trade or profession.
- b) to enable the various sections of the departments to assess briefly an apprentice's potentialities.

11. Short periods of training are spent in the various sections of the Production Departments and all apprentices are required to complete the training before going before the Craft/Technician/Student Selection Board where the assessments are considered.

Selection Board

12. Experience has shown that it is unwise and contrary to a boy's interest to make any final decision concerning his ultimate trade or profession until he has successfully completed a basic and development training period. All apprentices are therefore brought before a Selection Board at the successful completion of 24 months of training. On this Selection Board, which will consist of Heads of Divisions or their representatives and the Education Officer, every department is represented. The Board has before it copies of all Technical Institute or College and Divisional assessments over the period of the first 24 months of the apprentice's training. Each apprentice is interviewed and the Board carefully sifts all the available evidence before confirming the apprentice in the grade of Craft/Technician/Student. If the apprentice has shown outstanding progress during the previous twenty-four months in practical work and in his technical studies, he may be upgraded from his previous prospective grade. On the other hand if he has not, in the opinion of the Selection Board, made sufficient progress in his learning, both practical and theoretical, he may be downgraded from his previous prospective grade.

Advanced Training

13. For the remaining three years all apprentices follow a schedule of detailed training, for the particular trade or department and relative to the grade of apprenticeship for which they have been selected. In the case of craft apprentices, the particular trade will be finalised at the Craft Selection Board held immediately after the Craft/Technician/Student Selection Board.

Final Departmental Selection

14. Apprentices are not encouraged to specialize in any particular aspect of the Company's activities until the final year of the five years' training, the idea being to give them as broad a training as possible and to have as much information available as possible to assess their capabilities before final selection. The final departmental placing is determined by reviewing the whole of the apprentice's previous training and if there is a vacancy in a department where an apprentice has shown a very good performance he is established in that department. In the case of Student and Technician apprentices the final department will be determined six months before the end of the apprenticeship; in the case of Craft apprentices, three months before the end of the apprenticeship.

Technical Education during Apprenticeship

15. All apprentices will be required to attend the Technical Institute, and to College of Arts, Science and Technology or other training establishment on a day-release basis, the number of days and/or hours being related to the course of studies taken. Studies will be directed towards obtaining the appropriate City and Guilds of London Institute Craft Certificate or appropriate higher technical qualification.

16. Technician apprentices are required to obtain the Ordinary Certificate in **Mechanical** or Electrical Engineering; or the Shipbuilding and Ship-repairing Final Certificate or other equivalent qualification for their trade of the City and Guilds of London Institute before completion of their apprenticeship.

17. Student apprentices are required to follow a course of training which will eventually lead to a technical qualification such as the Higher Certificate of the City and Guilds of London Institute in Mechanical or Electrical Engineering, or if possible, a suitable degree course or course leading to the Diploma in Technology. The course taken by the student apprentice will depend largely on his educational level as certain G.C.E. 'O' and 'A' level qualifications are required for entrance to these courses. The Company is also prepared to sponsor any suitable student apprentice who gains entrance to a higher educational course on a full-time basis.

Technical Education and Training after Apprenticeship

18. On completion of his apprenticeship an ex-student apprentice employed on a staff basis will be required to follow a further training programme to equip him for the department for which he was selected at the Final Departmental Selection Board, the length of this training period and technical studies related to it being relative to the department selected.

Progress Reports

19. Reports on apprentices' progress will be made at six monthly intervals to their respective parents or guardians. If it is considered at any time during the period of apprenticeship that an apprentice is not benefitting from the training he is receiving then he will be told where he is not making sufficient progress in his technical or practical studies and every effort will be made by the Training Staff to bring him up to the desired standard.

Projects and Initiative Tests

20. Apprentices are encouraged to accept some responsibility which will develop their self-confidence and powers of leadership. For this purpose the Education Officer and Training Staff organize regularly groups of apprentices to perform tasks or projects designed to test initiative, leadership and the success of the training an apprentice is receiving. To obtain the maximum practical value from this project arrangements are made so that it can be handled exactly as if it were a commercial undertaking. These initiative tests are held during each year of apprenticeship and involve the apprentices competing as teams.

Leadership Training

21. To train apprentices who are showing a developing sense of responsibility and self-confidence and some powers

of leadership, the Company takes advantage of the residential courses offered by the Outward Bound Trust by giving to selected apprentices opportunities to attend these courses which bring together in communal life young people from many industries and widely separated localities. The courses seek their own way to extend the interest of youth, to foster good citizenship and to develop character through adventure. In this practical way the value of leadership, good citizenship and the necessity of living communally can be appreciated and understood by the apprentices. In addition, by the formal and informal discussions which are actively encouraged on the courses, boys are enabled not only to widen their views but to learn both to form, and to express, their own opinions.

22. Attendance at the Annual Apprentices' Conference organized by the Industrial Welfare Society of the United Kingdom at Keble College, Oxford, is another means adopted by the Company to broaden the background of its selected apprentices.

Training Schedule

23. When an apprentice begins his 5-year course of training he will be presented with a booklet or schedule which lays out over the complete five years exactly the type of training he can expect to receive for his particular grade of apprenticeship. The schedules of training are compiled with the help of the various departments and the time to be spent in each department is arrived at after very careful study of the amount of knowledge and training required to be gained with respect to the period of apprenticeship. This may be varied from time to time to keep training in line with modern developments. Emphasis is made on training during the whole apprenticeship and in this light the schedules are drawn up.

MALTA DRYDOCKSIndustrial Engineering Facilities1. Engineering

Fully equipped for the overhaul of all types of Steam or Diesel Machinery, main and domestic refrigeration plants.

Steam and gas turbine engines of all types repaired and surveyed including any type of reblading.

Modern techniques of boring and alignment by "Taylor Hobson" optical gear.

Chemical cleaning carried out on coolers and exchangers by specially trained personnel.

Re-tipping and general repairs to propellers as approved by manufactures.

Gear cutting straight bevel up to 24" spur or spiral and worm up to 40".

2. Internal Combustion Engines

Repairs and general overhauls carried out on all types of diesel and petrol engines.

Facilities available for overhaul and calibration of fuel injectors and pumps.

Engine test beds with dynamometer capacity up to 250 H.P.

3. Pipe Work

All classes of steam and general pipework fabricated or repaired up to largest sizes required in modern practice.

Grade "A" welders available.

4. Foundry

All types ferrous (except steel) castings up to 8 tons maximum. Non ferrous up to 6 tons.

5. Smithery

Floor area, 25,000 sq. ft.

Capable of handling all types of forging and smithwork. Annealing and normalising.

Galvanising, bath capacity 15' 0" x 3' 0" wide x 4' 0" deep.

6. Test House

Testhouse in process of being modernised to handle classification test procedures for anchors and cables.

7. Boiler Shop

Repairs including retubing of all types of boilers. Manufacturing facilities available for casings, uptails, funnels, and the installation of refractories.

8. Plate Shop

Modern fabrication and shiprepairing Plate Shop with a floor area of 25,000 sq. ft.

Machinery includes 1,500 ton rolls/flanger, 500 ton Gap Press, 300 ton pillar press, flame profiling machinery, mangles, drilling machines, oil fired plate and bar furnace.

Types of work include barges, pontoons, and tanks.

9. Light Plate Shop

Light Plate Shop totalling 20,000 sq. ft. area. Fully equipped to deal in a wide range of sheet metal work such as ventilation trunking, lockers, special purpose items in stainless steel.

10. Steel Shop

Steel Shop of 40,000 sq. ft. floor area and overhead travellers up to 40 ton lift. This shop is equipped to handle all types of structural and heavy engineering steelwork including specialist welding work.

11. Electrical Workshop

Repair of electrical rotating machinery, transformers, control and protective equipment of all types. Facilities and processes are available for rewinding, impregnating and stoving, dynamic balancing, machining, welding and metal spraying, nickel, cadmium and silver plating.

12. Electronics

Facilities available for testing and repair of electronic and electro-mechanical equipment. Wireless, radar, echo sounders, direction finders and other navigational aids, Gyro Compasses and automatic steering equipment. Remote indicating and automatic control systems audio equipment, cinema projectors.

13. Instrument Shop

Repair, testing and calibration of electrical and mechanical meters and gauges. Repair and overhaul of binoculars and telescopes, including blooming of lenses. Repair of magnetic compasses, repair, servicing and rating of chronometers, repairs of clocks, watches and similar mechanisms. Repair, servicing and adjustment of office machinery of all types. Repair and servicing of ship logs, wind speed and direction indicators and other similar instruments.

14. Joiner and Patternmaker Shop

Large capacity Joiner and Patternmaker Shop (25,000 sq. ft.) capable of carrying out all types of ship and industrial work.

Manufacture of high grade furniture.

Hand and Spray polishing. Vulcanising.

Sawmill facilities include two 7" Bandmills and heavy timber yard.

15. Textile Shop

Can undertake at short notice and at competitive prices ships awnings, windsails, tarpaulins, sails of all classes in cotton, nylon and terylene; fitted carpets and underlays; flags and ensigns.

All types of curtain material, overalls, boiler suits, jackets, trousers in natural and synthetic materials.

Upholstery repairs including manufacturing of mattresses, settees, cushions etc. in foam rubber hair and p.v.c.

Overcases of all types, deck chairs, sunshades, and fancy awnings.

16. Liferaft Repairs

Survey, servicing and repairing inflatable liferafts and all life-saving apparatus.

17. Boathouse

60,000 sq. ft. of covered area.

Boathouse capable of slipping vessels up to 60 feet in length.

Building and repairing of a wide range of craft in wood, steel and fibre glass.

Engine overhauls and installation.

18. General

Rigging work of all types - steel wire and rope.

Grit blasting equipment is available for external treatment of ships' hulls. Airless spray painting equipment also available.

Tank cleaning installation is in course of construction in close proximity to the drydocks capable of accepting 20,000 tons of slops at 2,000 tons/hour continuously.

A tank cleaning vessel is presently available.

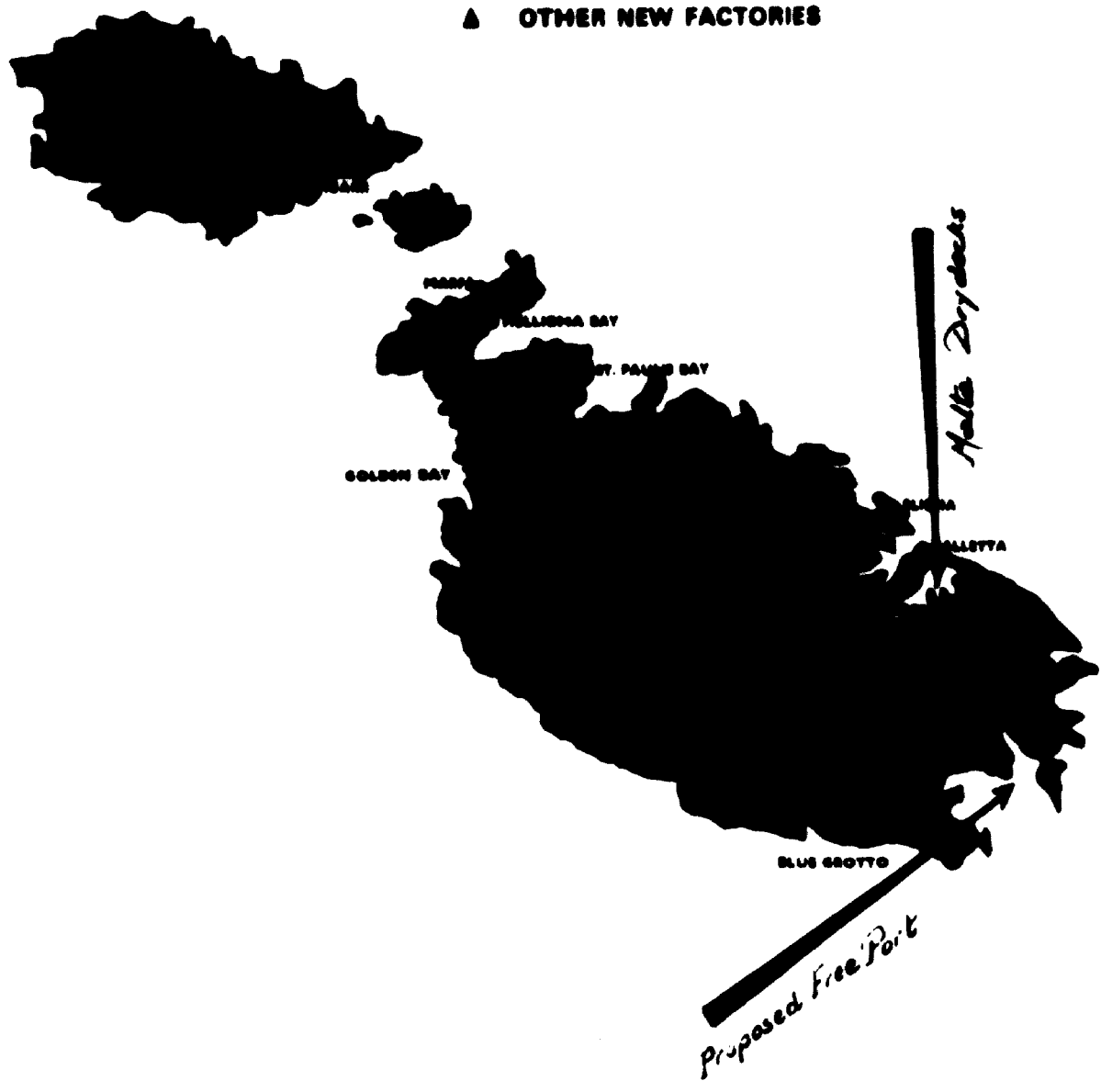
MAP OF THE MALTESE ISLANDS



INDUSTRIAL ESTATES



OTHER NEW FACTORIES



BACKGROUND INFORMATION ON MALTA

Geographical and Physical Features

1. The Maltese archipelago lies in a strategic position in the narrow waters between Sicily and North Africa, half-way on the shortest sea route between the Atlantic Ocean and the Suez Canal.

2. The climate is very healthy although in the hot weather (June - September) the Sirocco raises the temperature to 80 - 100°F; the mean maximum for the hottest months is about 80°F; the lowest temperatures are slightly over 40°F.

3. The islands are entirely composed of tertiary limestones with subsidiary clays and marls. Otherwise they possess no natural resources.

Government

4. The Declaration of Rights of 1802 acknowledged the King of the United Kingdom and his lawful successors as Malta's lawful sovereigns for all time. This was formally accepted by the Treaty of Paris of 1814. In 1921 the Amery-Kilner constitution granted responsible government, a legislative assembly and a senate. Thus the Crown Colony system established in 1811 was withdrawn.

5. In 1947 a new constitution provided responsible ministerial government under the basis of a "dyarchy". This constitution was replaced in 1962 by a measure of self-government which provided for an elected Legislative Assembly of 50 members.

6. On September 21, 1964 Malta became an independent monarchical state and the 19th full member of the British Commonwealth. In December 1964, it became the 113th member of the United Nations and in May, 1965 the 18th member of the Council of Europe.

Population

7. The population of the Maltese Islands is about 320,000 and the population density about 2,600 per square mile. The national growth in population is about 1.8 per cent per annum but this is offset by a loss through emigration. In the last three years the national population had a net decrease of 13,000.

Labour

8. Whereas in Western Europe the problem is one of labour shortage, particularly of skilled labour, in Malta the problem is to find work for the labour that exists and to ward off the unemployment threatened by the run-down of the British services. Apart from availability, wage rates are low, being about 55 per cent. of their United Kingdom equivalents. The labour force is industrious, adaptable and noted for its manual dexterity.

9. The Conditions of Employment (Regulation) Act, 1952, covers hours of work and leave, contracts of service, wages, overtime and fines. The Act provides for the setting-up of wages councils similar to those in the United Kingdom. A number are already working in certain industries.

10. Conditions of employment may also be established by joint negotiating machinery, such as joint industrial councils, or by voluntary settlements or arbitration awards under the Conciliation and Arbitration Acts.

11. The Labour Division of the Department of Emigration, Labour and Social Welfare considers itself duty bound to help employers to comply with statutory provisions. It does everything possible to assist in the solution of their labour problems.

12. There are thirty employees trade unions, of which the General Workers Union is the largest. Total membership is about 23,000 or 25 per cent. of the labour force. There are ten employers unions and four mixed unions.

Utilities

13. The important utilities required in newly established industries are:-

- (i) Electricity;
- (ii) Water;
- (iii) Posts and Telephones;
- (iv) Telegraph;
- (v) Transport.

Electricity

14. The main form of power available in Malte is electricity, obtained from imported fuel oil. In the past, inadequate and expensive supplies handicapped industrial development. Generating capacity and distribution have been brought up to standards recognised in the United Kingdom.

15. A new power station operating on the standard 3-phase 50-cycle system now provides 25,000 K.W. (firm 20,000 K.W.). Conversion of distribution to the standard system was completed in 1959.

16. The forward surge of electrical development throughout the Island continued to increase. The average rates for consumption and demand for the last five years worked out at 18% and 15% respectively. In order to keep ahead of the requirements by the industrialisation programme the Electricity Board has under construction a new Power/Water Station having an ultimate plant capacity of 100 M.V.A. which is being financed out of a loan from the World Bank.

Scale of Charges - New Electricity Charges (in force from October 1st, 1960).

Installation:- Actual cost plus 10 per cent.

SUPPLY OF CURRENT

Industrial Tariff (total installed capacity of electrical motors 30 H.P. or over):-

- (i) £6 per annum per K.W. of the maximum demand made during the year (or at the option of the consumer, £2 5s. per K.W. in each winter quarter and £1 10s. in each summer quarter).
- (ii) 1.25d. per unit supplied.

Water

17. The total storage capacity in Malta and Gozo is 96.5 million gallons. Extraction in both islands is at the present rate of 3,172 million gallons per year as against 2,415 million gallons in 1955, when the present extensive programme was started.

18. A combined Power/Water distillation plant will provide up to 2 million gallons of water per day initially and may be extended to provide a further 4 million gallons of water per day.

19. Water for industrial purposes is charged for at a flat rate of 2s. 9d per 1,000 gallons.

Posts and Telephones

20. The usual postal services are available.

21. Calls by radio-telephony can be made daily, except Sundays, from 0900 to 1230 hours G.M.T., to the United Kingdom, Ireland, the United States, Canada, North Africa, Australia, and most countries in Europe.

22. There is a 24-hour daily telephonic service by cable (Sundays included) to the United Kingdom, North Africa, and most countries in Europe.

23. The automatic telephone system is one of the most modern in the Commonwealth. It includes the Central Exchange with 7,000 lines, Sliema 5,000 lines, Rabat 600 lines, St. Paul's 400 lines, Birzebbugia 200 lines and Gozo 600 lines.

Telex

24. Telex communication is also available.

Telegraphs

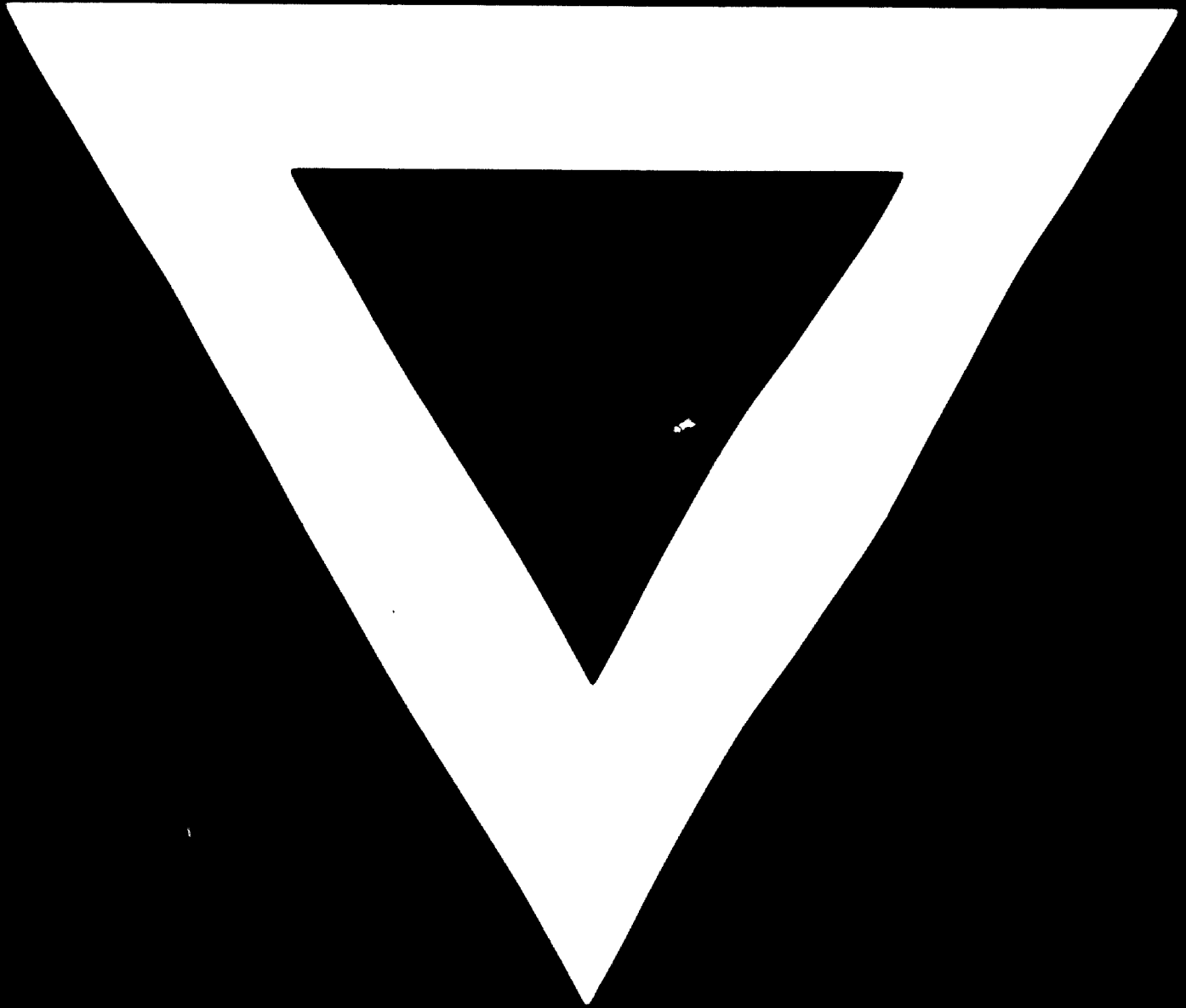
25. Cable and Wireless Limited, with branch offices at Valletta and St. George's, provides telegraph communications with any place in the world. The St. George's branch gives a round-the-clock service.

Transport

26. Air - Luqa is the commercial airport. A modern terminal was opened in 1958. The two-floor building contains a well-equipped restaurant, post, cable and wireless offices, a bonded store and an air freight customs office. All kinds of freight can be handled.

27. There are frequent passenger and cargo flights to the United Kingdom, the European Continent, North, East and Central Africa.
28. Sea - Passengers and cargo-passenger lines link Malta with the United Kingdom, Western and North-Western Europe and Mediterranean ports. A regular service runs from Tripoli to Naples, calling at Malta, Syracuse and Catania en route, six times a month. There are frequent calls of coaster type vessels carrying cargo from the Eastern Mediterranean.
29. Port Facilities - The Grand Harbour at Valletta handles practically all shipping except oil tankers, which discharge at Marsaxlokk and St. Paul's Bay. The average tonnage of goods handled at the port is just over 350,000 tons. There are bunkering facilities for handling fuel oil and coal. A proposal to convert Marsaxlokk Harbour into a "free port" is being studied.
30. Internal Transport - Much has been done to improve road communications and there are now some 500 miles of good asphalted and macadamised roads. Facilities exist for carrying very heavy loads by road and the average charge is a flat rate of about £10 per ton.

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