

REFITTING IN THE FUTURE

MANAGEMENT OF THE DEFENCE SHIPWORK PROGRAMME IN A COMMERCIAL ENVIRONMENT

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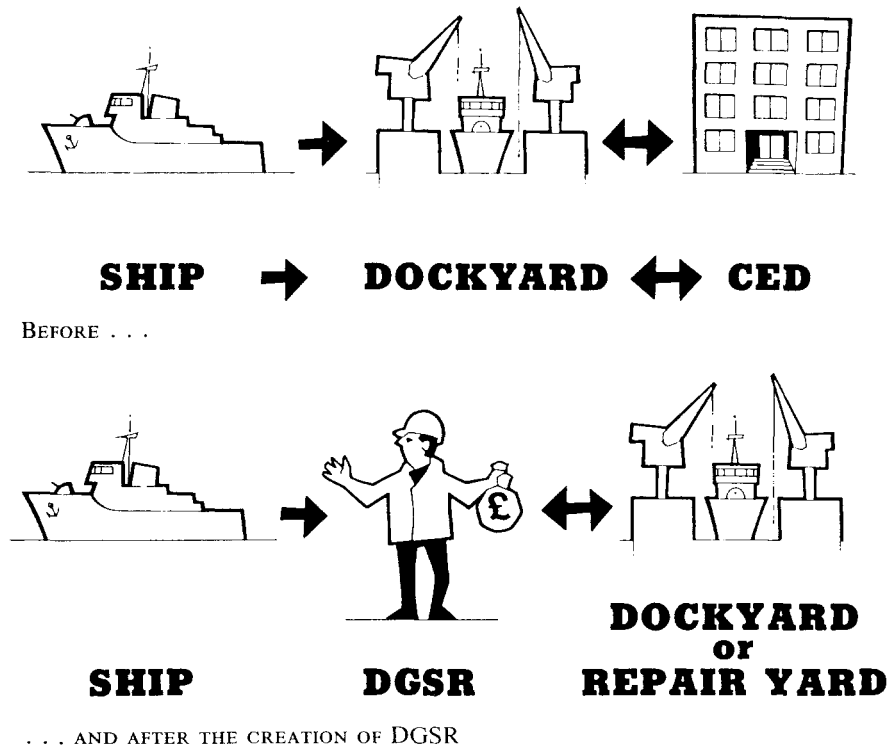
Introduction

Over the years there have been many reports written about the Royal Dockyards. In the main, they have concentrated on improving efficiency, productivity and accounting, but a common theme has been the requirement to have some form of 'customer organization' separate from the supplier.

The Dockyard Planning Team was set up in late 1984 in the wake of Mr Peter Levene's report to the Secretary of State. The two authors of this article started work with the Dockyard Planning Team in January 1985, producing a Report in March 1985 concluding that a Customer Organization should be established. The Navy Board on 27 June 1985 agreed that a new Director General Ship Refitting (DGSR) organization should be established under the Chief of Fleet Support. The customer functions of the present Dockyard Department, under the Chief Executive Dockyards (CED) will be replaced by the new DGSR organisation. The primary roles of DGSR are to manage the MOD ship refit and repair programme, taking into account the needs of all the authorities concerned. This will cover:

- (a) Those aspects of warship maintenance and repair which go beyond the capability of ship's staff and the Fleet Maintenance Bases.
- (b) Work on all other ships and vessels, that is RFAs and RMAS and other craft.

In order to fulfil its role DGSR will have two complementary abilities. Firstly, it must have the strength to negotiate successfully with the Dockyards and other commercial shiprepairers and then to monitor, control and accept the subsequent work programme. Secondly, it must operate in such a way as to ensure that the Ministry of Defence, by its activities, does not to an unreasonable extent allow costs to increase, through, for instance, late additions to work packages, or unnecessarily stringent specifications. It will be DGSR's task to make the departmental authorities in the MOD aware of the financial consequences of their requirements and decisions, and to mediate at the appropriate level where conflicts occur. Only if such rigorous disciplines are followed will the required savings in refit and repair costs be achieved.



Basic Principles

The main principles of the Customer Organization paper approved by the Navy Board, and now forming the basis of the Director General Ship Refitting organization and its operating procedures are as follows:

- (a) A single organization to manage all the MOD shipwork programme.
- (b) DGSR to be responsible for the whole refitting programme; C-in-C Fleet and the other operators to be responsible for their operating and operational maintenance.
- (c) Refits to be managed on a project basis with the project leadership at DGSR HQ level, and local representation to manage the projects locally on behalf of the HQ project leadership.
- (d) Where possible, to have a single point of contact for MOD contracts with the Dockyard commercial management.
- (e) Maximum practicable financial delegation to the projects, and, in turn, down to the local representation.

- (f) The DGSR organization to be a self-managing entity, where practicable.
- (g) The necessary expertise in contracts, finance, costing and accounting to be 'bedded out' with the project teams.

The Main Refit Contract Procedures

There will be two main forms of contract. Firstly, the Term Contract will cover all the arrangements for the incoming company to use the dockyard assets for the 'term' period—currently seven years. This is already a mammoth document with over one hundred annexes ranging over subjects as diverse as MOD Police, Nuclear Safety, and Intellectual Property Rights. DGSR will be the sole manager of the term contract, and its birth-pangs and growth to maturity would probably merit a major article in some worthy financial journal.

Of more day to day import are the Project Contracts, covering everything from major refits to relatively minor OPDEFs. The basic philosophy is that the responsibility for project management should be under one director—the Principal Director Ship Refitting (PDSR)—and that the relevant project groupings under him should contain a mix of all relevant skills—technical, financial, contractual, managerial and QA. These project groups would take the work specifications, amend them as necessary and turn them into contractual documents for the fixed work part of the project. These would then be passed to the Superintendent Ships at Devonport or Rosyth, responsible for overseeing that project and for negotiating the emergent work additions to the main contract within the limits defined by the Project Manager at headquarters. The Superintendent Ships would also be responsible for negotiating, using his contracts staff, contracts for emergency work arising from OPDEFs that are beyond the capacity of the Fleet Maintenance Base.

Before the decision is taken on when and where to place a project contract, many factors have to be taken into account. These include:

- (a) operational, security, harmony and domestic requirements;
- (b) possible effect on new construction and other repair/refit projects;
- (c) the size, complexity and degree of sophistication of the project in relation to the capacity and capability of the potential contractor(s);
- (d) an order of cost estimate against the overall budget;
- (e) whether the project should be part of the core programmes.

The order of cost estimate again comprises many parts involving many inputs. The baseline estimate of hours involved in the project is amended by:

- (a) the contractor's allocation of costs schedule, i.e. how he levies his overheads;
- (b) local trade union agreements on bonuses;
- (c) the level of subcontractor involvement;
- (d) the likely material state of the project, including as appropriate trials and survey reports;
- (e) As and As and modifications input and availability;
- (f) extent of MOD support—both personnel and materiel;
- (g) an allowance, if required, for the contractor's 'learning curve'.

Once approval to proceed has been obtained and the project management plan produced, a series of activities commences, to achieve the required start date. These may be summarized as:

- (a) Preparation of Refit Work Package specification and accompanying technical documentation, materiel support, etc.
- (b) Meetings to discuss contractual, technical and domestic requirements for the project.
- (c) Pre-refit visits and progress meetings to assist in preparation of the contract work specification.
- (d) Agreement of type of contract, terms and conditions of contract, and tender panel.
- (e) Completion of work specification and documentation concurrent with the forwarding of Invitation to Tender.
- (f) Contractor's visit to project and clarification meetings.
- (g) Submission and evaluation of tenders.
- (h) Agreeing project pre-refit operational programme and arrival date at the Contract yard.
- (i) Delivery date of Ministry supplied equipment and spares at Contract yard if necessary.
- (j) Awarding and placing contract.
- (k) Take in hand Meeting and Refit Start Date.

Many of the steps in the three paragraphs above apply only to major refit contracts and would be omitted for simpler projects. Indeed the whole success of DGSR is seen as being dependent upon the degree of delegation to the lowest possible level to enable decisions to be taken quickly and, where possible, at the 'coalface'.

Control of the project will be based on continuous monitoring and a series of checkpoints to agree—or possibly disagree—progress, and hence approve stage payments if applicable. Many diverse inputs will be required but it will be up to the Project Manager, through the Superintendent Ships, to keep the project continuously under review with the aim of:

- (a) Providing early warning of possible over-spend.
- (b) Keeping within cash limits of project budget.
- (c) Ensuring value of money by project completion to *time*, *cost*, and *quality*.

The DGSR Organization

The overall organization of the department of the Director General Ship Refitting is shown in FIG. 1.

The aim has been to produce an organization such as may be found in industry, with the equivalents being:

Director General	Chairman
Principal Director Ship Refitting	Managing Director
DSR (Policy and Plans)	Corporate Development and Business Director
DSR (Resources and Personnel)	Finance and Personnel Director
DSR (Support)	Works Director

The two Project Directors (FIG. 2) are equivalent to the Production Directors in industry, in that they are responsible for producing the successful 'product' of the organization, that is the refit contracts, as required by the customers with the required content to time, at the right quality and within budget— i.e. 'to time, cost and quality'.

The organizations of the four individual Directorates reporting directly to the Director General are shown in Figs. 2, 3, 4 and 5.

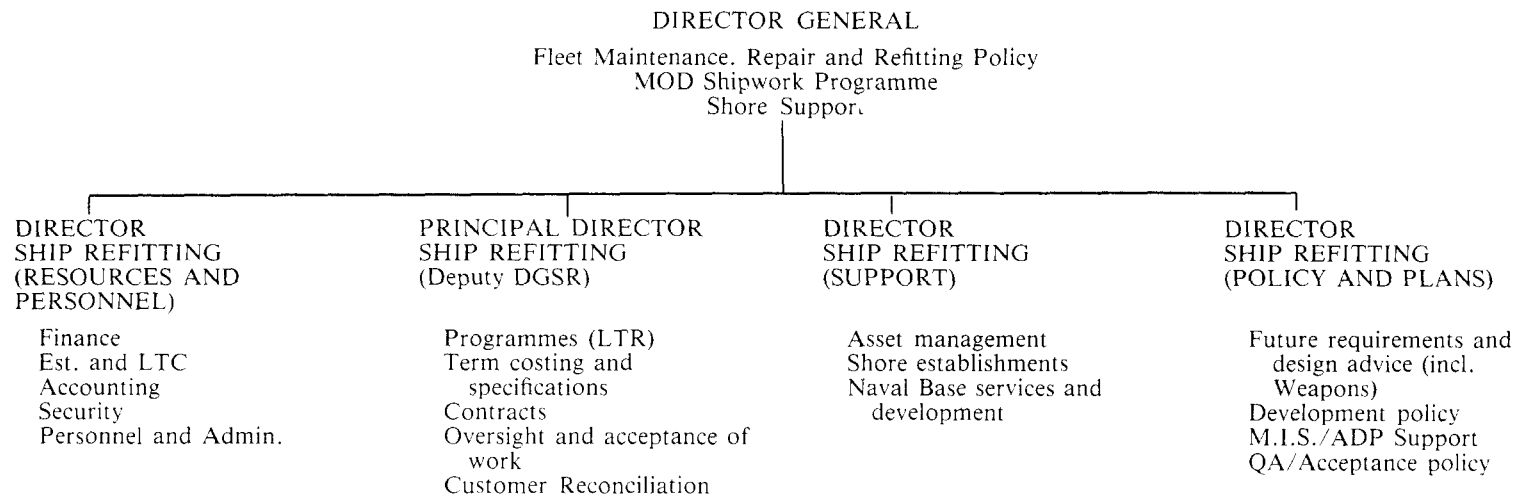


FIG. 1—DIRECTORATES OF THE DIRECTOR GENERAL SHIP REFITTING

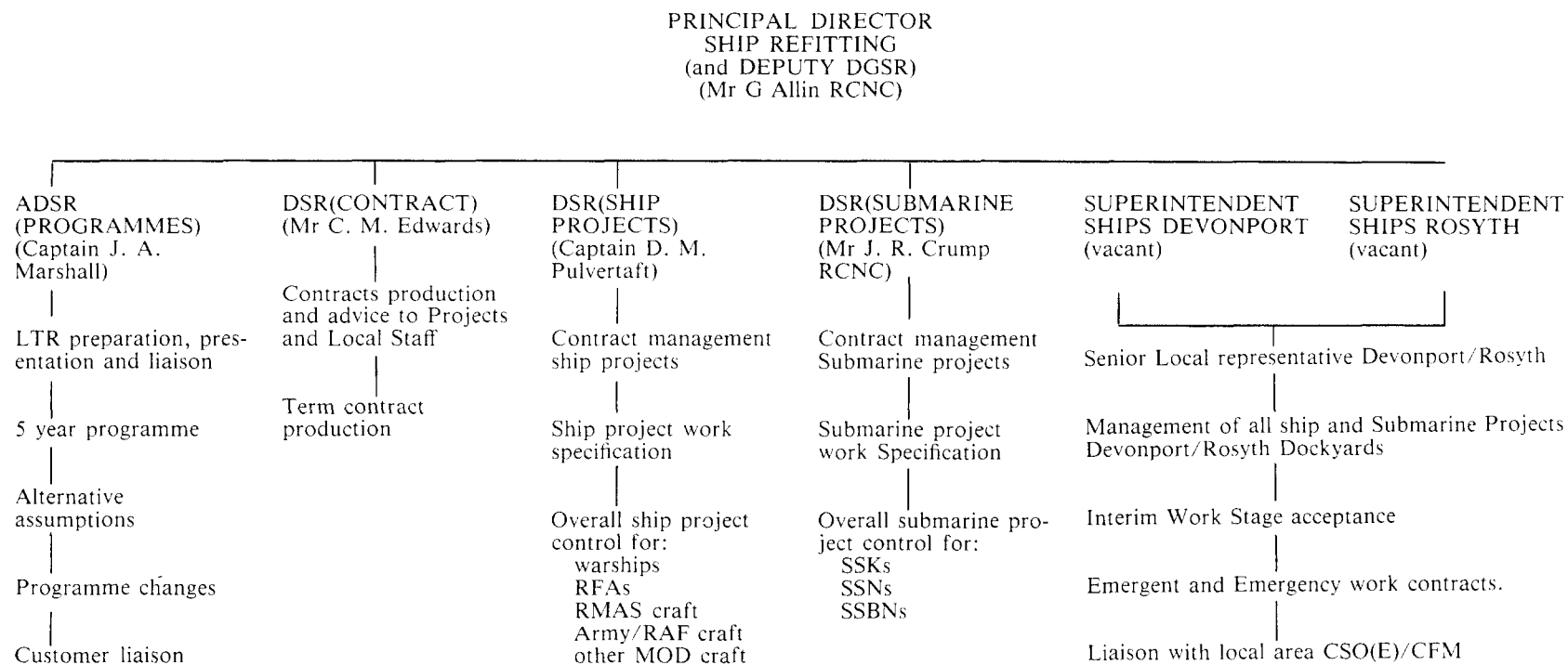


FIG. 2—THE PRINCIPAL DIRECTORATE, SHIP REFITTING

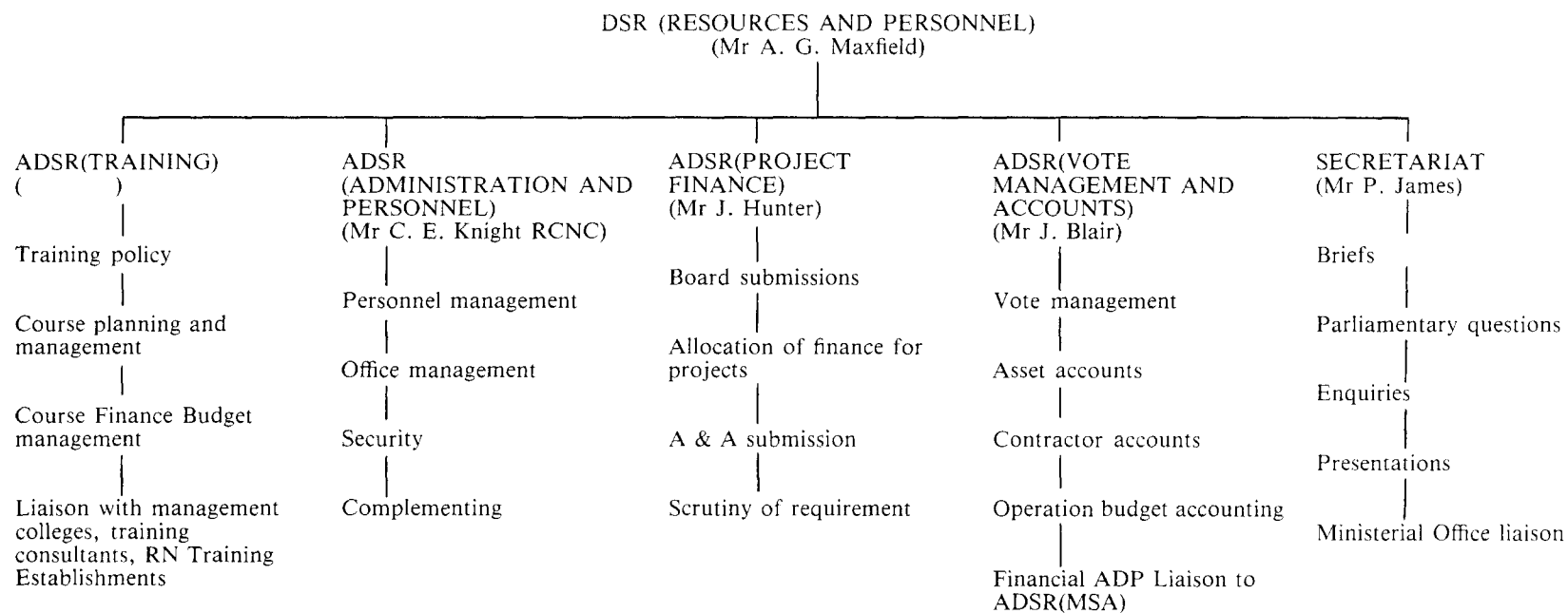


FIG. 3—THE DIRECTORATE, SHIP REFITTING (RESOURCES AND PERSONNEL). (SINCE THIS DIAGRAM WAS PREPARED, THE RESPONSIBILITY FOR TRAINING HAS BEEN TRANSFERRED TO ADSR (MANAGEMENT SYSTEMS & AUDIT) AND SHOULD THEREFORE BE ADDED TO THE ORGANIZATION CHART IN FIG. 4.)

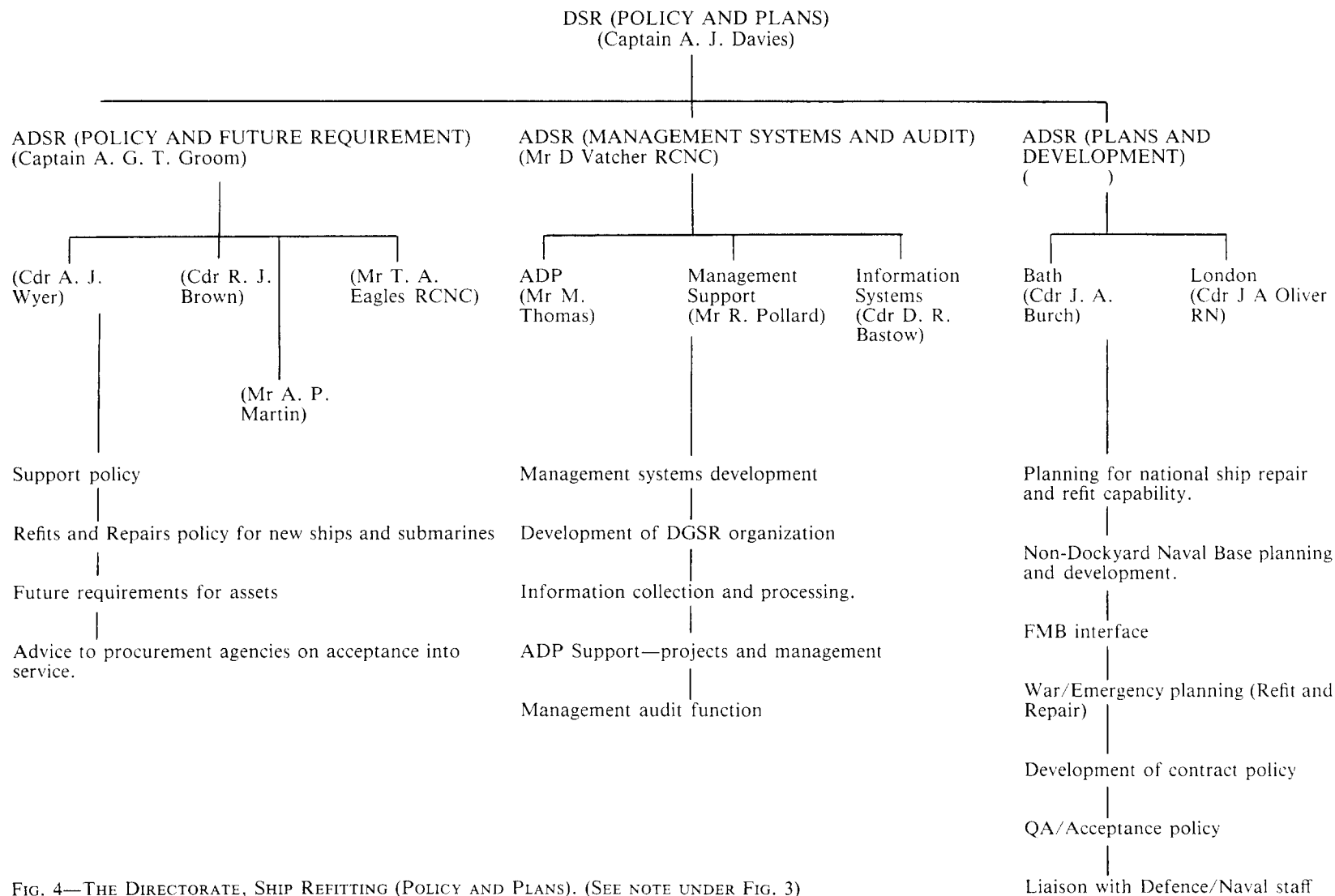


FIG. 4—THE DIRECTORATE, SHIP REFITTING (POLICY AND PLANS). (SEE NOTE UNDER FIG. 3)

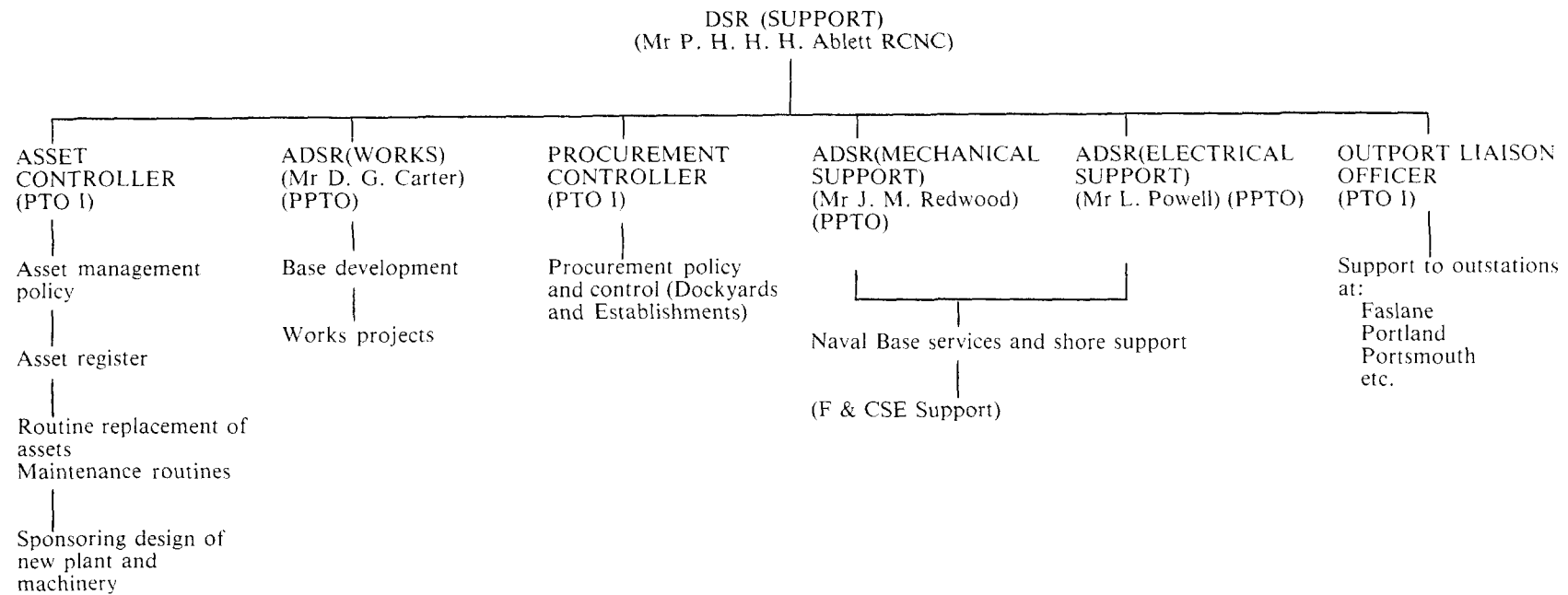


FIG. 5—THE DIRECTORATE, SHIP REFITTING (SUPPORT)

DGSR Headquarters

The Director General, together with the DSR (Policy and Plans) and their small personal staffs and the Secretariat (London) will be based in London, in MOD Main Building when accommodation becomes available. The intention here is that the policy-making part of the organization should be as close as possible to the main customers, that is, the Defence Staff (particularly DN Plans and Programmes, and DOR Sea), the OMB, the Naval Staff (particularly DNOT and DNW), CFS senior staff (DGFS P&S, DGST(N) and DNLP), and be readily available to C-in-C Fleet at Northwood.

The remainder of the Headquarters organization will be based in Bath, initially at Carpenter House, although it is well recognized that it would have been more suitable to have demonstrated a clean break from the CED HQ, to avoid any misunderstanding as to the completely different role and *modus operandi* of the DGSR organization.

The majority of the Submarine Projects Directorate will continue to be colocated with DGSM at Foxhill, and it is the aim to finally colocate all the main DGSR HQ with the Sea Systems Controllerate.

The Upkeep Policy and Future Requirements, and the Management Systems and Audit Assistant Directorates are also to be located in Bath with the rest of the HQ.

The Principal Director Ship Refitting in his role of Deputy DGSR will be administratively responsible for the Headquarters at Bath.

Local Organization

The DGSR local organization in Devonport and Rosyth will be under the control of a Superintendent Ships. These local organizations have a close similarity to the U.S.N. Sup. Ships organizations for commercial shipyards that carry out contract overhauls.

There is still much work to be done on the detailed numbers in these local organizations, and to a certain extent the detail will depend upon the Naval Base Organization that is set up and to a lesser degree the actual arrangements of the Term Contract.

For ships being refitted away from either of the two (former) Royal Dockyards, the project organization will be the same, but the details of the overseeing arrangements will be different. If the shipyard is one in which there is PNO representation then the overseeing will be done by PNO's staff augmented as necessary by DGSR. If the yard is not within a PNO's organization, then the overseeing will be done by DGSR staff.

If the amount of shipwork carried out in commercial shipyards, (other than Dockyards) increases significantly, then it will be necessary to look at the requirement for another Superintendent Ships, or some other arrangement.

Dealing with Operational Defects and Emergent Work

It is in the area of OPDEFs and emergent work that the customer will be most prone to view the efficiency and effectiveness of DGSR. It is here that the Sup Ships will need to make the right decisions rapidly, fairly, and consistently. To do so will require decisions based on a whole range of skills leading to formation of or amendment to a contract. The staff will have to call upon the attributes of manager, engineer, financier, contract agent, estimator, accountant, and naval officer. His deliverations must include:

- (a) Previous historical data—how long?, how much?, spares?, trade skill requirements?, etc.
- (b) Associated maintenance information, planned maintenance schedules.
- (c) Repair procedures, if available.

- (d) Stores requirements; availability; Storerob penalties.
- (e) Financial statement of funds available to place the contract.
- (f) Capability and capacity of possible repairers.
- (g) Operational programme effects from the Operator.
- (h) Costing of similar procedures/repairs.
- (i) Downstream effects on the fixed refit programme/other work.
- (j) Own DGSR staff loadings, availability of overseers.
- (k) Possible penalties to the customer in other areas.

and no doubt a few other topics could be included!

The ability to make these deliberations quickly is paramount to satisfying both customer and contractor and can only be achieved by a sensible use of modern systems encompassing ADP/IT *et al.* The sense of urgency may have to be conveyed to the contractor who might see himself in a very strong position.

After all, if the MD of Devonport PLC can see a sick CVS from his office window, he may well feel in strong negotiating position! The same applies to emergent work which almost inevitably places the Sup. Ships in a sole source contractor position. However it is the U.S.N. experience that a good Sup. Ships is still able to negotiate a very tight contract for emergent work and so avoid the real risks of a 'buying in' refit or repair tender bid.

'SLJO'—or 'The Other Bits of CED'

CED, as well as running the Royal Dockyards and managing the ship refitting programme, is also responsible for the support of the Fleet and Civil Shore Establishments (F & CSE), CED Telecomms, the Indirect Shipwork Programme (ISP), Other Production Work (OPW), the Portland Auxiliary Repair Unit (PARU), Engineering Services Branch (ESB) Faslane, Blackbrook Farm at Fareham, and many other tasks.

Although the prime task of DGSR is ship refitting, someone will have to take over these other tasks. As an interim measure some will indeed fall to DGSR, in particular ISP/OPW in the Dockyards.

It may be that it would be possible to put these shore support aspects of the Navy under a separate organization which would enable DGSR to concentrate on his prime role. Recommendations from the Dockyard Planning Group will be made in this area.

Personnel

On 5 November 1985, Rear-Admiral G. A. F. Hitchens was appointed as the first Director General. Since that date, progressively more appointments have been made and the organization is building up. At the time of writing the senior management is as shown in Figs. 2 to 5. The appointing programme will continue through 1986, leading to an eventual strength of some 250 in the Headquarters, and 300 or so between Devonport and Rosyth Superintendent Ships' organizations, with possible later additions if a 'commercial' shipyard Sup. Ships is required. Appointments are intended to last for at least two and a half years, so the names in Figs. 2 to 5 should remain correct well into 1988.

Some other General Points

To free DGSR for his prime role of ship refitting a means has to be found of removing interruptions, alterations and additions from the fixed programme—meeting completion dates ultimately leads to more operational time and to a saving in hard cash. To this end, enhanced ability of the

Fleet Maintenance Bases to cope with more demanding OPDEFs is being considered. This enhancement could take the form of personnel, resources or different working practices.

Another area requiring consideration is that of customer reconciliation. In future every project, big and small, will be costed in the same medium—money. Hence a customer requiring a late addition or breach of moratorium to a refit will be told the true cost of his wishes and hence the penalties that accrue. These penalties will probably affect more than his project and could result in the delay of a project belonging to another fleet commander—remember there are over 500 RMAS vessels. In any event it will be up to DGSR to reconcile the customers and achieve a solution, hopefully an amicable one. It behoves all of us to become cost-conscious and run a budget, as political imperatives are driving us down this road.

Summary

The way ahead towards commercial management of the remaining two Royal Dockyards is now laid down by Parliament.

The tenders for the Term Contract will be invited in April 1986, with the intention of Vesting Day being in April 1987. To meet this exciting challenge on behalf of the Ministry of Defence, and, in particular, for the Royal Navy, the Directorate General Ship Refitting is alive and kicking. There is a steep learning curve for everyone involved but the strong business-minded drive of the DGSR team is determined to climb the curve as rapidly as possible and to achieve a better deal for the Customers, with ships' refit programmes being completed on time, to the right quality and at better value for money than before. The Term Contractors have a mammoth task ahead of them to bring the yards into the hard commercial world where 'money talks'; DGSR will make sure that it talks the right language for the Navy.
